

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Craig W. Butler, Director

4/7/2014

Certified Mail

Robert Naftanail  
MASCO Cabinetry Middlefield LLC (KraftMaid Plant 2)  
15535 South State Ave.  
P.O. Box 1055  
Middlefield, OH 44062

|     |                                    |
|-----|------------------------------------|
| Yes | TOXIC REVIEW                       |
| No  | SYNTHETIC MINOR TO AVOID MAJOR NSR |
| No  | CEMS                               |
| No  | MACT/GACT                          |
| No  | NSPS                               |
| No  | NESHAPS                            |
| No  | NETTING                            |
| Yes | MODELING SUBMITTED                 |
| Yes | SYNTHETIC MINOR TO AVOID TITLE V   |
| Yes | FEDERALLY ENFORCABLE PTIO (FEPTIO) |
| No  | SYNTHETIC MINOR TO AVOID MAJOR GHG |

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0228000213  
Permit Number: P0115924  
Permit Type: OAC Chapter 3745-31 Modification  
County: Geauga

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

**How to appeal this permit**

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
77 South High Street, 17th Floor  
Columbus, OH 43215

## **How to save money, reduce pollution and reduce energy consumption**

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: [www.ohioairquality.org/clean\\_air](http://www.ohioairquality.org/clean_air)

## **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/survey.aspx](http://www.epa.ohio.gov/survey.aspx) and give us feedback on your permitting experience. We value your opinion.

## **How to get an electronic copy of your permit**

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-NEDO



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for**

**MASCO Cabinetry Middlefield LLC (KraftMaid Plant 2)**

|                |                                  |
|----------------|----------------------------------|
| Facility ID:   | 0228000213                       |
| Permit Number: | P0115924                         |
| Permit Type:   | OAC Chapter 3745-31 Modification |
| Issued:        | 4/7/2014                         |
| Effective:     | 4/7/2014                         |
| Expiration:    | 5/18/2014                        |





**Division of Air Pollution Control**  
**Permit-to-Install and Operate**  
for  
MASCO Cabinetry Middlefield LLC (KraftMaid Plant 2)

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## Authorization

Facility ID: 0228000213  
Application Number(s): A0049443  
Permit Number: P0115924  
Permit Description: Chapter 31 modification permit for 10 wood cabinet coating operations to use of low VOC coatings and restrict VOC emissions from these 10 coating operations to no more than 35 tons per rolling 12-month period.  
Permit Type: OAC Chapter 3745-31 Modification  
Permit Fee: \$4,000.00  
Issue Date: 4/7/2014  
Effective Date: 4/7/2014  
Expiration Date: 5/18/2014  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

MASCO Cabinetry Middlefield LLC (KraftMaid Plant 2)  
15535 S STATE AVE  
MIDDLEFIELD, OH 44062

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

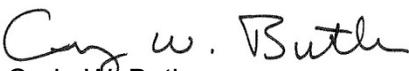
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087  
(330)425-9171

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Craig W. Butler  
Director



## Authorization (continued)

Permit Number: P0115924

Permit Description: Chapter 31 modification permit for 10 wood cabinet coating operations to use of low VOC coatings and restrict VOC emissions from these 10 coating operations to no more than 35 tons per rolling 12-month period.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

**Group Name: Roll Coaters**

|                                  |                         |
|----------------------------------|-------------------------|
| <b>Emissions Unit ID:</b>        | <b>K001</b>             |
| Company Equipment ID:            | UV Coating Line #3      |
| Superseded Permit Number:        | P0084581                |
| General Permit Category andType: | Not Applicable          |
| <b>Emissions Unit ID:</b>        | <b>R001</b>             |
| Company Equipment ID:            | UV Stain Roll Coat Line |
| Superseded Permit Number:        | P0084581                |
| General Permit Category andType: | Not Applicable          |
| <b>Emissions Unit ID:</b>        | <b>R002</b>             |
| Company Equipment ID:            | Sealer Roller Coater    |
| Superseded Permit Number:        |                         |
| General Permit Category andType: | Not Applicable          |
| <b>Emissions Unit ID:</b>        | <b>R003</b>             |
| Company Equipment ID:            | UV Topcoat Roll Coater  |
| Superseded Permit Number:        | P0084581                |
| General Permit Category andType: | Not Applicable          |
| <b>Emissions Unit ID:</b>        | <b>R008</b>             |
| Company Equipment ID:            | R008                    |
| Superseded Permit Number:        |                         |
| General Permit Category andType: | Not Applicable          |
| <b>Emissions Unit ID:</b>        | <b>R009</b>             |
| Company Equipment ID:            | UV Roll Coat Line No. 2 |
| Superseded Permit Number:        | P0084581                |
| General Permit Category andType: | Not Applicable          |

**Group Name: Spray Coaters**

|                                  |   |
|----------------------------------|---|
| <b>Emissions Unit ID:</b>        | <b>R004</b>                               |
| Company Equipment ID:            | UV Toner Molding Finish Line Spray Coater |
| Superseded Permit Number:        | P0084581                                  |
| General Permit Category andType: | Not Applicable                            |
| <b>Emissions Unit ID:</b>        | <b>R005</b>                               |
| Company Equipment ID:            | UV Stain Molding Finish Line Spray Coater |
| Superseded Permit Number:        | P0084581                                  |
| General Permit Category andType: | Not Applicable                            |
| <b>Emissions Unit ID:</b>        | <b>R006</b>                               |
| Company Equipment ID:            | R006                                      |
| Superseded Permit Number:        |   |
| General Permit Category andType: | Not Applicable                            |



**Final Permit-to-Install and Operate**  
MASCO Cabinetry Middlefield LLC (KraftMaid Plant 2)  
**Permit Number:** P0115924  
**Facility ID:** 0228000213  
**Effective Date:** 4/7/2014

|                                   |                                 |
|-----------------------------------|---------------------------------|
| <b>Emissions Unit ID:</b>         | <b>R007</b>                     |
| Company Equipment ID:             | UV Molding Topcoat Spray Coater |
| Superseded Permit Number:         | P0084581                        |
| General Permit Category and Type: | Not Applicable                  |



**Final Permit-to-Install and Operate**  
MASCO Cabinetry Middlefield LLC (KraftMaid Plant 2)  
**Permit Number:** P0115924  
**Facility ID:** 0228000213  
**Effective Date:** 4/7/2014

## **A. Standard Terms and Conditions**



**1. What does this permit-to-install and operate ("PTIO") allow me to do?**

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

**2. Who is responsible for complying with this permit?**

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

**3. What records must I keep under this permit?**

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

**4. What are my permit fees and when do I pay them?**

There are two fees associated with permitted air contaminant sources in Ohio:

PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

**5. When does my PTIO expire, and when do I need to submit my renewal application?**

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

**6. What happens to this permit if my project is delayed or I do not install or modify my source?**

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

**7. What reports must I submit under this permit?**

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

**8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?**

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

**9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?**

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



**10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?**

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

**11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?**

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

**12. What happens if one or more emissions units operated under this permit is/are shut down permanently?**

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.



**13. Can I transfer this permit to a new owner or operator?**

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

**14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?**

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

**15. What happens if a portion of this permit is determined to be invalid?**

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



**Final Permit-to-Install and Operate**  
MASCO Cabinetry Middlefield LLC (KraftMaid Plant 2)  
**Permit Number:** P0115924  
**Facility ID:** 0228000213  
**Effective Date:** 4/7/2014

## **B. Facility-Wide Terms and Conditions**



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) B.2.a)(2), B.3.c), B.3.d), B.3.e), B.3.f) and B.4.b)

b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(1) B.2.a)(1), B.2.b)(1), B.2.b)(2) and B.2.b)(3)

2. Applicable Emissions Limitations and/or Control Requirements

a) Facility-wide emissions shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures |
|----|---|---|
| a. | OAC rule 3745-31-05(D)<br>(Synthetic Minor to Avoid Title V and MACT) | See B.2.b)(1), B.2.b)(2) and B.2.b)(3).           |
| b. | ORC 3704.03(F)(4)(c) and<br>OAC rule 3745-114                         | See B.3.c), B.3.d), B.3.e), B.3.f) and B.4.b).    |

b) Additional Terms and Conditions

(1) VOC emissions from all coatings used in emissions units K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009 shall not exceed 35.0 tons per rolling, 12-month period.

(2) VOC emissions from the use of facility-wide cleanup, touchup and support materials shall not exceed 7.90 tons per rolling, 12-month period.

(3) The facility-wide emissions shall not exceed the following:

a. 4.40 tons per rolling, 12-month period of each individual hazardous air pollutant (HAP); and

b. 11.50 tons per rolling, 12-month period of total combined HAPs.

3. Monitoring and/or Recordkeeping Requirements

a) The permittee shall collect and record the following information each month for emissions units K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009:

(1) the company identification and type of each coating employed;



- (2) the volumes of each coating employed, defined as “V”, in gallons;
- (3) the VOC content of each coating, defined as “VOC<sub>c</sub>”, in pounds per gallon;
- (4) the total VOC emissions from all coatings employed, in pounds, and shall be calculated by the following equation:

$$E_{VOCc} = \sum_{i=0}^n (VOCc \times V)_i$$

where:

$E_{VOCc}$  = the total VOC emissions from all coatings employed in emissions units K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009, in pounds per month;

$i$  = subscript denoting a coating employed in emissions units K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009; and

$n$  = the total number of coatings employed in emissions units K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009; and

- (5) the rolling, 12-month period VOC emissions from all coatings employed in emissions units K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009, in tons.

b) The permittee shall collect and record the following facility-wide information each month:

- (1) the company identification of each cleanup, touchup and support material employed;
- (2) the volumes of each cleanup, touchup and support material employed, defined as “U”, in gallons;
- (3) the VOC content for each cleanup, touchup and support material, defined as “VOC<sub>s</sub>”, in pounds per gallon;
- (4) the total VOC emissions from all cleanup, touchup and support materials employed, in pounds per month, and shall be calculated by the following equation:

$$E_{VOCs} = \sum_{j=0}^m (VOCs \times U)_j$$

where:

$E_{VOCs}$  = the total VOC emissions from all cleanup, touchup and support materials employed, in pounds per month;

$j$  = subscript denoting a cleanup, touchup or support material employed; and

$m$  = the total number of cleanup, touchup or support materials employed;



- (5) the rolling, 12-month period VOC emissions from all cleanup, touchup or support materials employed in the facility, defined  $E_{VOCs12}$ , in tons, and shall be the rolling, 12-month period total for  $E_{VOCs}$ ;
- (6) Each individual HAP content for each coating, cleanup, touchup or support material, defined as  $HAP_c$ , in pounds per gallon;
- (7) The facility-wide emissions of each individual HAP, defined as  $E_{HAP}$ , in pounds per month, and shall be calculated by the following equation:

$$E_{HAP} = \sum_{k=0}^p (HAP_c \times [V + U])k$$

where:

$E_{HAP}$  = the total emissions of each individual HAP from all coating, cleanup, touchup and support materials employed facility-wide, in pounds per month;

k = subscript denoting a coating, cleanup, touchup or support material employed facility-wide; and

p = the total number of coating, cleanup, touchup or support materials employed facility-wide;

- (8) the rolling, 12-month period emissions of each individual HAP facility-wide, in tons, and shall be calculated as the sum of  $E_{HAP}$  for the rolling, 12-month period; and
  - (9) the rolling, 12-month period emissions of total combined HAPs facility-wide, in tons, and shall be calculated as the sum of the rolling, 12-month period emissions of each individual HAP facility-wide, as determined in B.3.b)(7).
- c) The federally enforceable permit-to-install and operate (FEPTIO) application for these emissions unit(s), K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminants emitted using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- (1) the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- a. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
  - b. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- (2) The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- (3) This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants or "worst case" toxic contaminant(s):

- a. Compound: Ethoxyethoxyethyl Acrylate  
TLV (mg/m3): 73.7  
Maximum Hourly Emission Rate (lbs/hr): 2.482  
Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 601  
MAGLC (ug/m3): 1,754.76
- b. Compound: Diethylene Glycol Monoethyl Ether  
TLV (mg/m3): 73.7  
Maximum Hourly Emission Rate (lbs/hr): 0.261  
Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 17  
MAGLC (ug/m3): 1,754.76
- c. Compound: Diethylene Glycol Monobutyl Ether  
TLV (mg/m3): 73.7



Maximum Hourly Emission Rate (lbs/hr): 2.090

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 174

MAGLC (ug/m3): 1,754.76

The permittee, having demonstrated that emissions of ethoxyethoxyethyl acrylate, diethylene glycol monoethyl ether, and diethylene glycol monobutyl ether, from emissions units K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

- d) Prior to making any physical changes to or changes in the method of operation of the emissions units, that could impact the parameters or values that were used in the predicted 1-hour "maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- (1) changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - (2) changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - (3) physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI, PTIO, or FEPTIO (as applicable) prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- e) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):



- (1) a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - (2) the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - (3) a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - (4) the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- f) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

#### 4. Reporting Requirements

- a) The permittee shall submit quarterly deviation (excursion) reports that identify:
- (1) all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - a. VOC emissions from all coatings used in emissions units K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009 shall not exceed 35.0 tons per rolling, 12-month period.
    - b. VOC emissions from the use of facility-wide cleanup, touchup and support materials shall not exceed 7.90 tons per rolling, 12-month period.
    - c. The facility-wide emissions shall not exceed the following:
      - i. 4.40 tons per rolling, 12-month period of each individual HAP; and
      - ii. 11.50 tons per rolling, 12-month period of total combined HAPs.
  - (2) the probable cause of each deviation (excursion);



- (3) any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- (4) the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- b) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

## 5. Testing Requirements

- a) Compliance with the Emissions Limitations and/or Control Requirements specified in sections B.2.a) and B.2.b) of these terms and conditions shall be determined in accordance with the following methods:

- (1) Emission Limitation:

VOC emissions from all coatings used in emissions units K001, R001, R002, R003, R004, R005, R006, R007, R008 and R009 shall not exceed 35.0 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in B.3.a)(5).

- (2) Emission Limitation:

VOC emissions from the use of facility-wide cleanup, touchup and support materials shall not exceed 7.90 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in B.3.b)(5).

- (3) Emission Limitation:

The facility-wide emissions of each individual HAP shall not exceed 4.40 tons per rolling, 12-month period.



Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section B.3.b)(8).

(4) Emission Limitation:

The facility-wide emissions of total combined HAPs shall not exceed 11.50 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section B.3.b)(9).



**Final Permit-to-Install and Operate**  
MASCO Cabinetry Middlefield LLC (KraftMaid Plant 2)  
**Permit Number:** P0115924  
**Facility ID:** 0228000213  
**Effective Date:** 4/7/2014

## **C. Emissions Unit Terms and Conditions**



**1. Emissions Unit Group – Roll Coaters: K001, R001, R002, R003, R008, and R009**

| <b>EU ID</b> | <b>Operations, Property and/or Equipment Description</b>                         |
|--------------|--|
| K001         | UV Coating Line #3 using air assisted and airless methods of coating application |
| R001         | UV Line #1 Stain Roll Coater   |
| R002         | UV Line #1 Sealer Roll Coater.   |
| R003         | UV Line #1 Topcoat Roller Coater   |
| R008         | UV Line #2 Edge Coater Line  |
| R009         | UV Line #2 Roll Coater   |

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)f

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements                     | Applicable Emissions Limitations/Control Measures         |
|----|---|---|
| a. | OAC rule 3745-21-07(M)(2)                         | See b)(2)a.   |
| b. | OAC rule 3745-21-15                               | See b)(2)b, b)(2)c, d)(1), d)(2) and e)(1)                |
| c. | OAC rule 3745-31-05(A)(3) as effective 11/30/2001 | See b)(2)d and b)(2)e for emissions units R003 and R008.  |
| d. | OAC rule 3745-31-05(A)(3) as effective 12/01/2006 | See b)(2)f for emissions units R003 and R008.             |
| e. | ORC 3704.03(T)                                    | See b)(2)e for emissions units K001, R001, R002 and R009. |
| f. | OAC rule 3745-31-05(D)                            | See B.2.a) and B.2.b).                                    |



|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures |
|----|---|---|
| g. | 40 CFR Part 63, Subpart JJ – National Emissions Standards for Hazardous Air Pollutant Emissions for Wood Furniture Manufacturing Operations | See b)(2)g.                                       |
| h. | OAC rule 3745-17-11(C)  | See b)(2)h.                                       |

(2) Additional Terms and Conditions

- a. In accordance with OAC rule 3745-21-07(M)(3)(a), OAC rule 3745-21-07(M)(2) is not applicable because these emissions units are not equipped with control devices for organic compounds (OC) emissions.
- b. The permittee shall comply with the following limitations:
  - i. the VOC content of any topcoat shall not exceed 0.8 pound of VOC per pound of solids, as applied;
  - ii. there is no VOC content limit for basecoats, and washcoats in accordance with OAC rule 3745-21-15(D)(1)(b); and
  - iii. the VOC content for sealers and stains specified in this applicable rule is less stringent than limitations established pursuant to OAC rule 3745-31-05(A)(3) and ORC 3704.03(T).
- c. The permittee shall prepare and maintain a written work practice implementation plan. The plan shall define environmentally desirable work practices for each wood furniture manufacturing operation and address each of the work practices contained in paragraphs (b) to (d) and (f) to (k) of 40 CFR §63.803.
- d. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, and then these emission limitations/control measures no longer apply: b)(1)c and b)(2)d.
- e. The permittee shall use only low VOC coatings in these emissions units to meet the following VOC content requirements:



- i. 2.10 pounds per gallon, as applied, for stains and toners;
  - ii. 0.40 pound per gallon, as applied, for topcoats; and
  - iii. 0.20 pound per gallon, as applied, for sealers.
- f. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from these air contaminant sources since the uncontrolled potential to emit for VOC is less than 10 tons/year for each emissions unit R003 and R008.

- g. In accordance with 40 CFR §63.800(b)(3), this facility meets the following limits and criteria, is an area source for 40 CFR Part 63, Subject JJ, and is not subject to any other provision of the subpart. If the facility subsequently exceeds the limits and criteria limited in this section and becomes a major source, the permittee must comply thereafter with all applicable provisions of 40 CFR Part 63, Subject JJ starting on the applicable compliance date in §63.800 and shall not exceed the HAP emission limitations contained in this permit without first obtaining a permit modification.
- i. no more than 5.0 tons of any one HAP emissions per rolling, 12-month period;
  - ii. no more than 12.5 tons of any combination of HAP per rolling, 12-month period; and
  - iii. at least 90 percent of the plant-wide emissions per rolling 12-month period are associated with the manufacture of wood furniture or wood furniture components.
- h. These are roll coating operations. In accordance with OAC rule 3745-17-11(A)(1)(h), these emissions units are exempted from OAC rule 3745-17-11.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall employ the following procedures for determining the VOC content and solids content of a coating.
  - a. The as-applied VOC content of a finishing material that is applied by a continuous coater shall be determined by the VOC content of the finishing material in the reservoir and the VOC content as calculated from records.
  - b. The VOC content and solids content of a coating shall be determined in accordance with paragraph (B) of OAC rule 3745-21-10 wherein formulation data



or USEPA Method 24 procedures (which include various ASTM measurement methods) may be employed.

- c. A certified product data sheet that provides data on VOC content and solids content shall be used by the permittee provided that any data based upon a measurement method shall be a measurement method that meets paragraph (I) of OAC rule 3745-21-15.
- (2) All records required under OAC rule 3745-21-15(K) shall be retained for a period of not less than five years and shall be made available to the Director or any authorized representative of the director for review during normal business hours. The following types of records are to be maintained.
- a. Compliance demonstration records for finishing operations:
    - i. a record of the VOC emission requirement elected to be met under any one paragraph of paragraphs (D)(1) to (D)(5) of OAC rule 3745-21-15 for each day of operation of the finishing operation;
    - ii. a certified product data sheet for each finishing material that is subject to a VOC emission requirement elected to be met under paragraph (K)(2)(a) of OAC rule 3745-21-15, and a certified product data sheet for any thinners or other VOC material added to the finishing materials before application; and
    - iii. a record of the VOC content, in pounds of VOC per pound of solids, as applied, of each finishing material, other than a stain, that is subject to a VOC content limit or a daily VOC emissions limit under paragraph (D) of OAC rule 3745-21-15, including documentation on any thinner or other VOC added to the finishing material before application.
    - iv. records pertaining to VOC content for a continuous coater in accordance with OAC rule 3745-21-15(K)(2)(e)(i):
      - (a) for each day of operation, the gallons of each material (finishing material and thinner) added to the continuous coater reservoir.
      - (b) for each day of operation, the VOC content of the finishing material in the reservoir and the VOC content as calculated from records.
  - b. Work practice implementation plan records:
    - i. records demonstrating that the operator training program required by 40 CFR 63.803(b) is in place;
    - ii. records collected in accordance with the inspection and maintenance plan required by 40 CFR 63.803(c);
    - iii. records associated with the cleaning solvent accounting system required by 40 CFR 63.803(d);



- iv. records associated with the limitation on the use of conventional air spray guns showing total finishing material usage and the percentage of finishing materials applied with conventional air spray guns for each semiannual period as required by 40 CFR 63.803(h); and
  - v. copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.
- (3) The permittee shall collect and record the following information each month for emissions units K001, R001, R002, R003, R008 and R009:
- a. the company identification and type of each coating employed; and
  - b. the VOC content of each coating, in pounds per gallon;
- e) Reporting Requirements
- (1) The permittee shall submit semiannual compliance status reports concerning the requirements specified in OAC rule 3745-21-15 no later than January 30 (covering period of July to December of previous year) and July 30 (covering period of January to June of the same year) to the Ohio EPA Northeast District Office. For each semiannual compliance status report, the permittee shall submit the following information for the 6-month period covered by the report:
- a. For any finishing operation subject to paragraph (D) of OAC rule 3745-21-15, any changes to the previous reporting of which paragraph of paragraphs (D)(1) to (D)(5) of OAC rule 3745-21-15 is elected to be met.
  - b. For any topcoat or sealer that is applied by means of a continuous coater, any changes to the means of compliance previously reported. If the change pertains to the use of the procedures of paragraph (I)(5)(b) of OAC rule 3745-21-15 for the VOC content and viscosity measurements of a continuous coater, data that demonstrates the correlation between the viscosity of the finishing material and the VOC content of the finishing material in the reservoir.
  - c. Compliance certification for semiannual reporting period including the following compliance certifications, where applicable:
    - i. For any topcoat or sealer that is subject to the VOC content limit of paragraph (D)(1), (D)(2), (D)(4)(b) or (D)(5)(b) of OAC rule 3745-21-15 and that complies by the procedures of paragraphs (I)(1) to (I)(4) of OAC rule 3745-21-15, the compliance certification shall state that compliant coatings for topcoats and sealers, as applicable, have been used each operating day in the semiannual reporting period, or should otherwise identify the periods of use of noncompliant coatings for topcoats and sealers, as applicable, the reasons for the use of noncompliant coatings, and the amounts and VOC contents of each noncompliant coating used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.



- ii. For any topcoat or sealer that is applied by means of a continuous coater, that is subject to the VOC content limit of paragraph (D)(1), (D)(2), (D)(4)(b) or (D)(5)(b) of OAC rule 3745-21-15, and that complies by the procedures of paragraph (I)(5) of OAC rule 3745-21-15, the compliance certification shall state the following, whichever is applicable:
    - (a) The compliance certification shall state that compliant coatings, as determined by the procedures of paragraph (I)(5)(a) of OAC rule 3745-21-15, have been used each operating day in the semiannual reporting period, or should otherwise identify the periods of use of noncompliant coatings, the reasons for the use of noncompliant coatings, and the amounts and VOC contents of each noncompliant coating used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.
    - (b) The compliance certification shall state that compliant coatings, as determined by the procedures of paragraph (I)(5)(b) of OAC rule 3745-21-15, have been used each operating day in the semiannual reporting period, or should otherwise identify the periods of use of noncompliant coatings, the reasons for the use of noncompliant coatings, and the amounts and VOC contents of each noncompliant coating used. Additionally, the certification shall state that the viscosity of the finishing material in the reservoir has not been less than the viscosity of the initial finishing material, that is, the material that is initially mixed and placed in the reservoir, for any day in the semiannual reporting period. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.
  - iii. For wood furniture manufacturing operations subject to the work practice requirements of paragraph (F) of OAC rule 3745-21-15, the compliance certification shall state that the work practice implementation plan is being followed, or should otherwise identify the provisions of the plan that have not been implemented and each day the provisions were not implemented.
  - iv. The compliance certification shall identify and describe any corrective actions considered and implemented for any noncompliance being reported in the compliance certification.
  - v. The compliance certification shall be signed by a responsible official of the company that owns or operates the wood furniture manufacturing operations.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.



f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The permittee shall use only low VOC coatings in these emissions units to meet the following VOC content requirements:

- i. 2.10 pounds per gallon, as applied, for stains and toners;
- ii. 0.40 pound per gallon, as applied, for topcoats; and
- iii. 0.20 pound per gallon, as applied, for sealers;

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(3)b.

b. Emission Limitation:

The VOC content of any topcoat shall not exceed 0.8 pound of VOC per pound of solids, as applied.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1) and d)(2).

g) Miscellaneous Requirements

(1) None.



**2. Emissions Unit Group - Spray Coaters: R004, R005 ,R006, and R007**

| <b>EU ID</b> | <b>Operations, Property and/or Equipment Description</b> |
|--------------|--|
| R004         | UV Toner Molding Finish Line Spray Coater                |
| R005         | UV Molding Stain Finish Line Spray Coater                |
| R006         | UV Molding Sealer Finish Line Spray Coater               |
| R007         | UV Molding Topcoat Spray Coater                          |

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)g

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements                     | Applicable Emissions Limitations/Control Measures        |
|----|---|--|
| a. | OAC rule 3745-17-11(C)                            | See c)(1), c)(2), d)(1), d)(2), d)(3), d)(4) and d)(5).  |
| b. | OAC rule 3745-21-07(M)(2)                         | See b)(2)a.  |
| c. | OAC rule 3745-21-15                               | See b)(2)b, b)(2)c, d)(6), d)(7) and e)(1)               |
| d. | OAC rule 3745-31-05(A)(3) as effective 11/30/2001 | See b)(2)d and b)(2)e for emissions units R006 and R007. |
| e. | OAC rule 3745-31-05(A)(3) as effective 12/01/2006 | See b)(2)f for emissions units R006 and R007.            |
| f. | ORC 3704.03(T)                                    | See b)(2)e and b)(2)f for emissions units R004 and R005. |
| g. | OAC rule 3745-31-05(D)                            | See B.2.a) and B.2.b)                                    |



|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures |
|----|---|---|
| h. | 40 CFR Part 63, Subpart JJ – National Emissions Standards for Hazardous Air Pollutant Emissions for Wood Furniture Manufacturing Operations | See b)(2)g.                                       |

(2) Additional Terms and Conditions

- a. In accordance with OAC rule 3745-21-07(M)(3)(a), OAC rule 3745-21-07(M)(2) is not applicable because these emissions units are not equipped with control devices for organic compounds (OC) emissions.
- b. The permittee shall comply with the following limitations:
  - i. the VOC content of any topcoat shall not exceed 0.8 pound of VOC per pound of solids, as applied;
  - ii. there is no VOC content limit for basecoats, and washcoats in accordance with OAC rule 3745-21-15(D)(1)(b); and
  - iii. the VOC content for sealers and stains specified in this applicable rule is less stringent than limitations established pursuant to OAC rule 3745-31-05 (A)(3) and ORC 3704.03 (T).
- c. The permittee shall prepare and maintain a written work practice implementation plan. The plan shall define environmentally desirable work practices for each wood furniture manufacturing operation and address each of the work practices contained in paragraphs (b) to (d) and (f) to (k) of 40 CFR §63.803.
- d. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, and then these emission limitations/control measures no longer apply: b)(1)d and b)(2)d.
- e. The permittee shall use only low VOC coatings in these emissions units to meet the following VOC content requirements:
  - i. 2.50 pounds per gallon, as applied, for molding toners;



- ii. 2.75 pounds per gallon, as applied, for molding stains;
  - iii. 0.40 pound per gallon, as applied, for molding sealers; and
  - iv. 0.10 pound per gallon, as applied, for molding topcoats.
- f. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from these air contaminant sources since the uncontrolled potential to emit for VOC is less than 10 tons/year for each emissions unit R006 and R007.

- g. In accordance with 40 CFR §63.800(b)(3), this facility meets the following limits and criteria, is an area source for 40 CFR Part 63, Subject JJ, and is not subject to any other provision of the subpart. If the facility subsequently exceeds the limits and criteria limited in this section and becomes a major source, the permittee must comply thereafter with all applicable provisions of 40 CFR Part 63, Subject JJ starting on the applicable compliance date in §63.800 and shall not exceed the HAP emission limitations contained in this permit without first obtaining a permit modification.
- i. no more than 5.0 tons of any individual HAP per rolling, 12-month period;
  - ii. no more than 12.5 tons of total combined HAP per rolling, 12-month period; and
  - iii. at least 90 percent of the facility-wide emissions per rolling, 12-month period are associated with the manufacture of wood furniture or wood furniture components.

c) **Operational Restrictions**

- (1) The permittee shall operate the dry filtration system for the control of particulate emissions whenever the emissions unit is in operation and shall maintain the dry particulate filter in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.
- (2) In the event the particulate filter system is not operating in accordance with the manufacturer's recommendations, instructions, or operating manual, with any modifications deemed necessary by the permittee, the control device shall be expeditiously repaired or otherwise returned to these documented operating conditions.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the dry particulate filter, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.



- (2) The permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency and it shall be made available to the Ohio EPA upon request.
- (3) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.
- (4) The permittee shall document each inspection (periodic and annual) of the dry particulate filter system and shall maintain the following information:
  - a. the date of the inspection;
  - b. a description of each/any problem identified and the date it was corrected;
  - c. a description of any maintenance and repairs performed; and
  - d. the name of person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

- (5) The permittee shall maintain records that document any time periods when the dry particulate filter was not in service when the emissions unit(s) was/were in operation, as well as, a record of all operations during which the dry particulate filter was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.
- (6) The permittee shall employ the following procedures for determining the VOC content and solids content of a coating.
  - a. The as-applied VOC content of a finishing material that is applied by a continuous coater shall be determined by the VOC content of the finishing material in the reservoir and the VOC content as calculated from records.
  - b. The VOC content and solids content of a coating shall be determined in accordance with paragraph (B) of OAC rule 3745-21-10 wherein formulation data or USEPA Method 24 procedures (which include various ASTM measurement methods) may be employed.
  - c. A certified product data sheet that provides data on VOC content and solids content shall be used by the permittee provided that any data based upon a measurement method shall be a measurement method that meets paragraph (I) of OAC rule 3745-21-15.



- (7) All records required under OAC rule 3745-21-15(K) shall be retained for a period of not less than five years and shall be made available to the Director or any authorized representative of the director for review during normal business hours. The following types of records are to be maintained.
- a. Compliance demonstration records for finishing operations:
    - i. a record of the VOC emission requirement elected to be met under any one paragraph of paragraphs (D)(1) to (D)(5) of OAC rule 3745-21-15 for each day of operation of the finishing operation;
    - ii. a certified product data sheet for each finishing material that is subject to a VOC emission requirement elected to be met under paragraph (K)(2)(a) of OAC rule 3745-21-15, and a certified product data sheet for any thinners or other VOC material added to the finishing materials before application; and
    - iii. a record of the VOC content, in pounds of VOC per pound of solids, as applied, of each finishing material, other than a stain, that is subject to a VOC content limit or a daily VOC emissions limit under paragraph (D) of OAC rule 3745-21-15, including documentation on any thinner or other VOC added to the finishing material before application.
    - iv. records pertaining to VOC content for a continuous coater in accordance with OAC rule 3745-21-15(K)(2)(e)(i):
      - (a) for each day of operation, the gallons of each material (finishing material and thinner) added to the continuous coater reservoir.
      - (b) for each day of operation, the VOC content of the finishing material in the reservoir and the VOC content as calculated from records.
  - b. Work practice implementation plan records:
    - i. records demonstrating that the operator training program required by 40 CFR 63.803(b) is in place;
    - ii. records collected in accordance with the inspection and maintenance plan required by 40 CFR 63.803(c);
    - iii. records associated with the cleaning solvent accounting system required by 40 CFR 63.803(d);
    - iv. records associated with the limitation on the use of conventional air spray guns showing total finishing material usage and the percentage of finishing materials applied with conventional air spray guns for each semi-annual period as required by 40 CFR 63.803(h); and
    - v. copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.



- (8) The permittee shall collect and record the following information each month for emissions units R004, R005, R006 and R007:
- a. the company identification and type of each coating employed; and
  - b. the VOC content of each coating, in pounds per gallon.
- e) Reporting Requirements
- (1) The permittee shall submit semiannual compliance status reports concerning the requirements specified in OAC rule 3745-21-15 no later January 30 (covering period of July to December of previous year) and July 30 (covering period of January to June of the same year) to the Ohio EPA Northeast District Office. For each semiannual compliance status report, the permittee shall submit the following information for the 6-month period covered by the report:
- a. For any finishing operation subject to paragraph (D) of OAC rule 3745-21-15, any changes to the previous reporting of which paragraph of paragraphs (D)(1) to (D)(5) of OAC rule 3745-21-15 is elected to be met.
  - b. For any topcoat or sealer that is applied by means of a continuous coater, any changes to the means of compliance previously reported. If the change pertains to the use of the procedures of paragraph (I)(5)(b) of OAC rule 3745-21-15 for the VOC content and viscosity measurements of a continuous coater, data that demonstrates the correlation between the viscosity of the finishing material and the VOC content of the finishing material in the reservoir.
  - c. Compliance certification for semiannual reporting period including the following compliance certifications, where applicable:
    - i. For any topcoat or sealer that is subject to the VOC content limit of paragraph (D)(1), (D)(2), (D)(4)(b), or (D)(5)(b) of OAC rule 3745-21-15 and that complies by the procedures of paragraphs (I)(1) to (I)(4) of OAC rule 3745-21-15, the compliance certification shall state that compliant coatings for topcoats and sealers, as applicable, have been used each operating day in the semiannual reporting period, or should otherwise identify the periods of use of noncompliant coatings for topcoats and sealers, as applicable, the reasons for the use of noncompliant coatings, and the amounts and VOC contents of each noncompliant coating used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.
    - ii. For any topcoat or sealer that is applied by means of a continuous coater, that is subject to the VOC content limit of paragraph (D)(1), (D)(2), (D)(4)(b), or (D)(5)(b) of OAC rule 3745-21-15, and that complies by the procedures of paragraph (I)(5) of OAC rule 3745-21-15, the compliance certification shall state the following, whichever is applicable:
      - (a) The compliance certification shall state that compliant coatings, as determined by the procedures of paragraph (I)(5)(a) of OAC rule



3745-21-15, have been used each operating day in the semiannual reporting period, or should otherwise identify the periods of use of noncompliant coatings, the reasons for the use of noncompliant coatings, and the amounts and VOC contents of each noncompliant coating used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.

- (b) The compliance certification shall state that compliant coatings, as determined by the procedures of paragraph (1)(5)(b) of OAC rule 3745-21-15, have been used each operating day in the semiannual reporting period, or should otherwise identify the periods of use of noncompliant coatings, the reasons for the use of noncompliant coatings, and the amounts and VOC contents of each noncompliant coating used. Additionally, the certification shall state that the viscosity of the finishing material in the reservoir has not been less than the viscosity of the initial finishing material, that is, the material that is initially mixed and placed in the reservoir, for any day in the semiannual reporting period. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.
  - iii. For wood furniture manufacturing operations subject to the work practice requirements of paragraph (F) of OAC rule 3745-21-15, the compliance certification shall state that the work practice implementation plan is being followed, or should otherwise identify the provisions of the plan that have not been implemented and each day the provisions were not implemented.
  - iv. The compliance certification shall identify and describe any corrective actions considered and implemented for any noncompliance being reported in the compliance certification.
  - v. The compliance certification shall be signed by a responsible official of the company that owns or operates the wood furniture manufacturing operations.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- f) Testing Requirements
  - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emission Limitation:

The permittee shall use only low VOC coatings in these emissions units to meet the following VOC content requirements:

- i. 2.50 pounds per gallon, as applied, for molding toners;
- ii. 2.75 pounds per gallon, as applied, for molding stains;
- iii. 0.40 pound per gallon, as applied, for molding sealers; and
- iv. 0.10 pound per gallon, as applied, for molding topcoats.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(8)b.

b. Emission Limitation:

The VOC content of any topcoat shall not exceed 0.8 pound of VOC per pound of solids, as applied.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(6) and d)(7).

g) Miscellaneous Requirements

- (1) None.