

**Synthetic Minor Determination and/or**  **Netting Determination**  
 Permit To Install **02-22933**

**A. Source Description**

Walnut Creek Finishing finishes wood furniture for its retail store. This PTI is for the Chapter 31 modification of four wood coating operations originally permitted in 2003.

**B. Facility Emissions and Attainment Status**

The facility is located in Wayne County, which is attainment for all criteria pollutants. The facility emits VOC from four permitted furniture finishing spray booths, and permit exempt fuel burning operations. The facility-wide Potential to Emit are 213.6 tons of VOC emissions, 12.2 tons of single HAP and 25.5 tons of combined HAPs.

**C. Source Emissions**

R001 - Wood furniture coating operation in Booth 4 equipped with dry overspray filters and one HVLP spray gun/pump previously permitted under PTI 02-21638 (2/23/06). Pieces are manually moved and air dried. The facility uses both photochemically reactive and nonphotochemically reactive coatings at this time. Days when a PRM is employed, the unit is subject to OAC rule 3745-21-07(G)(2).

R002 - Wood furniture coating operation in Booth 1 equipped with dry overspray filters and one airless spray gun/pump previously permitted under PTI 02-21638 (2/23/06). Pieces are manually moved and air dried. The facility uses both photochemically reactive and nonphotochemically reactive coatings at this time. Days when a PRM is employed, the unit is subject to OAC rule 3745-21-07(G)(2).

R003 - Wood furniture coating operation in Booth 3 equipped with dry overspray filters and one airless spray gun/pump previously permitted under PTI 02-21638 (2/23/06). Pieces are manually moved and air dried. The facility uses both photochemically reactive and nonphotochemically reactive coatings at this time. Days when a PRM is employed, the unit is subject to OAC rule 3745-21-07(G)(2).

R004 - Wood furniture coating operation in Booth 2 equipped with dry overspray filters and one HVLP spray gun/pump previously permitted under PTI 02-21638 (2/23/06). Pieces are manually moved and air dried. The facility uses both photochemically reactive and nonphotochemically reactive coatings at this time. Days when a PRM is employed, the unit is subject to OAC rule 3745-21-07(G)(2).

Other PTI exempt boilers are included in the calculations below.

The potential to emit for this facility:

EU	VOC (TPY)	combined HAP (TPY)	single HAP (TPY)
R001	94.78	4.91	4.14
R002	61.98	4.53	3.85
R003	61.98	4.53	3.85
R004	30.13	2.26	1.93
exempt boilers	0.12	0	0
Total	248.99	16.23	13.77

The allowable emissions including the federally enforceable limits in this PTI limit the PTE to:

EU	VOC (TPY)	combined HAP (TPY)	single HAP (TPY)
R001, R002, R003 and R004 combined	24.9	1.75	1.49
exempt boilers	0.12	0	0
Total	25.02	1.75	1.49

**D. Conclusion**

The federally enforceable limits for the coating VOC emissions, as a rolling, 12-month summation, and the associated record keeping and reporting in this PTI is sufficient to reduce the facility's PTE for VOC below the Title V. The federally enforceable limits on the single and combined HAP contents restricts the source below Title V thresholds due to the limits the VOC usage (because the primary constituent of HAP is VOC).



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL  
HOLMES COUNTY**

**CERTIFIED MAIL**

Street Address:

Mailing Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Lazarus Gov.  
Center

**Application No: 02-22933**

**Fac ID: 0238000181**

**DATE: 3/13/2008**

Walnut Creek Finishing  
Dale Miller  
PO Box 24  
Walnut Creek, OH 44687

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43216-1049.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$800** will be due. Please do not submit any payment now.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

*Michael W. Ahern*

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

NEDO



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

**Permit To Install  
Terms and Conditions**

**Issue Date: To be entered upon final issuance  
Effective Date: To be entered upon final issuance**

**DRAFT PERMIT TO INSTALL 02-22933**

Application Number: 02-22933  
Facility ID: 0238000181  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: Walnut Creek Finishing  
Person to Contact: Dale Miller  
Address: PO Box 24  
Walnut Creek, OH 44687

Location of proposed air contaminant source(s) [emissions unit(s)]:

**3468 State Route 39  
Millersburg, Ohio**

Description of proposed emissions unit(s):

**Chapter 31 modification to allow the use of photochemically reactive paints.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

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Chris Korleski  
Director

Walnut Creek Finishing

PTI Application: 02-22933

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

Facility ID: 0238000181

## **A. Permit to Install General Terms and Conditions**

### **1. Compliance Requirements**

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

### **3. Records Retention Requirements**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

### **4. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections,

**Walnut Creek Finishing****Facility ID: 0238000181****PTI Application: 02-22933****Issued: To be entered upon final issuance**

conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental

**Walnut Creek Finishing**

**Facility ID: 0238000181**

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Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

#### **10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

#### **11. Applicability**

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

#### **12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available

**Walnut Creek Finishing**

**Facility ID: 0238000181**

**PTI Application: 02-22933**

**Issued: To be entered upon final issuance**

Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

**13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this

Emissions Unit ID: **R001**

permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

**14. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**15. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

**B. Permit to Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)  
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<b>Pollutant</b>	<b><u>Tons Per Year</u></b>
VOC	24.9

**Walnut  
PTI A**

Emissions Unit ID: **R001**

**Issued: To be entered upon final issuance**

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (R001) - Wood furniture coating operation in Booth 4 consisting of one manual, HVLP spray gun/pump and booth with overspray filters. Pieces are manually moved and air dried.**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See sections A.2.b, A.2.c and B.1 below.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and OAC rule 3745-17-11(C).
OAC rule 3745-31-05(C)	See sections A.2.d and B.2 below.
OAC rule 3745-17-11(C)	See section B.1 below.
OAC rule 3745-21-07(G)	See section A.2.a below.
OAC rule 3745-114-01	See sections C.5, C.6, C.7, C.8 and D.4 below.

**2. Additional Terms and Conditions**

- 2.a Each day that a photochemically reactive material [as defined in OAC 3745-21-01(C)(5)] is employed, the organic compound (OC) emissions from all coatings and photochemically reactive cleanup material shall not exceed 8 pounds per hour and 40 pounds per day. OC emissions from cleanup material that is not a photochemically reactive material shall not be included in showing compliance with these emission limitations.

The OC emission limitations of 8 pounds per hour and 40 pounds per day when photochemically reactive coatings or clean up materials are employed shall cease to be effective and federally enforceable on the date the U.S. EPA approves the revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is added to the Ohio SIP, the emission limitations, monitoring, record keeping, reporting and testing requirements

Emissions Unit ID: **R001**

related to these hourly and daily limitations included in sections C.2, C.3.b, D.2.a, E.1.a and E.1.b shall be void.

- 2.b** Each day that photochemically reactive materials [as defined in OAC rule 3745-21-01(C)(5)] are not employed, the volatile organic compound (VOC) emissions from coatings shall not exceed 21.53 pounds per hour. This emission limitation is based upon the maximum coating application rate of 3.5 gallons per hour.

The requirement to comply with this emission limitation only on days when photochemically reactive coating or clean up material are not employed shall cease on the date the U.S. EPA approves revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the revised rule is added to the Ohio SIP, this emission limitation shall be effective every day the emissions unit is in operation.

- 2.c** The VOC emissions from all coatings and cleanup materials from this emissions unit, and from emissions units R001, R002, R003 and R004, combined, shall not exceed 24.9 tons per year, as a rolling, 12-month summation.
- 2.d** The VOC content of coatings shall not exceed 6.15 pounds per gallon, as applied.

## **B. Operational Restrictions**

1. All exhaust from the spray booth shall pass through the dry filters whenever this emissions unit is in operation.
2. The maximum emissions from coating and cleanup material usage for this emissions unit and for emissions units R001, R002, R003 and R004, combined, shall not exceed 24.9 tons of VOC per rolling, 12-month period. The permittee has existing coating and clean up material usage records such that there is no need for first year monthly VOC emission limitations.

## **C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document all time periods when the dry filters were not in service when the emissions unit was in operation.
2. The permittee shall collect and record the following information for each day that photochemically reactive coatings or cleanup material are employed in this emissions

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unit:

- a. the company identification for each coating and photochemically reactive cleanup material employed;
- b. the number of gallons of each coating and photochemically reactive cleanup material employed minus the number of gallons of coating and/or cleanup material recovered for disposal;
- c. the OC content of each coating and photochemically reactive cleanup material, in pounds OC per gallon;
- d. the total emissions rate for all coatings and photochemically reactive cleanup materials, in pounds OC per day;
- e. the total number of hours the emissions unit was in operation;
- f. the average hourly OC emission rate for all coatings and photochemically reactive cleanup materials, i.e., (d)/(e), in pounds per hour (average);
- g. the VOC content of each coating and photochemically reactive cleanup material, in pounds VOC per gallon; and
- h. the total emissions rate for all coatings and photochemically reactive cleanup materials, in pounds VOC per day.

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, section C.2 will be voided entirely.]

3. The permittee shall collect and record the following information for each day that photochemically reactive coatings or cleanup materials are not employed in this emissions unit:
  - a. the company identification for each coating or cleanup material employed;
  - b. documentation that photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) was not used;

- c. the VOC content of each coating, in lbs/gallon as applied;
- d. the number of gallons of each coating employed minus the number of gallons of coating recovered for disposal;
- e. the total VOC emissions from all coatings employed, in lbs/day, i.e., sum of (c) times (d);
- f. the total number of hours the emissions unit was in operation; and
- g. the average hourly VOC emission rate for all coatings, i.e., (e)/(f), in lbs/hr.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, the records required by this section shall be kept on a daily basis with no reference to photochemically reactive materials. Section C.3.b will be voided entirely.]

4. The permittee shall collect and record the following information for each month for the emissions unit:
  - a. the number of gallons of each nonphotochemically reactive cleanup material employed minus the number of gallons of cleanup material recovered for disposal;
  - b. the VOC content of each nonphotochemically reactive cleanup material, in lbs/gallon;
  - c. the total VOC emissions from all nonphotochemically reactive cleanup materials employed, in lbs/month, i.e., sum of (b) times (a);
  - d. the actual VOC emissions from all coatings and cleanup materials for the previous, 12-month period [i.e., sum of the daily VOC emissions (sections C.2.h + C.3.e) and the monthly nonphotochemically reactive cleanup material VOC emission (term C.6.c) for the previous, 12-month period]; and
  - e. the actual VOC emissions from emissions units R001, R002, R003 and R004, combined, for the previous, 12-month period.

[Note: Records of nonphotochemically reactive cleanup material shall be recorded monthly according to section C.4 above. After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, any reference to "nonphotochemically reactive" and "section C.2.h" shall be voided.]

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5. The permit to install for the emissions units in this PTI was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) 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 contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, 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:
  - a. 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):
    - i. 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
    - ii. 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.
  - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
  - c. 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):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Toluene

TLV (mg/m<sup>3</sup>): 453.6

Maximum Hourly Emission Rate (lbs/hr): 1.59

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 2380

Adjusted MAGLC (ug/m<sup>3</sup>): 2999 (adjusted for 100.5 hrs/wk)

The permittee, has demonstrated that emissions of xylene and toluene from emissions units R001, R002, R003 and R004 are 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).

6. Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), 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:
- a. 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;
  - b. 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
  - c. 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.).

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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" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

7. 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):
  - a. 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.);
  - b. 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);
  - c. 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
  - d. 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.
8. 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-

Emissions Unit ID: R001

level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

9. The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the control devices with any modifications deemed necessary by the permittee during the time period in which the control devices are utilized.

The permittee shall operate the control devices in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee.

10. The permittee shall conduct periodic inspections of the control devices to determine whether the devices are operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee. The periodic inspections of each control device shall be performed at a frequency that is based upon the recommendation of the manufacturer of the control device, and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency. In addition to these periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the control device while the emissions unit is shut down and perform any needed maintenance and repair for the control device to ensure that it is able to routinely operate in accordance with the manufacturer's recommendations.
11. The permittee shall document each inspection of a control device by maintaining a record that includes the date of the inspection, a description of each problem identified and the date it was corrected, a description of the maintenance and repairs performed, and the name of the person who performed the inspection.
12. In the event that the control devices are not operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee, the control devices shall be expeditiously repaired or otherwise returned to operation in accordance with such requirements. The permittee shall maintain documentation of those periods when the control devices are not operating in accordance with such requirements.

#### D. Reporting Requirements

1. The permittee shall notify the Director (Ohio EPA, Northeast District Office) in writing of any daily record showing that the dry filters were not in service or not operated in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee when the

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emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (Ohio EPA, Northeast District Office) within 30 days after the event occurs.

2. The permittee submit quarterly deviation (excursion) reports that identify:
  - a. for the days during which a photochemically reactive material was employed, each day during which the OC emissions from the coatings and photochemically reactive cleanup materials exceeded 8 pounds per hour and/or 40 pounds per day, and the actual OC emissions for each such incidence;
  - b. for the days during which a photochemically reactive material was not employed, each day during which the average VOC emissions from the coatings exceeded the pounds per hour limitation specified above, and the actual average VOC emissions for each such day;
  - c. each day during which the VOC content of any coating exceeded the pounds per gallon limitation specified above and the actual VOC content of each such coating employed; and
  - d. any exceedence of the annual VOC\* emission limitation of 24.9 tons per year, as a rolling, 12-month summation from emissions units R001, R002, R003 and R004, combined, and the actual VOC emissions during each such period.

\*based upon the premise that 100% of the solvent in the coating and clean up material employed is emitted.

The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, section D.2.a and the opening phrase of section D.2.b that references photochemically reactive material shall be voided.]

3. The permittee shall also submit annual reports that summarize the emissions of VOC from this emissions unit and from emissions units R001, R002, R003 and R004, combined.

The reports shall include the emissions calculations, shall be submitted by January 31 of each year, and shall cover the previous calendar year.

4. The permittee shall submit annual reports to the Ohio EPA, Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model (including the air toxic compounds emitted and the emission rate), 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. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

#### **E. Testing Requirements**

1. Compliance with the allowable emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:

8 pounds per hour of OC emissions for each day that photochemically reactive materials are employed

Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.2.f based upon the record keeping requirements specified in section C.2.
  - b. Emission Limitation:

40 pounds per day of OC emissions for each day that photochemically reactive materials are employed

Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.2.d based upon the record keeping requirements specified in section C.2.
  - c. Emission Limitation:

21.53 pounds VOC emissions per hour for each day that photochemically reactive materials are not employed

Applicable Compliance Method:

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Compliance shall be demonstrated by the daily values calculated in section C.3.g based on the record keeping requirements specified in section C.3.

d. Emission Limitation:

24.9 tons of VOC emissions per year from all coatings and cleanup material from R001 and from R001, R002, R003 and R004, combined

Applicable Compliance Method:

Compliance shall be demonstrated by the values recorded in sections C.4.d and C.4.e based on the record keeping requirements specified in sections C.2, C.3 and C.4.

e. Emission Limitation:

6.15 pounds of VOC per gallon coating, as applied

Applicable Compliance Method:

Any determination of VOC content, solids contents, or density of coating material shall be based on the coating materials as employed (as applied), including the addition of any thinner or viscosity reducer to the coatings. In accordance with OAC rule 3745-21-04(B)(5), the permittee shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating materials, or from data determined by an analysis of each coating, as applied, by Reference Method 24 or Method 24A. If, pursuant to section 11.4 of Method 24, 40 CFR Part 60, Appendix A (revised as of July 1, 2001), an owner or operator determines that Method 24 or Method 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 and/or Method 24A.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, sections E.1.a and E.1.b, the reference to photochemically reactive materials in section E.1.c and the reference to section C.2 in section E.1.d shall be voided.]

**F. Miscellaneous Requirements**

**Walnut Creek Finishing**

**PTI Application: 02-22022**

**Issue**

**Facility ID: 0238000181**

**Emissions Unit ID: R001**

1. The terms and conditions contained in this permit for this emissions unit shall supersede all the air pollution control requirements for the emissions unit contained in the permit to install 02-21638 issued on February 23, 2006.
2. In accordance with the provisions of OAC rule 3745-31-05(C), the following terms and conditions of this permit to install are federally enforceable: A through F, except C.5, C.6, C.7, C.8 and D.4.

Walnut

PTI A

Emissions Unit ID: R002

Issued: To be entered upon final issuance

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(R002) - Wood furniture coating operation in Booth 1 consisting of one manual, airless spray gun/pump and booth with overspray filters. Pieces are manually moved and air dried.**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See sections A.2.b, A.2.c and B.1 below.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and OAC rule 3745-17-11(C).
OAC rule 3745-31-05(C)	See sections A.2.d and B.2 below.
OAC rule 3745-17-11(C)	See section B.1 below.
OAC rule 3745-21-07(G)	See section A.2.a below.
ORC 3704.03(F)(4)(c)	See section B.3 below.
OAC rule 3745-114-01	See sections C.6, C.7, C.8, C.9 and D.4 below.

**2. Additional Terms and Conditions**

- 2.a Each day that a photochemically reactive material [as defined in OAC 3745-21-01(C)(5)] is employed, the organic compound (OC) emissions from all coatings and photochemically reactive cleanup material shall not exceed 8 pounds per hour and 40 pounds per day. OC emissions from cleanup material that is not a photochemically reactive material shall not be included in showing compliance with these emission limitations.

The OC emission limitations of 8 pounds per hour and 40 pounds per day when photochemically reactive coatings or clean up materials are employed shall cease to be effective and federally enforceable on the date the U.S. EPA approves the revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is added to the Ohio SIP, the emission

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PTI A**Emissions Unit ID: **R002****Issued: To be entered upon final issuance**

limitations, monitoring, record keeping, reporting and testing requirements related to these hourly and daily limitations included in sections C.2, C.3.b, D.2.a, E.1.a and E.1.b shall be void.

- 2.b** Each day that photochemically reactive materials [as defined in OAC rule 3745-21-01(C)(5)] are not employed, the volatile organic compound (VOC) emissions from coatings shall not exceed 14.04 pounds per hour. This emission limitation is based upon the maximum coating application rate of 2.2 gallons per hour.

The requirement to comply with this emission limitation only on days photochemically reactive coating or clean up material are not employed shall cease on the date the U.S. EPA approves revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the revised rule is added to the Ohio SIP, this emission limitation shall be effective every day the emissions unit is in operation.

- 2.c** The VOC emissions from all coatings and cleanup materials from this emissions unit, and from emissions units R001, R002, R003 and R004, combined, shall not exceed 24.9 tons per year, as a rolling, 12-month summation.
- 2.d** The VOC content of coatings shall not exceed 6.38 pounds per gallon, as applied.

**B. Operational Restrictions**

1. All exhaust from the spray booth shall pass through the dry filters whenever this emissions unit is in operation.
2. The maximum emissions from coating and cleanup material usage for this emissions unit and for emissions units R001, R002, R003 and R004, combined, shall not exceed 24.9 tons of VOC per rolling, 12-months. The permittee has existing coating and clean up material usage records such that there is no need for first year monthly VOC emission limitations.
3. The hours of operation of this emissions unit shall not exceed 100.5 hours per week.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document all time periods when the dry filters were not in service when the emissions unit was in operation.

2. The permittee shall collect and record the following information for each day that photochemically reactive coatings or cleanup material are employed in this emissions unit:
  - a. the company identification for each coating and photochemically reactive cleanup material employed;
  - b. the number of gallons of each coating and photochemically reactive cleanup material employed minus the number of gallons of coating and/or cleanup material recovered for disposal;
  - c. the OC content of each coating and photochemically reactive cleanup material, in pounds OC per gallon;
  - d. the total emissions rate for all coatings and photochemically reactive cleanup materials, in pounds OC per day;
  - e. the total number of hours the emissions unit was in operation;
  - f. the average hourly OC emission rate for all coatings and photochemically reactive cleanup materials, i.e., (d)/(e), in pounds per hour (average);
  - g. the VOC content of each coating and photochemically reactive cleanup material, in pounds VOC per gallon; and
  - h. the total emissions rate for all coatings and photochemically reactive cleanup materials, in pounds VOC per day.

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, section C.2 will be voided entirely.]

3. The permittee shall collect and record the following information for each day that photochemically reactive coatings or cleanup materials are not employed in this emissions unit:
  - a. the company identification for each coating or cleanup material employed;

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- b. documentation that photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) was not used;
- c. the VOC content of each coating, in lbs/gallon as applied;
- d. the number of gallons of each coating employed minus the number of gallons of coating recovered for disposal;
- e. the total VOC emissions from all coatings employed, in lbs/day, i.e., sum of (c) times (d);
- f. the total number of hours the emissions unit was in operation; and
- g. the average hourly VOC emission rate for all coatings, i.e., (e)/(f), in lbs/hr.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, the records required by this section shall be kept on a daily basis with no reference to photochemically reactive materials. Section C.3.b will be voided entirely.]

4. The permittee shall record each week the total number of hours the emissions unit was in operation; i.e., sum of (C.2.e plus C.3.f).

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, the reference to C.2.e shall be voided.]

5. The permittee shall collect and record the following information for each month for the emissions unit:
  - a. the number of gallons of each nonphotochemically reactive cleanup material employed minus the number of gallons of cleanup material recovered for disposal;
  - b. the VOC content of each nonphotochemically reactive cleanup material, in lbs/gallon;
  - c. the total VOC emissions from all nonphotochemically reactive cleanup materials employed, in lbs/month, i.e., sum of (b) times (a);
  - d. the actual VOC emissions from all coatings and cleanup materials for the previous, 12-month period [i.e., sum of the daily VOC emissions (sections C.2.h + C.3.e) and the monthly nonphotochemically reactive cleanup material VOC

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emission (term C.6.c) for the previous, 12-month period]; and

- e. the actual VOC emissions from emissions units R001, R002, R003 and R004, combined, for the previous, 12-month period.

[Note: Records of nonphotochemically reactive cleanup material shall be recorded monthly according to section C.5 above. After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, any reference to "nonphotochemically reactive" and "section C.2.h" shall be voided.]

- 6. The permit to install for the emissions units in this PTI was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) 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 contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, 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:
  - a. 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):
    - i. 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
    - ii. 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.

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- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. 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):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Toluene

TLV (mg/m<sup>3</sup>): 453.6

Maximum Hourly Emission Rate (lbs/hr): 1.59

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 2380

Adjusted MAGLC (ug/m<sup>3</sup>): 2999 (adjusted for 100.5 hrs/wk)

The permittee, has demonstrated that emissions of xylene and toluene from emissions units R001, R002, R003 and R004 are 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).

- 7. Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), 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:
  - a. 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;

- b. 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
- c. 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" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

- 8. 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):
  - a. 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.);
  - b. 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);
  - c. 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

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- d. 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.
9. 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.
10. The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the control devices with any modifications deemed necessary by the permittee during the time period in which the control devices are utilized.

The permittee shall operate the control devices in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee.
11. The permittee shall conduct periodic inspections of the control devices to determine whether the devices are operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee. The periodic inspections of each control device shall be performed at a frequency that is based upon the recommendation of the manufacturer of the control device, and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency. In addition to these periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the control device while the emissions unit is shut down and perform any needed maintenance and repair for the control device to ensure that it is able to routinely operate in accordance with the manufacturer's recommendations.
12. The permittee shall document each inspection of a control device by maintaining a record that includes the date of the inspection, a description of each problem identified and the date it was corrected, a description of the maintenance and repairs performed, and the name of the person who performed the inspection.
13. In the event that the control devices are not operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee, the control devices shall be expeditiously repaired or otherwise returned to operation in accordance with such

requirements. The permittee shall maintain documentation of those periods when the control devices are not operating in accordance with such requirements.

#### **D. Reporting Requirements**

1. The permittee shall notify the Director (Ohio EPA, Northeast District Office) in writing of any daily record showing that the dry filters were not in service or not operated in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (Ohio EPA, Northeast District Office) within 30 days after the event occurs.
2. The permittee submit quarterly deviation (excursion) reports that identify:
  - a. for the days during which a photochemically reactive material was employed, each day during which the OC emissions from the coatings and photochemically reactive cleanup materials exceeded 8 pounds per hour and/or 40 pounds per day, and the actual OC emissions for each such incidence;
  - b. for the days during which a photochemically reactive material was not employed, each day during which the average VOC emissions from the coatings exceeded the pounds per hour limitation specified above, and the actual average VOC emissions for each such day;
  - c. each day during which the VOC content of any coating exceeded the pounds per gallon limitation specified above and the actual VOC content of each such coating employed;
  - d. any exceedence of the annual VOC\* emission limitation of 24.9 tons per year, as a rolling, 12-month summation from emissions units R001, R002, R003 and R004, combined, and the actual VOC emissions during each such period; and
  - e. any exceedence of the weekly hours of operation limitation, and the actual hours operated.

\*based upon the premise that 100% of the solvent in the coating and cleanup material employed is emitted.

The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this

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permit.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, section D.2.a and the opening phrase of section D.2.b that references photochemically reactive material shall be voided.]

3. The permittee shall also submit annual reports that summarize the emissions of VOC from this emissions unit and from emissions units R001, R002, R003 and R004, combined.

The reports shall include the emissions calculations, shall be submitted by January 31 of each year, and shall cover the previous calendar year.

4. The permittee shall submit annual reports to the Ohio EPA, Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model (including the air toxic compounds emitted and the emission rate), 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. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

## **E. Testing Requirements**

1. Compliance with the allowable emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

8 pounds per hour of OC emissions for each day that photochemically reactive materials are employed

Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.2.f based upon the record keeping requirements specified in section C.2.

- b. Emission Limitation:

40 pounds per day of OC emissions for each day that photochemically reactive materials are employed

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Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.2.d based upon the record keeping requirements specified in section C.2.

## c. Emission Limitation:

14.04 pounds VOC emissions per hour for each day that photochemically reactive materials are not employed

Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.3.g based on the record keeping requirements specified in section C.3.

## d. Emission Limitation:

24.9 tons of VOC emissions per year from all coatings and cleanup material from R001 and from R001, R002, R003 and R004, combined

Applicable Compliance Method:

Compliance shall be demonstrated by the values recorded in sections C.5.d and C.5.e based on the record keeping requirements specified in sections C.2, C.3 and C.5.

## e. Emission Limitation:

6.38 pounds of VOC per gallon coating, as applied

Applicable Compliance Method:

Any determination of VOC content, solids contents, or density of coating material shall be based on the coating materials as employed (as applied), including the addition of any thinner or viscosity reducer to the coatings. In accordance with OAC rule 3745-21-04(B)(5), the permittee shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating materials, or from data determined by an analysis of each coating, as applied, by Reference Method 24 or Method 24A. If, pursuant to section 11.4 of Method 24, 40 CFR Part 60, Appendix A (revised as of July 1, 2001), an owner or operator determines that Method 24 or Method 24A cannot be used for a particular

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coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 and/or Method 24A.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, sections E.1.a and E.1.b, the reference to photochemically reactive materials in section E.1.c and the reference to section C.2 in section E.1.d shall be voided.]

**F. Miscellaneous Requirements**

1. The terms and conditions contained in this permit for this emissions unit shall supersede all the air pollution control requirements for the emissions unit contained in the permit to install 02-21638 issued on February 23, 2006.
2. In accordance with the provisions of OAC rule 3745-31-05(C), the following terms and conditions of this permit to install are federally enforceable: A through F, except B.3, C.4, C.6, C.7, C.8, C.9, D.2.e and D.4.

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PTI A

Emissions Unit ID: R003

Issued: To be entered upon final issuance

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment -(R003) - Wood furniture coating operation in Booth 3 consisting of one manual, airless spray gun/pump and booth with overspray filters. Pieces are manually moved and air dried.**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See sections A.2.b, A.2.c and B.1 below.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and OAC rule 3745-17-11(C).
OAC rule 3745-31-05(C)	See sections A.2.d and B.2 below.
OAC rule 3745-17-11(C)	See section B.1 below.
OAC rule 3745-21-07(G)	See section A.2.a below.
ORC 3704.03(F)(4)(c)	See section B.3 below.
OAC rule 3745-114-01	See sections C.6, C.7, C.8, C.9 and D.4 below.

**2. Additional Terms and Conditions**

- 2.a Each day that a photochemically reactive material [as defined in OAC 3745-21-01(C)(5)] is employed, the organic compound (OC) emissions from all coatings and photochemically reactive cleanup material shall not exceed 8 pounds per hour and 40 pounds per day. OC emissions from cleanup material that is not a photochemically reactive material shall not be included in showing compliance with these emission limitations.

The OC emission limitations of 8 pounds per hour and 40 pounds per day when photochemically reactive coatings or clean up materials are employed shall cease to be effective and federally enforceable on the date the U.S. EPA approves the revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is added to the Ohio SIP, the emission

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limitations, monitoring, record keeping, reporting and testing requirements related to these hourly and daily limitations included in sections C.2, C.3.b, D.2.a, E.1.a and E.1.b shall be void.

- 2.b** Each day that photochemically reactive materials [as defined in OAC 3745-21-01(C)(5)] are not employed, the volatile organic compound (VOC) emissions from coatings shall not exceed 14.04 pounds per hour. This emission limitation is based upon the maximum application rate of 2.2 gallons per hour.

The requirement to comply with this emission limitation only on days photochemically reactive coating or clean up material are not employed shall cease on the date the U.S. EPA approves revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the revised rule is added to the Ohio SIP, this emission limitation shall be effective every day the emissions unit is in operation.

- 2.c** The VOC emissions from all coatings and cleanup materials from this emissions unit, and from emissions units R001, R002, R003 and R004, combined, shall not exceed 24.9 tons per year, as a rolling, 12-month summation.
- 2.d** The VOC content of coatings shall not exceed 6.38 pounds per gallon, as applied.

## **B. Operational Restrictions**

1. All exhaust from the spray booth shall pass through the dry filters whenever this emissions unit is in operation.
2. The maximum emissions from coating and cleanup material usage for this emissions unit and for emissions units R001, R002, R003 and R004, combined, shall not exceed 24.9 tons of VOC per rolling, 12-months. The permittee has existing coating and clean up material usage records such that there is no need for first year monthly VOC emission limitations.
3. The hours of operation of this emissions unit shall not exceed 100.5 hours per week.

## **C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document all time periods when the dry filters were not in service when the emissions unit was in operation.

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2. The permittee shall collect and record the following information for each day that photochemically reactive coatings or cleanup material are employed in this emissions unit:
  - a. the company identification for each coating and photochemically reactive cleanup material employed;
  - b. the number of gallons of each coating and photochemically reactive cleanup material employed minus the number of gallons of coating and/or cleanup material recovered for disposal;
  - c. the OC content of each coating and photochemically reactive cleanup material, in pounds OC per gallon;
  - d. the total emissions rate for all coatings and photochemically reactive cleanup materials, in pounds OC per day;
  - e. the total number of hours the emissions unit was in operation;
  - f. the average hourly OC emission rate for all coatings and photochemically reactive cleanup materials, i.e., (d)/(e), in pounds per hour (average);
  - g. the VOC content of each coating and photochemically reactive cleanup material, in pounds VOC per gallon; and
  - h. the total emissions rate for all coatings and photochemically reactive cleanup materials, in pounds VOC per day.

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, section C.2 will be voided entirely.]

3. The permittee shall collect and record the following information for each day that photochemically reactive coatings or cleanup materials are not employed in this emissions unit:
  - a. the company identification for each coating or cleanup material employed;

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- b. documentation that photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) was not used;
- c. the VOC content of each coating, in lbs/gallon as applied;
- d. the number of gallons of each coating employed minus the number of gallons of coating recovered for disposal;
- e. the total VOC emissions from all coatings employed, in lbs/day, i.e., sum of (c) times (d);
- f. the total number of hours the emissions unit was in operation; and
- g. the average hourly VOC emission rate for all coatings, i.e., (e)/(f), in lbs/hr.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, the records required by this section shall be kept on a daily basis with no reference to photochemically reactive materials. Section C.3.b will be voided entirely.]

- 4. The permittee shall record each week the total number of hours the emissions unit was in operation; i.e., sum of (C.2.e plus C.3.f).

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, the reference to C.2.e shall be voided.]

- 5. The permittee shall collect and record the following information for each month for the emissions unit:
  - a. the number of gallons of each nonphotochemically reactive cleanup material employed minus the number of gallons of cleanup material recovered for disposal;
  - b. the VOC content of each nonphotochemically cleanup material, in lbs/gallon;
  - c. the total VOC emissions from all nonphotochemically reactive cleanup materials employed, in lbs/month, i.e., sum of (b) times (a);
  - d. the actual VOC emissions from all coatings and cleanup materials for the previous, 12-month period [i.e., sum of the daily VOC emissions (sections C.2.h + C.3.e) and the monthly nonphotochemically reactive cleanup material VOC emission (term C.6.c) for the previous, 12-month period]; and

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- e. the actual VOC emissions from emissions units R001, R002, R003 and R004, combined, for the previous, 12-month period.

[Note: Records of nonphotochemically reactive cleanup material shall be recorded monthly according to section C.5 above. After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, any reference to "nonphotochemically reactive" and "section C.2.h" shall be voided.]

6. The permit to install for the emissions units in this PTI was evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) 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 contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, 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:
  - a. 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):
    - i. 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
    - ii. 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.
  - b. The TLV is divided by ten to adjust the standard from the working population to

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the general public (TLV/10).

- c. 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):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Toluene

TLV (mg/m<sup>3</sup>): 453.6

Maximum Hourly Emission Rate (lbs/hr): 1.59

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 2380

Adjusted MAGLC (ug/m<sup>3</sup>): 2999 (adjusted for 100.5 hrs/wk)

The permittee, has demonstrated that emissions of xylene and toluene from emissions units R001, R002, R003 and R004 are 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).

7. Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), 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:
- a. 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;

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- b. 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
- c. 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" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

- 8. 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):
  - a. 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.);
  - b. 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);
  - c. 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
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air

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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.

9. 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.
10. The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the control devices with any modifications deemed necessary by the permittee during the time period in which the control devices are utilized.  

The permittee shall operate the control devices in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee.
11. The permittee shall conduct periodic inspections of the control devices to determine whether the devices are operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee. The periodic inspections of each control device shall be performed at a frequency that is based upon the recommendation of the manufacturer of the control device, and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency. In addition to these periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the control device while the emissions unit is shut down and perform any needed maintenance and repair for the control device to ensure that it is able to routinely operate in accordance with the manufacturer's recommendations.
12. The permittee shall document each inspection of a control device by maintaining a record that includes the date of the inspection, a description of each problem identified and the date it was corrected, a description of the maintenance and repairs performed, and the name of the person who performed the inspection.
13. In the event that the control devices are not operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee, the control devices shall be expeditiously repaired or otherwise returned to operation in accordance with such requirements. The permittee shall maintain documentation of those periods when the control devices are not operating in accordance with such requirements.

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1. The permittee shall notify the Director (Ohio EPA, Northeast District Office) in writing of any daily record showing that the dry filters were not in service or not operated in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (Ohio EPA, Northeast District Office) within 30 days after the event occurs.
2. The permittee submit quarterly deviation (excursion) reports that identify:
  - a. for the days during which a photochemically reactive material was employed, each day during which the OC emissions from the coatings and photochemically reactive cleanup materials exceeded 8 pounds per hour and/or 40 pounds per day, and the actual OC emissions for each such incidence;
  - b. for the days during which a photochemically reactive material was not employed, each day during which the average VOC emissions from the coatings exceeded the pounds per hour limitation specified above, and the actual average VOC emissions for each such day;
  - c. each day during which the VOC content of any coating exceeded the pounds per gallon limitation specified above and the actual VOC content of each such coating employed;
  - d. any exceedence of the annual VOC\* emission limitation of 24.9 tons per year, as a rolling, 12-month summation from emissions units R001, R002, R003 and R004, combined, and the actual VOC emissions during each such period; and
  - e. any exceedence of the weekly hours of operation limitation, and the actual hours operated.

\*based upon the premise that 100% of the solvent in the coating and clean up material employed is emitted.

The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

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[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, section D.2.a and the opening phrase of section D.2.b that references photochemically reactive material shall be voided.]

3. The permittee shall also submit annual reports that summarize the emissions of VOC from this emissions unit and from emissions units R001, R002, R003 and R004, combined.

The reports shall include the emissions calculations, shall be submitted by January 31 of each year, and shall cover the previous calendar year.

4. The permittee shall submit annual reports to the Ohio EPA, Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model (including the air toxic compounds emitted and the emission rate), 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. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

## **E. Testing Requirements**

1. Compliance with the allowable emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

8 pounds per hour of OC emissions for each day that photochemically reactive materials are employed

Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.2.f based upon the record keeping requirements specified in section C.2.

- b. Emission Limitation:

40 pounds per day of OC emissions for each day that photochemically reactive materials are employed

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Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.2.d based upon the record keeping requirements specified in section C.2.

## c. Emission Limitation:

14.04 pounds VOC emissions per hour for each day that photochemically reactive materials are not employed

Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.3.g based on the record keeping requirements specified in section C.3.

## d. Emission Limitation:

24.9 tons of VOC emissions per year from all coatings and cleanup material from R001 and from R001, R002, R003 and R004, combined

Applicable Compliance Method:

Compliance shall be demonstrated by the values recorded in sections C.5.d and C.5.e based on the record keeping requirements specified in sections C.2, C.3 and C.5.

## e. Emission Limitation:

6.38 pounds of VOC per gallon coating, as applied

Applicable Compliance Method:

Any determination of VOC content, solids contents, or density of coating material shall be based on the coating materials as employed (as applied), including the addition of any thinner or viscosity reducer to the coatings. In accordance with OAC rule 3745-21-04(B)(5), the permittee shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating materials, or from data determined by an analysis of each coating, as applied, by Reference Method 24 or Method 24A. If, pursuant to section 11.4 of Method 24, 40 CFR Part 60, Appendix A (revised as of July 1, 2001), an owner or operator determines that Method 24 or Method 24A cannot be used for a particular

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coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 and/or Method 24A.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, sections E.1.a and E.1.b, the reference to photochemically reactive materials in section E.1.c and the reference to section C.2 in section E.1.d shall be voided.]

#### **F. Miscellaneous Requirements**

1. The terms and conditions contained in this permit for this emissions unit shall supersede all the air pollution control requirements for the emissions unit contained in the permit to install 02-21638 issued on February 23, 2006.
2. In accordance with the provisions of OAC rule 3745-31-05(C), the following terms and conditions of this permit to install are federally enforceable: A through F, except B.3, C.4, C.6, C.7, C.8, C.9, D.2.e and D.4.

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**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

**Operations, Property, and/or Equipment - (R004) - Wood furniture coating operation in Booth 2 consisting of one manual, airless spray gun/pump and booth with overspray filters. Pieces are manually moved and air dried.**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See sections A.2.b, A.2.c and B.1 below.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and OAC rule 3745-17-11(C).
OAC rule 3745-31-05(C)	See sections A.2.d and B.2 below.
OAC rule 3745-17-11(C)	See section B.1 below.
OAC rule 3745-21-07(G)	See section A.2.a below.
ORC 3704.03(F)(4)(c)	See section B.3 below.
OAC rule 3745-114-01	See sections C.6, C.7, C.8, C.9 and D.4 below.

**2. Additional Terms and Conditions**

- 2.a Each day that a photochemically reactive material [as defined in OAC 3745-21-01(C)(5)] is employed, the organic compound (OC) emissions from all coatings and photochemically reactive cleanup material shall not exceed 8 pounds per hour and 40 pounds per day. OC emissions from cleanup material that is not a photochemically reactive material shall not be included in showing compliance with these emission limitations.

The OC emission limitations of 8 pounds per hour and 40 pounds per day when photochemically reactive coatings or clean up materials are employed shall cease to be effective and federally enforceable on the date the U.S. EPA approves the revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is added to the Ohio SIP, the emission

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limitations, monitoring, record keeping, reporting and testing requirements related to these hourly and daily limitations included in sections C.2, C.3.b, D.2.a, E.1.a and E.1.b shall be void.

- 2.b** Each day that photochemically reactive materials [as defined in OAC 3745-21-01(C)(5)] are not employed, the volatile organic compound (VOC) emissions from coatings shall not exceed 6.77 pounds per hour. This emission limitation is based upon the maximum application rate of 1.1 gallons per hour.

The requirement to comply with this emission limitation only on days photochemically reactive coating or clean up material are not employed shall cease on the date the U.S. EPA approves revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the revised rule is added to the Ohio SIP, this emission limitation shall be effective every day the emissions unit is in operation.

- 2.c** The VOC emissions from all coatings and cleanup materials from this emissions unit, and from emissions units R001, R002, R003 and R004, combined, shall not exceed 24.9 tons per year, as a rolling, 12-month summation.
- 2.d** The VOC content of coatings shall not exceed 6.15 pounds per gallon, as applied.

**B. Operational Restrictions**

1. All exhaust from the spray booth shall pass through the dry filters whenever this emissions unit is in operation.
2. The maximum emissions from coating and cleanup material usage for this emissions unit and for and emissions units R001, R002, R003 and R004, combined, shall not exceed 24.9 tons of VOC per rolling, 12-month period. The permittee has existing coating and clean up material usage records such that there is no need for first year monthly VOC emission limitations.
3. The hours of operation of this emissions unit shall not exceed 100.5 hours per week.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain daily records that document all time periods when the dry filters were not in service when the emissions unit was in operation.

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2. The permittee shall collect and record the following information for each day that photochemically reactive coatings or cleanup material are employed in this emissions unit:
  - a. the company identification for each coating and photochemically reactive cleanup material employed;
  - b. the number of gallons of each coating and photochemically reactive cleanup material employed minus the number of gallons of coating and/or cleanup material recovered for disposal;
  - c. the OC content of each coating and photochemically reactive cleanup material, in pounds OC per gallon;
  - d. the total emissions rate for all coatings and photochemically reactive cleanup materials, in pounds OC per day;
  - e. the total number of hours the emissions unit was in operation;
  - f. the average hourly OC emission rate for all coatings and photochemically reactive cleanup materials, i.e., (d)/(e), in pounds per hour (average);
  - g. the VOC content of each coating and photochemically reactive cleanup material, in pounds VOC per gallon; and
  - h. the total emissions rate for all coatings and photochemically reactive cleanup materials, in pounds VOC per day.

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit. Also, the definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).]

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, section C.2 will be voided entirely.]

3. The permittee shall collect and record the following information for each day that photochemically reactive coatings or cleanup materials are not employed in this emissions unit:
  - a. the company identification for each coating or cleanup material employed;

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- b. documentation that photochemically reactive material as defined in OAC rule 3745-21-01(C)(5) was not used;
- c. the VOC content of each coating, in lbs/gallon as applied;
- d. the number of gallons of each coating employed minus the number of gallons of coating recovered for disposal;
- e. the total VOC emissions from all coatings employed, in lbs/day, i.e., sum of (c) times (d);
- f. the total number of hours the emissions unit was in operation; and
- g. the average hourly VOC emission rate for all coatings, i.e., (e)/(f), in lbs/hr.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, the records required by this section shall be kept on a daily basis with no reference to photochemically reactive materials. Section C.3.b will be voided entirely.]

4. The permittee shall record each week the total number of hours the emissions unit was in operation; i.e., sum of (C.2.e plus C.3.f).

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, the reference to C.2.e shall be voided.]

5. The permittee shall collect and record the following information for each month for the emissions unit:
  - a. the number of gallons of each nonphotochemically reactive cleanup material employed minus the number of gallons of cleanup material recovered for disposal;
  - b. the VOC content of each nonphotochemically cleanup material, in lbs/gallon;
  - c. the total VOC emissions from all nonphotochemically reactive cleanup materials employed, in lbs/month, i.e., sum of (b) times (a);
  - d. the actual VOC emissions from all coatings and cleanup materials for the previous, 12-month period [i.e., sum of the daily VOC emissions (sections C.2.h + C.3.e) and the monthly nonphotochemically reactive cleanup material VOC emission (term C.6.c) for the previous, 12-month period]; and

- e. the actual VOC emissions from emissions units R001, R002, R003 and R004, combined, for the previous, 12-month period.

[Note: Records of nonphotochemically reactive cleanup material shall be recorded monthly according to section C.5 above. After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, any reference to "nonphotochemically reactive" and "section C.2.h" shall be voided.]

6. The permit to install for the emissions units in this PTI was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) 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 contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, 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:
- a. 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):
- i. 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
  - ii. 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.
- b. The TLV is divided by ten to adjust the standard from the working population to

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the general public (TLV/10).

- c. 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):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Toluene

TLV (mg/m<sup>3</sup>): 453.6

Maximum Hourly Emission Rate (lbs/hr): 1.59

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 2380

Adjusted MAGLC (ug/m<sup>3</sup>): 2999 (adjusted for 100.5 hrs/wk)

The permittee, has demonstrated that emissions of xylene and toluene from emissions units R001, R002, R003 and R004 are 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).

7. Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), 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:
- a. 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;

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- b. 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
- c. 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" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

8. 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):
  - a. 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.);
  - b. 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);
  - c. 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
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air

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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.

9. 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.
10. The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the control devices with any modifications deemed necessary by the permittee during the time period in which the control devices are utilized.  

The permittee shall operate the control devices in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee.
11. The permittee shall conduct periodic inspections of the control devices to determine whether the devices are operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee. The periodic inspections of each control device shall be performed at a frequency that is based upon the recommendation of the manufacturer of the control device, and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency. In addition to these periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the control device while the emissions unit is shut down and perform any needed maintenance and repair for the control device to ensure that it is able to routinely operate in accordance with the manufacturer's recommendations.
12. The permittee shall document each inspection of a control device by maintaining a record that includes the date of the inspection, a description of each problem identified and the date it was corrected, a description of the maintenance and repairs performed, and the name of the person who performed the inspection.
13. In the event that the control devices are not operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee, the control devices shall be expeditiously repaired or otherwise returned to operation in accordance with such requirements. The permittee shall maintain documentation of those periods when the

control devices are not operating in accordance with such requirements.

#### **D. Reporting Requirements**

1. The permittee shall notify the Director (Ohio EPA, Northeast District Office) in writing of any daily record showing that the dry filters were not in service or not operated in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (Ohio EPA, Northeast District Office) within 30 days after the event occurs.
2. The permittee submit quarterly deviation (excursion) reports that identify:
  - a. for the days during which a photochemically reactive material was employed, each day during which the OC emissions from the coatings and photochemically reactive cleanup materials exceeded 8 pounds per hour and/or 40 pounds per day, and the actual OC emissions for each such incidence;
  - b. for the days during which a photochemically reactive material was not employed, each day during which the average VOC emissions from the coatings exceeded the pounds per hour limitation specified above, and the actual average VOC emissions for each such day;
  - c. each day during which the VOC content of any coating exceeded the pounds per gallon limitation specified above and the actual VOC content of each such coating employed;
  - d. any exceedence of the annual VOC\* emission limitation of 24.9 tons per year, as a rolling, 12-month summation from emissions units R001, R002, R003 and R004, combined, and the actual VOC emissions during each such period; and
  - e. any exceedence of the weekly hours of operation limitation, and the actual hours operated.

\*based upon the premise that 100% of the solvent in the coating and clean up material employed is emitted.

The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, section D.2.a and the opening phrase of section D.2.b that references photochemically reactive material shall be voided.]

3. The permittee shall also submit annual reports that summarize the emissions of VOC from this emissions unit and from emissions units R001, R002, R003 and R004, combined.

The reports shall include the emissions calculations, shall be submitted by January 31 of each year, and shall cover the previous calendar year.

4. The permittee shall submit annual reports to the Ohio EPA, Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model (including the air toxic compounds emitted and the emission rate), 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. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

## **E. Testing Requirements**

1. Compliance with the allowable emission limitations in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

8 pounds per hour of OC emissions for each day that photochemically reactive materials are employed

Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.2.f based upon the record keeping requirements specified in section C.2.

- b. Emission Limitation:

40 pounds per day of OC emissions for each day that photochemically reactive materials are employed

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Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.2.d based upon the record keeping requirements specified in section C.2.

## c. Emission Limitation:

6.77 pounds VOC emissions per hour for each day that photochemically reactive materials are not employed

Applicable Compliance Method:

Compliance shall be demonstrated by the daily values calculated in section C.3.g based on the record keeping requirements specified in section C.3.

## d. Emission Limitation:

24.9 tons of VOC emissions per year from all coatings and cleanup material from R001 and from R001, R002, R003 and R004, combined

Applicable Compliance Method:

Compliance shall be demonstrated by the values recorded in sections C.5.d and C.5.e based on the record keeping requirements specified in sections C.2, C.3 and C.5.

## e. Emission Limitation:

6.15 pounds of VOC per gallon coating, as applied

Applicable Compliance Method:

Any determination of VOC content, solids contents, or density of coating material shall be based on the coating materials as employed (as applied), including the addition of any thinner or viscosity reducer to the coatings. In accordance with OAC rule 3745-21-04(B)(5), the permittee shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating materials, or from data determined by an analysis of each coating, as applied, by Reference Method 24 or Method 24A. If, pursuant to section 11.4 of Method 24, 40 CFR Part 60, Appendix A (revised as of July 1, 2001), an owner or operator determines that Method 24 or Method 24A cannot be used for a particular

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coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 and/or Method 24A.

[Note: After the revision to OAC rule 3745-21-07(G) is approved into the Ohio SIP, sections E.1.a and E.1.b, the reference to photochemically reactive materials in section E.1.c and the reference to section C.2 in section E.1.d shall be voided.]

**F. Miscellaneous Requirements**

1. The terms and conditions contained in this permit for this emissions unit shall supersede all the air pollution control requirements for the emissions unit contained in the permit to install 02-21638 issued on February 23, 2006.
2. In accordance with the provisions of OAC rule 3745-31-05(C), the following terms and conditions of this permit to install are federally enforceable: A through F, except B.3, C.4, C.6, C.7, C.8, C.9, D.2.e and D.4.