



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center  
122 S. Front Street  
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049  
Columbus, OH 43216-1049

12/24/02

**CERTIFIED MAIL**

**RE: Final Title V Chapter 3745-77 permit**

04-48-01-0075  
Textileather Corporation  
Daniel W Stewart  
3729 Twining Street  
P.O. Box 875  
Toledo, OH 43608-1315

Dear Daniel W Stewart:

Enclosed is the Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it carefully.

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Environmental Review Appeals Commission within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. It is also requested by the Director that a copy of the appeal be served upon the Environmental Enforcement Section of the Office of the Attorney General. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
236 East Town Street  
Room 300  
Columbus, Ohio 43215

If you have any questions, please contact Toledo Div of Environmental Services.

Very truly yours,

Michael W. Ahern, Supervisor  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: Toledo Div of Environmental Services  
File, DAPC PMU



State of Ohio Environmental Protection Agency

FINAL TITLE V PERMIT

Issue Date: <b>12/24/02</b>	Effective Date: <b>01/14/02</b>	Expiration Date: <b>12/24/07</b>
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This document constitutes issuance of a Title V permit for Facility ID: 04-48-01-0075 to:  
 Textileather Corporation  
 3729 Twining Street  
 P. O. Box 875  
 Toledo, OH 43608-1315

**Emissions Unit ID (Company ID)/Emissions Unit Activity Description**

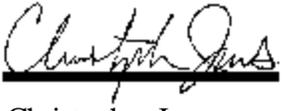
B001 (No. 1 Boiler) No. 1 Boiler - Process steam and heat	Adsorption Solvent Recovery System	P014 (No. 41 Plastisol Line) No. 41 Plastisol Line with Electrostatic Precipitator
B002 (No. 2 Boiler) No. 2 Boiler - Process steam and heat	K008 (No. 24 P/F Machine) No. 24 Print and Finish Machine with Carbon Adsorption Solvent Recovery System	P018 (No. 51 Plastisol Line) No. 51 Plastisol Line with Incinerator
K001 (No. 16 P/F Machine) No. 16 Print and Finish Machine with Carbon Adsorption Solvent Recovery System	K009 (No. 25 P/F Machine) No. 25 Print and Finish Machine with Carbon Adsorption Solvent Recovery System	Z001 (Bulk Handling System) Bulk Handling System
K004 (No. 18 P/F Machine) No. 18 Print and Finish Machine with Carbon Adsorption Solvent Recovery System	K010 (No. 26 P/F Machine) No. 26 Print and Finish Machine with Carbon Adsorption Solvent Recovery System	Z003 (Ribbon Blenders / Banbury Mixers) Ribbon Blenders and Banbury Mixers for Calendering System
K005 (No. 21 P/F Machine) No. 21 Print and Finish Machine with Carbon Adsorption Solvent Recovery System	K011 (No. 28 P/F Machine) No. 28 Print and Finish Machine with Carbon Adsorption Solvent Recovery System	Z004 (Plastisol Line 41 De-bagging) PVC Resin De-Bagging Operation - Plastisol Line No. 41
K006 (No. 22 P/F Machine) No. 22 Print and Finish Machine with Carbon Adsorption Solvent Recovery System	K012 (No. 2 Calendering Line) No.2 Calendering Line	Z005 (Plastisol Line 51 De-bagging) PVC Resin De-Bagging Operation - Plastisol Line No. 51
K007 (No. 23 P/F Machine) No. 23 Print and Finish Machine with Carbon	K013 (No. 3 Calendering Line) No.3 Calendering Line	

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Toledo Div of Environmental Services  
 348 South Erie Street  
 Toledo, OH 43602-1633  
 (419) 936-3015

OHIO ENVIRONMENTAL PROTECTION AGENCY

A handwritten signature in black ink, appearing to read "Christopher Jones", is written over a solid black horizontal line.

Christopher Jones  
Director

## PART I - GENERAL TERMS AND CONDITIONS

### A. *State and Federally Enforceable Section*

#### 1. **Monitoring and Related Record Keeping and Reporting Requirements**

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.  
*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))*
- b. 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 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.  
*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))*
- c. The permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.  
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*
  - ii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) with respect to emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**
    - (a) Written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations ; (ii) the probable cause of such deviations; and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Part III of this Title V permit, the written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six

months and the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations. See B.6 below if no deviations occurred during the quarter.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i), (ii) and (iii))*

- (b) Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the deviation reporting requirements for this Title V permit, written reports that identify each malfunction that occurred during each calendar quarter shall be submitted, at a minimum, quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters.

In identifying each deviation caused by a malfunction, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Also, if a deviation caused by a malfunction is identified in a written report submitted pursuant to paragraph (a) above, a separate report is not required for that malfunction pursuant to this paragraph. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing, at a minimum, on a quarterly basis.

Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation, operational restriction, and control device operating parameter limitation shall be reported in the same manner as described above for malfunctions. These written reports for malfunctions (and scheduled maintenance projects, if appropriate) shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(iii))*

iii. **For monitoring, record keeping, and reporting requirements:**

Written reports that identify any deviations from the federally enforceable monitoring, record keeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year, for the previous six calendar months. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, record keeping, and reporting requirements. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no deviations occurred during that period.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii))*

- iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the

report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."  
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

**2. 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 unit(s) 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 OAC rule 3745-15-06, 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).  
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iii))

**3. Risk Management Plans**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.  
(Authority for term: OAC rule 3745-77-07(A)(4))

**4. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.  
(Authority for term: OAC rule 3745-77-07(A)(5))

**5. Severability Clause**

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.  
(Authority for term: OAC rule 3745-77-07(A)(6))

**6. General Requirements**

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and

reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. 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 request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

*(Authority for term: OAC rule 3745-77-07(A)(7))*

#### **7. 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.

*(Authority for term: OAC rule 3745-77-07(A)(8))*

#### **8. Marketable Permit Programs**

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(9))*

#### **9. Reasonably Anticipated Operating Scenarios**

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(10))*

#### **10. Reopening for Cause**

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

*(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))*

## **11. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

*(Authority for term: OAC rule 3745-77-07(B))*

## **12. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
  - i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
  - ii. Compliance certifications shall include the following:
    - (a) An identification of each term or condition of this permit that is the basis of the certification.
    - (b) The permittee's current compliance status.
    - (c) Whether compliance was continuous or intermittent.
    - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
    - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
  - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

*(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))*

### **13. Permit Shield**

- a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

*(Authority for term: OAC rule 3745-77-07(F))*

### **14. Operational Flexibility**

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification

under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

*(Authority for term: OAC rules 3745-77-07(H)(1) and (2))*

#### **15. Emergencies**

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

*(Authority for term: OAC rule 3745-77-07(G))*

#### **16. Off-Permit Changes**

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emission levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph

(I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(For purposes of clarification, the permittee can refer to Engineering Guide #63 that is available in the STARSHIP software package.)

*(Authority for term: OAC rule 3745-77-07(I))*

**17. Compliance Method Requirements**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

*(This term is provided for informational purposes only.)*

**18. Insignificant Activities**

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**19. Permit to Install Requirement**

Prior to the “installation” or “modification” of any “air contaminant source,” as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**20. 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.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**B. State Only Enforceable Section**

**1. Reporting Requirements Related to Monitoring and Record Keeping Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping 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 (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) 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. In identifying each deviation, the permittee

shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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 quarterly, i.e., 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.)

**2. 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.

**3. 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, 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.

**4. 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).

**5. 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.

**6. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

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 quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

## Part II - Specific Facility Terms and Conditions

### A. State and Federally Enforcable Section

1. The permittee may be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Fabric Printing, Coating, and Dyeing, 40 CFR Part 63, Subpart OOOO. U.S. EPA failed to promulgate this standard by May 15, 2002, the Maximum Achievable Control Technology (MACT) hammer date. In accordance with 40 CFR Part 63, Subpart B (40 CFR Parts 63.50 through 63.56), the permittee shall submit an application to revise the permit to include equivalent emission limitations as a result of a case-by-case MACT determination. The application shall be submitted in two parts. The deadline to submit the Part I application, as specified in 40 CFR Part 63.53, was May 15, 2002.
2. If the final NESHAP standard is not promulgated by the deadline specified by U.S. EPA, the permittee shall submit the Part II application as specified in 40 CFR Part 63.53. The Part II application shall be submitted within 60 days after the deadline to promulgate the respective standard or by May 15, 2003, whichever is later. It must contain the following information, unless otherwise specified by future U.S. EPA regulations:

- a. for a new affected source, the anticipated date of startup of operation;
- b. the hazardous air pollutants (HAPs) emitted by each affected source in the relevant source category and an estimated total uncontrolled and controlled emission rate for HAPs from the affected source;
- c. any existing federal, State, or local limitations or requirements applicable to the affected source;
- d. for each affected emission point or group of affected emission points, an identification of control technology in place;
- e. information relevant to establishing the MACT floor (or MACT emission limitation), and, at the option of the permittee, a recommended MACT floor; and
- f. any other information reasonably needed by the permitting authority including, at the discretion of the permitting authority, information required pursuant to Subpart A of 40 CFR Part 63.

The Part II application for a MACT determination may, but is not required to, contain the following information:

- a. recommended emission limitations for the affected source and support information (the permittee may recommend a specific design, equipment, work practice, or operational standard, or combination thereof, as an emission limitation);
  - b. a description of the control technologies that would be applied to meet the emission limitation, including technical information on the design, operation, size, estimated control efficiency and any other information deemed appropriate by the permitting authority, and identification of the affected sources to which the control technologies must be applied; and
  - c. relevant parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting period.
3. If the NESHAP is promulgated before the Part II application is due for the relevant source category, the permittee may be subject to the rule as an existing major source with a compliance date as specified in the NESHAP. If subject, the permittee shall submit the following notifications:
    - a. Unless otherwise specified in the relevant Subpart, within 120 days after promulgation of a 40 CFR Part 63 Subpart to which the source is subject, the permittee shall submit an Initial Notification Report that contains the following information, in accordance with 40 CFR Part 63.9(b)(2):
      - i. the name and mailing address of the permittee;
      - ii. the physical location of the source if it is different from the mailing address;
      - iii. identification of the relevant MACT standard and the source's compliance date;
      - iv. a brief description of the nature, design, size, and method of operation of the source, and an identification of the types of emission points within the affected source subject to the relevant standard and the types of HAPs emitted; and
      - v. a statement confirming the facility is a major source for HAPs.

## A. State and Federally Enforcable Section (continued)

- b. Unless otherwise specified in the relevant Subpart, within 60 days following completion of any required compliance demonstration activity specified in the relevant Subpart, the permittee shall submit a notification of compliance status that contains the following information:
- i. the methods used to determine compliance;
  - ii. the results of any performance tests, visible emission observations, continuous monitoring systems performance evaluations, and/or other monitoring procedures or methods that were conducted;
  - iii. the methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
  - iv. the type and quantity of HAPs emitted by the source, reported in units and averaging times in accordance with the test methods specified in the relevant Subpart;
  - v. an analysis demonstrating whether the affected source is a major source or an area source;
  - vi. a description of the air pollution control equipment or method for each emission point, including each control device or method for each HAP and the control efficiency (percent) for each control device or method; and
  - vii. a statement of whether or not the permittee has complied with the requirements of the relevant Subpart.

## B. State Only Enforceable Section

1. The following insignificant emissions units are located at this facility:

K003 - pilot line;  
P003 - embossing line;  
T001 - tank #1: 10,000-gallon plasticizer above ground storage;  
T002 - tank #2: 10,000-gallon plasticizer above ground storage;  
T003 - tank #3: 10,000-gallon plasticizer above ground storage;  
T006 - tank #6: 20,000-gallon plasticizer above ground storage;  
T007 - tank #7: 20,000-gallon plasticizer above ground storage;  
T008 - tank #8: 20,000-gallon plasticizer above ground storage;  
T009 - tank #22: 20,000-gallon plasticizer above ground storage;  
T010 - tank #23: 20,000-gallon plasticizer above ground storage;  
T011 - tank #13: 10,000-gallon double wall horizontal MEK/THF under ground storage;  
T012 - tank #12: 10,000-gallon double wall horizontal MEK/THF under ground storage;  
T013 - tank #18: 10,000-gallon double wall horizontal MEK under ground storage;  
T016 - tank #11: 10,000-gallon double wall horizontal MEK under ground storage;  
T017 - tank #17: 10,000-gallon double wall horizontal MEK under ground storage;  
T018 - tank #16: 10,000-gallon double wall horizontal THF under ground storage;  
T026 - tank #26: 10,000-gallon plasticizer above ground storage;  
T027 - tank #27: 10,000-gallon plasticizer above ground storage;  
Z002 - no. 3 calendar oil heater no. 2;  
Z008 - stabilizer hand loading station: calendaring;  
Z009 - resin drop points: calendaring;  
Z010 - antimony trioxide station: calendaring;  
Z011 - PVC addition hopper #1: calendaring;  
Z012 - PVC addition hopper #2: calendaring;  
Z013 - plasticizer mix/addition area: calendaring;  
Z014 - PVC/filler recycling station: calendaring;  
Z015 - silo shaker;  
Z016 - annealer;  
Z017 - cold cleaning tank #1;  
Z018 - cold cleaning tank #2;  
Z019 - 2 drum curing ovens;  
Z020 - 2 lab hoods: quality labs;  
Z021 - vacuum former: quality lab;  
Z022 - 5 ovens: quality lab;

**B. State Only Enforceable Section (continued)**

- Z023 - 5 lab hoods: R&D lab #1;
- Z024 - 4 mini print machines: R&D lab #1;
- Z025 - mini calendar: R&D lab;
- Z026 - 2 mini mills: R&D lab #1;
- Z027 - oven: R&D lab #1;
- Z028 - oven: R&D lab #2;
- Z029 - 3 lab hoods: R&D lab #2;
- Z030 - sample prep table with hood: R&D lab #2;
- Z031 - print and finish color matching test hood (QA/QC);
- Z032 - Hydro-Tek distillation still;
- Z033 - soup room weight scale;
- Z034 - facility drum mixers;
- Z035 - 800-gallon colored plastisol tank #1: by plastisol line;
- Z036 - 800-gallon colored plastisol tank #2: by plastisol line;
- Z037 - 800-gallon colored plastisol tank #3: by plastisol line;
- Z038 - 800-gallon colored plastisol tank #4: by plastisol line;
- Z039 - 800-gallon colored plastisol tank #5: by plastisol line;
- Z040 - 800-gallon colored plastisol tank #6: by plastisol line;
- Z041 - 1,750-gallon colored plastisol tank #17: by large mixer;
- Z042 - 1,550-gallon colored plastisol tank #18: by large mixer;
- Z043 - 1,550-gallon colored plastisol tank #19: by large mixer;
- Z044 - 750-gallon oil plasticizer tank #11332: new dope room;
- Z045 - 750-gallon oil plasticizer tank #11331: new dope room;
- Z046 - 1,050-gallon product 037 or 450 tank #11335: new dope room;
- Z047 - 1,050-gallon product 037 or 450 tank #11336: new dope room;
- Z048 - 2,150-gallon foam tank #11328: new dope room;
- Z049 - 2,150-gallon skin tank #11325: new dope room;
- Z050 - 1,500-gallon foam surge tank #11324: new dope room;
- Z051 - 1,500-gallon skin surge tank #11322: new dope room;
- Z052 - 5,600-gallon oil plasticizer 52338 tank #11320: new dope room;
- Z053 - 1,350-gallon BFN tank #11317: new dope room;
- Z054 - 3,350-gallon pigmented foam tank #11301: new tank area;
- Z055 - 3,350-gallon pigmented foam tank #11302: new tank area;
- Z056 - 3,350-gallon pigmented foam tank #11303: new tank area;
- Z057 - 3,350-gallon pigmented foam tank #11304: new tank area;
- Z058 - 3,350-gallon pigmented foam tank #11305: new tank area;
  
- Z059 - 3,350-gallon pigmented foam tank #11306: new tank area;
- Z060 - 3,350-gallon pigmented foam tank #11307: new tank area;
- Z061 - 3,350-gallon pigmented foam tank #11308: new tank area;
- Z062 - 3,350-gallon pigmented foam tank #11309: new tank area;
- Z063 - 3,350-gallon clear skin tank #11310: new tank area;
- Z064 - 3,350-gallon pigmented foam tank #11311: new tank area;
- Z065 - 3,350-gallon clear skin tank #11312: new tank area;
- Z066 - 3,350-gallon pigmented foam tank #11313: new tank area;
- Z067 - 3,350-gallon clear skin tank #11314: new tank area;
- Z068 - 3,350-gallon pigmented foam tank #11315: new tank area;
- Z069 - 3,350-gallon clear skin tank #11316: new tank area;
- Z070 - 1,250-gallon clear plastisol tank #43: plastisol dope room;
- Z071 - 1,350-gallon BFN tank #44: plastisol dope room;
- Z072 - 750-gallon BFN tank #45: plastisol dope room;
- Z073 - 1,200-gallon BFN tank #46: plastisol dope room;
- Z074 - 1,950-gallon clear plastisol tank #100: plastisol dope room;
- Z075 - 1,950-gallon clear plastisol tank #101: plastisol dope room;
- Z076 - 1,950-gallon clear plastisol tank #102: plastisol dope room;
- Z077 - 1,950-gallon clear plastisol tank #103: plastisol dope room;
- Z078 - 1,950-gallon clear plastisol tank #104: plastisol dope room;
- Z079 - 1,950-gallon clear plastisol tank #105: plastisol dope room;
- Z080 - 1,950-gallon clear plastisol tank #106: plastisol dope room;
- Z081 - 1,950-gallon clear plastisol tank #107: plastisol dope room;
- Z082 - 1,950-gallon clear plastisol tank #108: plastisol dope room;
- Z083 - 1,950-gallon clear plastisol tank #109: plastisol dope room;
- Z084 - 1,950-gallon clear plastisol tank #110: plastisol dope room;
- Z085 - 1,850-gallon clear plastisol tank #111: plastisol dope room;
- Z086 - 1,200-gallon pigment tank #21302: plastisol dope room;
- Z087 - 800-gallon BFN tank #21388: bulk dope room;
- Z088 - 1,300-gallon tank #21354: bulk dope room;
- Z089 - 1,300-gallon tank #21353: bulk dope room;

**B. State Only Enforceable Section (continued)**

Z090 - 1,600-gallon foams/skins tank #213138: bulk dope room;  
Z091 - 1,150-gallon foams/skins tank #21390: bulk dope room;  
Z092 - 1,400-gallon BFN tank #21351: bulk dope room;  
Z093 - 1,550-gallon skin tank #21395: bulk dope room;  
Z094 - 1,550-gallon foam mixer tank: bulk dope room;  
Z095 - 550-gallon clear plastisol #21382: bulk dope room;  
Z096 - 550-gallon clear plastisol tank #21381: bulk dope room;  
Z097 - 3,250-gallon tank #21384: bulk dope room;  
Z098 - 3,200-gallon tank #21385: bulk dope room;  
Z099 - 750-gallon tank #659: bulk dope room;  
Z100 - indoor CV makeup tank no. 1;  
Z101 - indoor CV makeup tank no. 2;  
Z102 - indoor CV makeup tank no. 3;  
Z103 - indoor CV makeup tank no. 4;  
Z104 - 750-gallon clear vinyl tank #11: soup room;  
Z105 - 750-gallon clear vinyl tank #12: soup room;  
Z106 - 750-gallon clear vinyl tank #13: soup room;  
Z107 - 750-gallon clear vinyl tank #14: soup room;  
Z108 - 750-gallon clear vinyl tank #15: soup room;  
Z109 - 750-gallon clear vinyl tank #16: soup room;  
Z110 - 750-gallon clear vinyl tank #17: soup room;  
Z111 - 750-gallon clear vinyl tank #18: soup room;  
Z112 - 750-gallon clear vinyl tank #19: soup room;  
Z113 - 750-gallon clear vinyl tank #20: soup room;  
Z114 - 750-gallon clear vinyl tank #21: soup room;  
Z115 - 1,150-gallon clear vinyl tank #24: soup room;  
Z116 - 1,150-gallon clear vinyl tank #25: soup room;  
Z117 - 750-gallon clear vinyl tank #26: soup room;  
Z118 - 750-gallon clear vinyl tank #27: soup room;  
Z119 - 1,150-gallon clear vinyl tank #28: soup room;  
Z120 - 150-gallon clear vinyl (MT) tank: soup room;  
Z121 - 300-gallon silicone/tolulene tank #21209: soup room;  
Z122 - 1,100-gallon Hydro-Tek distillation system scrap ink tank;  
Z123 - 2 ovens: R&D lab #2;  
Z124 - Despatch oven: Development Center;  
Z125 - lab hood: Development Center;  
Z126 - brabender: Development Center;  
Z127 - pigment mixing operations; and  
Z128 - #3 calendar oil heater.

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a permit to install for the emissions unit.

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 1 Boiler (B001)  
**Activity Description:** No. 1 Boiler - Process steam and heat

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

- 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
78 million Btu boiler fired with natural gas, LPG, or #2 fuel oil	OAC rule 3745-17-07(A)(1)	See A.1.2.a below.
	OAC rule 3745-17-10(B)(1)	0.020 pound of particulate emissions per million Btu of actual heat input
	OAC rule 3745-18-54(K)	1.0 pound of sulfur dioxide per million Btu of actual heat input when burning #2 fuel oil

##### 2. Additional Terms and Conditions

- Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

##### II. Operational Restrictions

- The permittee shall burn only natural gas, LPG, or #2 fuel oil in this emissions unit.
- The quality of the oil burned in this emissions unit shall meet, on an "as burned" basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.0 pound of sulfur dioxide per million Btu of actual heat input. Compliance with this specification shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

##### III. Monitoring and/or Record Keeping Requirements

- For each day during which the permittee burns a fuel other than natural gas, LPG and/or #2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.
- For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lb/million Btu).

#### **IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each day when a fuel other than natural gas, LPG, and/or #2 fuel oil was burned in this emissions unit.
2. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
  - a. the total quantity of oil received in each shipment (gallons); and
  - b. the calculated sulfur dioxide emission rate (lb/million Btu) for each shipment of oil received during the calendar month.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

#### **V. Testing Requirements**

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

**1.a** Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

**1.b** Emission Limitation:

0.020 pound of particulate emissions per million Btu of actual heat input

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this limitation in accordance with the method(s) and procedures specified in OAC rule 3745-17-03(B)(9).

**1.c** Emission Limitation:

1.0 pound of sulfur dioxide per million Btu of actual heat input when burning #2 fuel oil

Applicable Compliance Method:

Compliance shall be demonstrated through the record keeping requirements specified in section A.III. If required, the permittee shall demonstrate compliance with this limitation in accordance with the method(s) and procedures specified in OAC rule 3745-18-04(E).

#### **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 2 Boiler (B002)  
**Activity Description:** No. 2 Boiler - Process steam and heat

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

- 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
78 million Btu boiler fired with natural gas, LPG, or #2 fuel oil	OAC rule 3745-17-07(A)(1)	See A.1.2.a below.
	OAC rule 3745-17-10(B)(1)	0.020 pound of particulate emissions per million Btu of actual heat input
	OAC rule 3745-18-54(K)	1.0 pound of sulfur dioxide per million Btu of actual heat input when burning #2 fuel oil

##### 2. Additional Terms and Conditions

- Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

##### II. Operational Restrictions

- The permittee shall burn only natural gas, LPG, or #2 fuel oil in this emissions unit.
- The quality of the oil burned in this emissions unit shall meet, on an "as burned" basis, a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.0 pound of sulfur dioxide per million Btu of actual heat input. Compliance with this specification shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

##### III. Monitoring and/or Record Keeping Requirements

- For each day during which the permittee burns a fuel other than natural gas, LPG and/or #2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- The permittee shall collect or require the oil supplier to collect a representative grab sample for each shipment of oil that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with the following ASTM methods: ASTM method D4294, ASTM method D240, or ASTM method 6010 for sulfur content; and ASTM method D240 for heat content. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.
- For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lb/million Btu).

#### **IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports which include an identification of each day when a fuel other than natural gas, LPG, and/or #2 fuel oil was burned in this emissions unit.
2. The permittee shall submit, on a quarterly basis, copies of the permittee's or oil supplier's analyses for each shipment of oil which is received for burning in this emissions unit. The permittee's or oil supplier's analyses shall document the sulfur content (percent) and heat content (Btu/gallon) for each shipment of oil. The following information shall also be included with the copies of the permittee's or oil supplier's analyses:
  - a. the total quantity of oil received in each shipment (gallons); and
  - b. the calculated sulfur dioxide emission rate (pounds/million Btu) for each shipment of oil received during the calendar month.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

#### **V. Testing Requirements**

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:
  - 1.a Emission Limitation:  
  
20% opacity as a 6-minute average  
  
Applicable Compliance Method:  
  
If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).
  - 1.b Emission Limitation:  
  
0.020 pound of particulate emissions per million Btu of actual heat input  
  
Applicable Compliance Method:  
  
If required, the permittee shall demonstrate compliance with this limitation in accordance with the method(s) and procedures specified in OAC rule 3745-17-03(B)(9).
  - 1.c Emission Limitation:  
  
1.0 pound of sulfur dioxide per million Btu of actual heat input when burning #2 fuel oil  
  
Applicable Compliance Method:  
  
Compliance shall be demonstrated through the record keeping requirements specified in section A.III. If required, the permittee shall demonstrate compliance with this limitation in accordance with the method(s) and procedures specified in OAC rule 3745-18-04(E).

#### **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 16 P/F Machine (K001)

**Activity Description:** No. 16 Print and Finish Machine with Carbon Adsorption Solvent Recovery System

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

##### 2. Additional Terms and Conditions

- 2.a The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- 2.b When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
  - i. a capture efficiency which is at least 75%, by weight; and
  - ii. a control efficiency which is at least 90%, by weight.
- 2.c When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
  - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
  - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
  - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- 2.d When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

## II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
  - a. the permittee shall operate the capture system and carbon adsorption system;
  - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

## III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
  - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed)
  - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
  - a. the name and identification number of each coating, as applied; and
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **IV. Reporting Requirements**

1. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
  - a. the results of each average hood slot air velocity measurement;
  - b. the results of each ventilation fan inspection; and
  - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

### **V. Testing Requirements**

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

## V. Testing Requirements (continued)

### 1.a Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions  
control efficiency of at least 90%, by weight, for the VOC emissions

#### Applicable Compliance Method:

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

#### Appendix D - "head space" test method

##### i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

##### ii. Solvent Determination

(a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.

(b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

##### iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

## V. Testing Requirements (continued)

Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

### 1.b Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
  - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
  - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
  - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

## **V. Testing Requirements (continued)**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

## **VI. Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 18 P/F Machine (K004)

**Activity Description:** No. 18 Print and Finish Machine with Carbon Adsorption Solvent Recovery System

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

##### 2. Additional Terms and Conditions

- 2.a The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- 2.b When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
  - i. a capture efficiency which is at least 75%, by weight; and
  - ii. a control efficiency which is at least 90%, by weight.
- 2.c When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
  - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
  - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
  - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- 2.d When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

## II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
  - a. the permittee shall operate the capture system and carbon adsorption system;
  - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

## III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
  - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed)
  - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
  - a. the name and identification number of each coating, as applied; and
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### III. Monitoring and/or Record Keeping Requirements (continued)

6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### IV. Reporting Requirements

1. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
  - a. the results of each average hood slot air velocity measurement;
  - b. the results of each ventilation fan inspection; and
  - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

### V. Testing Requirements

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

## V. Testing Requirements (continued)

### 1.a Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions  
control efficiency of at least 90%, by weight, for the VOC emissions

#### Applicable Compliance Method:

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

#### Appendix D - "head space" test method

##### i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

##### ii. Solvent Determination

(a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.

(b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

##### iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

## V. Testing Requirements (continued)

Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

### 1.b Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
  - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
  - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
  - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

## **V. Testing Requirements (continued)**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

## **VI. Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 21 P/F Machine (K005)

**Activity Description:** No. 21 Print and Finish Machine with Carbon Adsorption Solvent Recovery System

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

##### 2. Additional Terms and Conditions

- 2.a The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- 2.b When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
  - i. a capture efficiency which is at least 75%, by weight; and
  - ii. a control efficiency which is at least 90%, by weight.
- 2.c When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
  - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
  - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
  - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- 2.d When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

## II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
  - a. the permittee shall operate the capture system and carbon adsorption system;
  - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

## III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
  - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed)
  - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
  - a. the name and identification number of each coating, as applied; and
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **IV. Reporting Requirements**

1. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
  - a. the results of each average hood slot air velocity measurement;
  - b. the results of each ventilation fan inspection; and
  - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

### **V. Testing Requirements**

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

## V. Testing Requirements (continued)

### 1.a Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions  
control efficiency of at least 90%, by weight, for the VOC emissions

#### Applicable Compliance Method:

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

#### Appendix D - "head space" test method

##### i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

##### ii. Solvent Determination

(a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.

(b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

##### iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

## V. Testing Requirements (continued)

Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

### 1.b Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
  - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
  - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
  - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

## **V. Testing Requirements (continued)**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

## **VI. Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 22 P/F Machine (K006)

**Activity Description:** No. 22 Print and Finish Machine with Carbon Adsorption Solvent Recovery System

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

##### 2. Additional Terms and Conditions

- 2.a The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- 2.b When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
  - i. a capture efficiency which is at least 75%, by weight; and
  - ii. a control efficiency which is at least 90%, by weight.
- 2.c When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
  - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
  - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
  - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- 2.d When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

## II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
  - a. the permittee shall operate the capture system and carbon adsorption system;
  - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

## III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
  - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed)
  - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
  - a. the name and identification number of each coating, as applied; and
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **IV. Reporting Requirements**

1. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
  - a. the results of each average hood slot air velocity measurement;
  - b. the results of each ventilation fan inspection; and
  - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

### **V. Testing Requirements**

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

## V. Testing Requirements (continued)

### 1.a Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions  
control efficiency of at least 90%, by weight, for the VOC emissions

#### Applicable Compliance Method:

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

#### Appendix D - "head space" test method

##### i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

##### ii. Solvent Determination

(a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.

(b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

##### iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

## V. Testing Requirements (continued)

Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

### 1.b Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
  - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
  - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
  - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

## **V. Testing Requirements (continued)**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

## **VI. Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - Terms and Conditions for Emissions Units**

**Emissions Unit ID:** No. 23 P/F Machine (K007)

**Activity Description:** No. 23 Print and Finish Machine with Carbon Adsorption Solvent Recovery System

**A. State and Federally Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

**2. Additional Terms and Conditions**

- 2.a The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- 2.b When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
  - i. a capture efficiency which is at least 75%, by weight; and
  - ii. a control efficiency which is at least 90%, by weight.
- 2.c When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
  - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
  - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
  - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- 2.d When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

## II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
  - a. the permittee shall operate the capture system and carbon adsorption system;
  - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

## III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
  - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed)
  - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
  - a. the name and identification number of each coating, as applied; and
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **IV. Reporting Requirements**

1. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
  - a. the results of each average hood slot air velocity measurement;
  - b. the results of each ventilation fan inspection; and
  - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

### **V. Testing Requirements**

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

## V. Testing Requirements (continued)

### 1.a Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions  
control efficiency of at least 90%, by weight, for the VOC emissions

#### Applicable Compliance Method:

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

#### Appendix D - "head space" test method

##### i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

##### ii. Solvent Determination

(a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.

(b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

##### iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

## V. Testing Requirements (continued)

Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

### 1.b Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
  - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
  - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
  - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

## **V. Testing Requirements (continued)**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

## **VI. Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 24 P/F Machine (K008)

**Activity Description:** No. 24 Print and Finish Machine with Carbon Adsorption Solvent Recovery System

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

##### 2. Additional Terms and Conditions

- 2.a The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- 2.b When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
  - i. a capture efficiency which is at least 75%, by weight; and
  - ii. a control efficiency which is at least 90%, by weight.
- 2.c When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
  - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
  - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
  - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- 2.d When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

## II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
  - a. the permittee shall operate the capture system and carbon adsorption system;
  - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

## III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
  - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed)
  - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
  - a. the name and identification number of each coating, as applied; and
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **IV. Reporting Requirements**

1. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
  - a. the results of each average hood slot air velocity measurement;
  - b. the results of each ventilation fan inspection; and
  - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

### **V. Testing Requirements**

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

## V. Testing Requirements (continued)

### 1.a Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions  
control efficiency of at least 90%, by weight, for the VOC emissions

#### Applicable Compliance Method:

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

#### Appendix D - "head space" test method

##### i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

##### ii. Solvent Determination

(a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.

(b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

##### iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

## V. Testing Requirements (continued)

Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

### 1.b Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
  - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
  - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
  - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

## **V. Testing Requirements (continued)**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

## **VI. Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 25 P/F Machine (K009)

**Activity Description:** No. 25 Print and Finish Machine with Carbon Adsorption Solvent Recovery System

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

##### 2. Additional Terms and Conditions

- 2.a The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- 2.b When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
  - i. a capture efficiency which is at least 75%, by weight; and
  - ii. a control efficiency which is at least 90%, by weight.
- 2.c When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
  - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
  - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
  - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- 2.d When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

## II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
  - a. the permittee shall operate the capture system and carbon adsorption system;
  - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

## III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
  - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed)
  - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
  - a. the name and identification number of each coating, as applied; and
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **IV. Reporting Requirements**

1. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
  - a. the results of each average hood slot air velocity measurement;
  - b. the results of each ventilation fan inspection; and
  - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

### **V. Testing Requirements**

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

## V. Testing Requirements (continued)

### 1.a Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions  
control efficiency of at least 90%, by weight, for the VOC emissions

#### Applicable Compliance Method:

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

#### Appendix D - "head space" test method

##### i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

##### ii. Solvent Determination

(a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.

(b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

##### iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

## V. Testing Requirements (continued)

Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

### 1.b Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
  - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
  - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
  - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

## **V. Testing Requirements (continued)**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

## **VI. Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 26 P/F Machine (K010)

**Activity Description:** No. 26 Print and Finish Machine with Carbon Adsorption Solvent Recovery System

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

##### 2. Additional Terms and Conditions

- 2.a The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- 2.b When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
  - i. a capture efficiency which is at least 75%, by weight; and
  - ii. a control efficiency which is at least 90%, by weight.
- 2.c When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
  - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
  - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
  - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- 2.d When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

## II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
  - a. the permittee shall operate the capture system and carbon adsorption system;
  - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

## III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
  - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed)
  - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
  - a. the name and identification number of each coating, as applied; and
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **IV. Reporting Requirements**

1. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
  - a. the results of each average hood slot air velocity measurement;
  - b. the results of each ventilation fan inspection; and
  - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

### **V. Testing Requirements**

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

## V. Testing Requirements (continued)

### 1.a Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions  
control efficiency of at least 90%, by weight, for the VOC emissions

#### Applicable Compliance Method:

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

#### Appendix D - "head space" test method

##### i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

##### ii. Solvent Determination

(a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.

(b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

##### iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

## V. Testing Requirements (continued)

Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

### 1.b Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
  - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
  - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
  - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

## **V. Testing Requirements (continued)**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

## **VI. Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 28 P/F Machine (K011)

**Activity Description:** No. 28 Print and Finish Machine with Carbon Adsorption Solvent Recovery System

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
print and finish machine with carbon adsorption	OAC rule 3745-21-09(H)(1)(a), (b)	See A.I.2.a below.
	OAC rule 3745-21-09(H)(2)(a), (b)	See A.I.2.b below.

##### 2. Additional Terms and Conditions

- 2.a The permittee shall employ coatings with a volatile organic compound (VOC) content that does not exceed 4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents, or that does not exceed 25% VOC by volume of the volatile matter unless the emissions unit is equipped and operated as specified in section A.I.2.b.
- 2.b When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the coating line shall be equipped with a capture system and associated control system which are designed and operated to achieve the following efficiencies for VOC:
  - i. a capture efficiency which is at least 75%, by weight; and
  - ii. a control efficiency which is at least 90%, by weight.
- 2.c When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain the hooding modifications described below:
  - i. All coating application stations, not utilized exclusively for printing, shall be equipped with a fixed hood with movable flaps that encloses the front face of the coating well to the web entry point into the drying oven during all operations. The design of the fixed hoods is depicted in Figure 1 of Appendix A of the Consent Order file stamped December 27, 1988. All print heads shall be equipped with a fixed baffle in a manner similar to that shown in Figure 2 of Appendix A of the Consent Order as file stamped December 27, 1988.
  - ii. The fixed hoods shall be ventilated with the final exhaust directed to the solvent recovery system.
  - iii. The topcoat and print head hoods shall be exhausted at a rate sufficient to ensure that external influences do not significantly affect VOC capture performance.
- 2.d When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a carbon adsorption system with a carbon adsorption capacity of at least 32,000 cubic feet per minute and also shall direct emissions from all lines operating in the color-matching mode to the carbon adsorption system.

## II. Operational Restrictions

1. At all times while this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed,
  - a. the permittee shall operate the capture system and carbon adsorption system;
  - b. the VOC concentration in the exhaust gases from the carbon adsorbers, as a rolling, 3-hour average, shall not exceed a VOC concentration (ppm) which is 20 percent greater than the average concentration during the most recent emission test that demonstrated the emissions unit was in compliance; and
  - c. the permittee shall ensure that any capture or control system bypass that could divert any VOC laden air from any coating applicator to the ambient air is closed.
2. During those periods of time when this emissions unit is in operation and only materials meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) and/or (b) are employed, the permittee may bypass the capture and control system.
3. All emissions unit ventilation fans and sufficient carbon adsorption system fans shall be in operation to ensure adequate emission capture at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b).
4. When employing the carbon adsorption system, all bypass dampers, position indicators, and associated operators shall be in the correct position and in good operating condition at all times when this emissions unit is in operation and utilizing materials that do not meet the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b), to ensure that all captured VOC emissions are vented to the carbon adsorption system. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.

## III. Monitoring and/or Record Keeping Requirements

1. When materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed, the permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the VOC concentrations in the exhaust gases from the carbon adsorbers. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. (Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9.) The organic monitoring device and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. On each day during which this emissions unit was in operation and the VOC emissions were vented to the control equipment, the permittee shall collect and record the following information during such periods of control equipment operation:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter;
  - c. the number of gallons of each coating employed (converted from records of pounds of each coating employed)
  - d. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - e. all 3-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - f. all periods of time during which inappropriate bypassing of the control equipment was occurring.
3. The permittee shall collect and record the following information each month for all periods of operation of this emissions unit during which the VOC emissions were not vented to the control equipment:
  - a. the name and identification number of each coating, as applied; and
  - b. the VOC content of each coating, as applied, in pounds of VOC per gallon, excluding water and exempt solvents, and as a percent VOC, by volume, of the volatile matter.
4. Except as noted below, each calendar quarter, the permittee shall utilize an anemometer, or any other equivalent measurement method approved by the Ohio EPA, to measure the average hood slot air velocity for each ventilation hood serving this emissions unit, in feet per minute (fpm). Velocity measurements shall be taken at a minimum of 3 points along the length of the slot; 2 points shall be located approximately 4 inches in from each end of the slot and 1 point shall be located near the middle. The anemometer, or other equivalent measurement method approved by the Ohio EPA, shall be capable of accurately measuring the desired parameter and shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The measurements shall be taken while this emissions unit and other emissions units, representative of normal operations, are vented to the carbon adsorption system. The permittee shall maintain records of the results of all hood slot air velocity measurements for reporting purposes only.

If the average hood slot air velocity measurements for four consecutive quarters do not identify a deviation of the baseline velocities (see A.V.2.e), the permittee may perform the average hood slot air velocity measurements on a semiannual basis. Should the average hood slot air velocity measurements taken on a semiannual basis identify a deviation of the baseline velocities, the permittee shall revert to quarterly measurements.

5. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan housing, belt drives where used, and bearings. Lubrication of bearings and replacement of other parts shall be performed as required to maintain normal operation. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

6. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding observations shall include visual inspections for proper placement of hood flaps and baffles, where used, physical damage, and holes. Ductwork observations shall include visual inspections for leaks and holes. Bypass damper observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to carbon adsorption system or to atmosphere) and visual inspections to verify that the damper operator, position indicator, and damper are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.

### **IV. Reporting Requirements**

1. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit identifying those periods of time when this emissions unit is in operation and materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed;
  - b. all three-hour periods of operation during which the average VOC concentration or reading of organics in the exhaust gases is more than 20% greater than the average exhaust gas concentration or reading measured by the organics monitoring device during the most recent determination of the recovery efficiency of the carbon adsorber that demonstrated that the source was in compliance when materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) are employed; and
  - c. all periods of time during which any inappropriate bypassing of the control equipment occurred.

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

2. The permittee shall notify the Toledo Division of Environmental Services (TDOES) in writing of any monthly record showing the use of materials not meeting the VOC content limitations specified in OAC rule 3745-21-09(H)(1)(a) or (b) while the capture and control system is bypassed. The notification shall include a copy of such record and shall be sent to the TDOES within 30 days following the end of the calendar quarter.
3. The permittee shall submit quarterly reports that contain the following information:
  - a. the results of each average hood slot air velocity measurement;
  - b. the results of each ventilation fan inspection; and
  - c. the results of each inspection of the carbon adsorption system and any of the hooding or ductwork comprising the VOC emission capture system.

### **V. Testing Requirements**

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

## V. Testing Requirements (continued)

### 1.a Emission Limitation:

capture efficiency of at least 75%, by weight, for the VOC emissions  
control efficiency of at least 90%, by weight, for the VOC emissions

#### Applicable Compliance Method:

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The percent of solvent retained in the product may be determined using the "head space" test method (as specified in Appendix D of the Consent Order file stamped December 27, 1988) as follows:

#### Appendix D - "head space" test method

##### i. Obtaining Sample

Eight 3/16" diameter samples are punched out from a cross section of the web obtained at the windup area of the vinyl coating line. The samples are placed in a glass jar, which is sealed with a crimped-on lid.

##### ii. Solvent Determination

(a) Standard - Standards are prepared by injecting known quantities of solvent into sealed glass jars which are the same jars used for the vinyl samples. The jar containing solvent is heated to vaporize the solvent, and also to produce a uniform mixture. A specific volume of the heated mixture is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks.

(b) Sample - The jar with the sample is heated at 220 degrees Fahrenheit for 30 minutes during which the retained solvent is driven into the air space in the jar. A specific volume of heated air is withdrawn from the jar and injected into the chromatograph. A chart is produced showing specific peaks. The procedure is repeated until the final solvent peak height is less than 10% of the original peak height.

##### iii. Calculation

From the chromatograph chart for each sample, the peak height is determined and related to micro-liters of solvent, referencing to the peak heights on the standard chart. The weight per area is calculated by multiplying the total micro-liters of solvent by a predetermined constant and by the ratio of material width of 36 inches (1 yard). Retained solvent is, therefore, expressed as pounds per 100 linear yards of product.

## V. Testing Requirements (continued)

Capture efficiency shall be determined based on the following formula:

Capture efficiency = (VOC exhaust + VOC retained)/VOC applied;

where:

VOC exhaust = VOC in the final oven exhaust directed to the VOC control system from the line during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 25 or 25A, as appropriate; expressed in pounds per 100 linear yards of product.

VOC retained = VOC retained in the product; determined using the "head space" test method specified in Appendix D of the Consent Order file stamped December 27, 1988 and described in sections A.V.1.a.i through A.V.1.a.iii above; expressed in pounds per 100 linear yards of product.

VOC applied = VOC in the coatings applied at the line tested during the period of the run; determined by 40 CFR Part 60, Appendix A, Method 24; expressed in pounds per 100 linear yards of product.

### 1.b Emission Limitation:

4.8 pounds of VOC per gallon of coating, excluding water and exempt solvents or 25% VOC by volume of the volatile matter

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through testing performed in accordance with Method 24 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-21-10(B).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after issuance of the permit and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC.
  - c. The following test method(s) shall be employed to demonstrate compliance with the capture and control efficiency limitations for VOC: the method(s) specified in section A.V.1.a for capture efficiency and for control efficiency. Alternative USEPA approved test methods may be used with prior approval from Ohio EPA.
  - d. The test(s) shall be conducted while all of the associated emissions units are operating at normal conditions, unless otherwise specified or approved by the TDOES.
  - e. Slot air velocity measurements shall be performed during each test run to obtain the average slot air velocity over the length of each ventilation hood. These slot air velocity measurements shall represent the baseline velocities, provided 75 percent capture efficiency is demonstrated.

## **V. Testing Requirements (continued)**

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the TDOES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TDOES.

## **VI. Miscellaneous Requirements**

1. The permittee shall maintain a record of general product categories manufactured in the Print and Finish Department. For each general product category, the permittee shall determine the percent of solvent retained in the final material for a representative product in that category using the "head space" test method. As new product categories are developed, the percent solvent retained in the final material for a representative product shall be determined and added to the original listing. The list and any subsequent updates shall be retained by the permittee for as long as the product is manufactured.

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 2 Calendering Line (K012)

**Activity Description:** No.2 Calendering Line

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
calendering line	OAC rule 3745-21-07(G)(2)	exempt  See section A.II.1.

##### 2. Additional Terms and Conditions

None

##### II. Operational Restrictions

1. The permittee shall not employ any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit.

##### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the following information each month for the line:
  - a. the name and identification number of each coating, as applied; and
  - b. whether or not the coating is a photochemically reactive material.

##### IV. Reporting Requirements

1. The permittee shall notify the Toledo Division of Environmental Services in writing of any monthly record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days following the end of the calendar month.

##### V. Testing Requirements

None

##### VI. Miscellaneous Requirements

None

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - Terms and Conditions for Emissions Units**

**Emissions Unit ID:** No. 3 Calendering Line (K013)

**Activity Description:** No.3 Calendering Line

**A. State and Federally Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
calendering line	OAC rule 3745-21-07(G)(2)	exempt  See section A.II.1.

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

1. The permittee shall not employ any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit.

**III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records of the following information each month for the line:
  - a. the name and identification number of each coating, as applied; and
  - b. whether or not the coating is a photochemically reactive material.

**IV. Reporting Requirements**

1. The permittee shall notify the Toledo Division of Environmental Services in writing of any monthly record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days following the end of the calendar month.

**V. Testing Requirements**

**None**

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 41 Plastisol Line (P014)  
**Activity Description:** No. 41 Plastisol Line with Electrostatic Precipitator

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

- 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
7,500 pounds per hour plastisol line controlled with an electrostatic precipitator	OAC rule 3745-17-07(A)(1)	See A.I.2.a below.
	OAC rule 3745-17-11(B)(1)	9.9 pounds per hour of particulate emissions
	OAC rule 3745-21-07(G)(1)	3 lbs/hr and 15 lbs/day of organic compounds (OC), unless reduced by at least 85%
	OAC rule 3745-21-07(G)(2)	exempt
		See section A.II.2.

##### 2. Additional Terms and Conditions

- 2.a Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

##### II. Operational Restrictions

- The permittee shall operate the electrostatic precipitator whenever this emissions unit is in operation.
- The permittee shall not employ any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit.

##### III. Monitoring and/or Record Keeping Requirements

- The permittee shall maintain daily records that document any time periods when the electrostatic precipitator was not in service when the emissions unit was in operation.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

3. The permittee shall maintain records of the following information each month for the line:
  - a. the name and identification number of each coating, as applied; and
  - b. whether or not the coating is a photochemically reactive material.

### IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when the ESP was not in service when the emissions unit was in operation.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.
4. The permittee shall notify the Toledo Division of Environmental Services in writing of any monthly record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days following the end of the calendar month.

### V. Testing Requirements

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

- 1.a Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

### 1.b Emission Limitation:

9.9 pounds per hour of particulate emissions

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing methods and procedures specified in section A.V.2.

### 1.c Emission Limitation:

3 lbs/hr and 15 lbs/day of organic materials, unless reduced by at least 85%

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing methods and procedures specified in section A.V.2.

## 2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates and the allowable mass emission rate for OC or the 85% reduction requirement as appropriate.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A and for OC, Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appenidx A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA. The total organic emission is the sum of the Method 5 and Method 25 or 25A measurements. These test methods may also be used to demonstrate compliance with the 85% reduction of OC.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Toledo Division of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Toledo Division of Environmental Services's refusal to accept the results of the emission test(s).

Personnel from the Toledo Division of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Toledo Division of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services.

## VI. Miscellaneous Requirements

**None**

Facility Name: **Textileather Corporation**  
Facility ID: **04-48-01-0075**  
Emissions Unit: **No. 41 Plastisol Line (P014)**

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 51 Plastisol Line (P018)  
**Activity Description:** No. 51 Plastisol Line with Incinerator

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
11,375 pounds per hour plastisol line controlled with a thermal incinerator	OAC rule 3745-17-07(A)(1)	See section A.I.2.a.
	OAC rule 3745-17-11(B)(1)	16.5 pounds per hour of particulate emissions
	OAC rule 3745-21-07(G)(1)	3 lbs/hr and 15 lbs/day of organic compounds (OC), unless reduced by at least 85%
	OAC rule 3745-21-07(G)(2)	exempt
	OAC rule 3745-31-05(A)(3) (PTI 04-406)	See section A.II.3. 0.11 pound of VOC per gallon of coating, excluding water and exempt solvents, as applied
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-17-11(B)(1).
		See section A.I.2.b.

##### 2. Additional Terms and Conditions

- 2.a Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
- 2.b The permittee shall employ a thermal incinerator for this emissions unit that maintains a minimum control efficiency of 95%, by weight, for particulates and VOC emissions. The total organic emission is the sum of the Method 5 and the Method 18 or 25 measurements.

##### II. Operational Restrictions

1. The permittee shall burn only natural gas and/or #2 fuel oil in this emissions unit.

## II. Operational Restrictions (continued)

2. The permittee shall operate the capture system and thermal incinerator control system whenever this emissions unit is in operation.

The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The permittee shall not employ any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas and/or #2 fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

- a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance; and
- b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall maintain records of the following information each month for the line:
  - a. the name and identification number of each coating, as applied; and
  - b. whether or not the coating is a photochemically reactive material.
4. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in permit to install 04-406, issued on Sept. 9, 1987: section A.III.3. The monitoring and record keeping requirements contained in the above-referenced permit to install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with the requirements constitutes compliance with the underlying monitoring and record keeping requirements in the permit to install.

## IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas and/or #2 fuel oil was burned in this emissions units.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above.
3. The permittee shall notify the Toledo Division of Environmental Services in writing of any monthly record showing the use of any photochemically reactive material. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days following the end of the calendar month.

#### **IV. Reporting Requirements (continued)**

4. The quarterly deviation reports in section A.IV.2 shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

#### **V. Testing Requirements**

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

- 1.a Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation:

Thermal incinerator which demonstrates a minimum control efficiency of 95%, by weight, for particulates and VOC emissions

Applicable Compliance Method:

The most recent stack test that demonstrated compliance (99.5%) was performed on September 15, 1988. If required, the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Method 5 and Method 18 or 25 of 40 CFR Part 60, Appendix A. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases. Since all particulate matter is considered to be VOC at temperatures above 265 degrees Fahrenheit, the permittee shall not be required to perform Method 5 testing, if stack temperatures are maintained above 265 degrees Fahrenheit during the Method 25 stack test.

- 1.c Emission Limitation:

0.11 pound of VOC per gallon of coating, excluding water and exempt solvents, as applied

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in section A.III.3. USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to section 11.4 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 or 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 or 24A.

**V. Testing Requirements (continued)**

**1.d** Emission Limitation:

16.5 pounds per hour of particulate emissions

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(10).

**1.e** Emission Limitation:

3 lbs/hr and 15 lbs/day of organic compounds (OC), unless reduced by at least 85%

Applicable Compliance Method:

If required, compliance shall be based upon the emission testing methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 25 or 25A.

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Bulk Handling System (Z001)

**Activity Description:** Bulk Handling System

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

- 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
pneumatic conveying systems for railcar unloading, truck unloading and bulk handling with 9 fabric filters	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions from all of the pneumatic systems shall not exceed 13 pounds per hour (based upon Figure II).

##### 2. Additional Terms and Conditions

None

##### II. Operational Restrictions

- The permittee shall operate each fabric filter whenever the associated emissions unit is in operation.

##### III. Monitoring and/or Record Keeping Requirements

- The permittee shall maintain records that document any time periods when any fabric filter was not in service when the associated emissions unit was in operation.
- The permittee shall perform visible emission checks every other day for the railcar and truck unloading operations and weekly checks for the other bulk handling operations, when the equipment is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - the color of the emissions;
  - whether the emissions are representative of normal operations;
  - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - the total duration of any visible emission incident; and
  - any corrective actions taken to eliminate the visible emissions.

#### **IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which any fabric filter was not in service when the associated emissions unit was in operation.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from each stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

#### **V. Testing Requirements**

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

**1.a** Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.b** Emission Limitation:

13 pounds per hour of particulate emissions

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10) for those emission points where such emission testing is technically feasible.

#### **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - Terms and Conditions for Emissions Units**

**Emissions Unit ID:** Ribbon Blenders / Banbury Mixers (Z003)  
**Activity Description:** Ribbon Blenders and Banbury Mixers for Calendering System

**A. State and Federally Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
5 ribbon blenders and Banbury mixers for the calendering system, controlled with a fabric filter	OAC rule 3745-17-07(A)(1)	The visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	11 pounds per hour of particulate emissions (total) (based upon Figure II)

**2. Additional Terms and Conditions**

- 2.a OAC rule 3745-21-07(G)(2) is not applicable to this emissions unit because it is only a mixing operation and no chemical reactions are taking place.

**II. Operational Restrictions**

1. The permittee shall operate the fabric filter whenever this emissions unit is in operation.

**III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain records that document any time periods when the fabric filter was not in service when the emissions unit was in operation.

### III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

### IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the fabric filter was not in service when the associated emissions unit was in operation.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

### V. Testing Requirements

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

- 1.a Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation:

11 pounds per hour of particulate emissions

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10).

Facility Name: **Textileather Corporation**  
Facility ID: **04-48-01-0075**  
Emissions Unit: **Ribbon Blenders / Banbury Mixers (Z003)**

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Plastisol Line 41 De-bagging (Z004)  
**Activity Description:** PVC Resin De-Bagging Operation - Plastisol Line No. 41

#### A. State and Federally Enforceable Section

##### I. Applicable Emissions Limitations and/or Control Requirements

- 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
automated PVC resin de-bagging operation with fabric filter for no. 41 plastisol line	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions from the automatic de-bagging system shall not exceed 4.4 pounds per hour.

##### 2. Additional Terms and Conditions

None

##### II. Operational Restrictions

- The permittee shall operate the fabric filter whenever this emissions unit is in operation.

##### III. Monitoring and/or Record Keeping Requirements

- The permittee shall maintain records that document any time periods when the fabric filter was not in service when the emissions unit was in operation.
- The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - the color of the emissions;
  - whether the emissions are representative of normal operations;
  - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - the total duration of any visible emission incident; and
  - any corrective actions taken to eliminate the visible emissions.

##### IV. Reporting Requirements

- The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the fabric filter was not in service when the emissions unit was in operation.

#### **IV. Reporting Requirements (continued)**

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

#### **V. Testing Requirements**

1. Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - 1.a Emission Limitation:  
  
20% opacity as a 6-minute average  
  
Applicable Compliance Method:  
  
Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).
  - 1.b Emission Limitation:  
  
4.4 pounds per hour of particulate emissions  
  
Applicable Compliance Method:  
  
If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10) for those emission points where such emission testing is technically feasible.

#### **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Plastisol Line 51 De-bagging (Z005)  
**Activity Description:** PVC Resin De-Bagging Operation - Plastisol Line No. 51

#### A. State and Federally Enforceable Section

##### I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
two automated PVC resin de-bagging operations with two fabric filters for no. 51 plastisol line	OAC rule 3745-17-07(A)(1)	See A.I.2.a below.
	OAC rule 3745-17-11(B)(1)	Particulate emissions from both automatic de-bagging systems shall not exceed 14.7 pounds per hour.
	OAC rule 3745-31-05(A)(3) (PTI 04-406)	0% opacity as a 6-minute average  See A.I.2.b below.

##### 2. Additional Terms and Conditions

- 2.a The visible particulate emission limitation required by this applicable rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-11(B)(1).

#### II. Operational Restrictions

1. The permittee shall operate each fabric filter whenever the associated emissions unit is in operation.

#### III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records that document any time periods when the fabric filter was not in service when the associated emissions unit was in operation.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the total duration of any visible emission incident; and
  - c. any corrective actions taken to eliminate the visible emissions.

#### **IV. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the fabric filter was not in service when the associated emissions unit was in operation.
2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the City of Toledo, Division of Environmental Services by January 31, April 30, July 31, and November 30 of each year and shall cover the previous 6-month period.
3. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

#### **V. Testing Requirements**

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

**1.a** Emission Limitation:

0% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.b** Emission Limitation:

14.7 pounds per hour of particulate emissions

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10) for those emission points where such emission testing is technically feasible.

#### **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**I. 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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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