



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION  
CUYAHOGA COUNTY**

**CERTIFIED MAIL**

Street Address:

50 West Town Street, Suite 700

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

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 13-04294**

**Fac ID: 1318617346**

**DATE: 9/4/2007**

USG, Interiors/American Metals  
Michael Radca  
1000 Crocker Rd  
Westlake, OH 44145

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, OH 43215

Sincerely,

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

CC: USEPA

CLAA



Permit To Install  
Terms and Conditions

Issue Date: 9/4/2007  
Effective Date: 9/4/2007

**FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 13-04294**

Application Number: 13-04294  
Facility ID: 1318617346  
Permit Fee: **\$100**  
Name of Facility: USG, Interiors/American Metals  
Person to Contact: Michael Radca  
Address: 1000 Crocker Rd  
Westlake, OH 44145

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

**1000 Crocker Rd  
West lake, Ohio**

Description of proposed emissions unit(s):

**K005 - Paint mixing area including two automated electrostratic rotating disk spray systems and two manual electrostatic spray booths a curing oven with exhaust all controlled.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

#### 1. Monitoring and Related Recordkeeping 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.
- 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, 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.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to

the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. 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.
  - iv. If this permit is for an emissions unit located at a Title V facility, then 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 are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

## 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.

#### 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.

#### 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.

#### 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 re-issuance, or modification
- 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, revoked, or revoked and reissued, for cause. 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 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.

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## **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. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

## **8. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any 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 and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

## **9. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this 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 ORC section 3704.08.
  - 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.

#### 10. Permit-To-Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

#### 11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

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**12. 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.

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### **13. Permit-To-Install**

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

## **B. State Only Enforceable Permit-To-Install General Terms and Conditions**

### **1. Compliance Requirements**

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

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

### **3. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder.

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The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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#### **4. Authorization To Install or Modify**

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

#### **5. Construction of New Sources(s)**

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

#### **6. Public Disclosure**

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

#### **7. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

#### **8. Construction Compliance Certification**

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

**9. 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., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**C. Permit-To-Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC (coatings)	25.76
VOC (cleanup)	3.9
PM	0.2

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**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

**A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions**

None

**B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions**

None

### Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

#### A. State and Federally Enforceable Section

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
K005 - Paint mixing area including two automated electrostratic rotating disk spray systems and two manual electrostatic spray booths a curing oven with exhaust all controlled by a carbon adsorber system with on-site thermal oxidizer batch regeneration.	40 CFR Part 63, Subpart M OAC rule 3745-31-05 (A)(3)
Modified The terms and conditions of this PTI supercede the terms and conditions of PTI 13-02662 issued on March 24, 1993.	OAC rule 3745-17-07(A)
Modified The terms and conditions of this PTI supercede the terms and conditions of PTI 13-04294 issued on September 13, 2005.	OAC rule 3745-17-11 OAC rule 3745-21-09(U)(1)(i)

**USG,  
PTI A**

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Applicable Emissions <u>Limitations/Control</u> <u>Measures</u>	control See A.1.2.a below.
0.04 lb PE/hr and 0.2 tpy PE 5% opacity as a six-minute average	See A.1.2.b. below.
from coatings: 4.5 lbs VOC/hr (fugitive); 1.5 lbs VOC/hr (from carbon bed stack); 15 lbs VOC/hr (from thermal oxidizer stack); and 25.76 tpy VOC total (after control)	
from cleanup: 3.9 tpy VOC	
The visible emission limitation established by this rule is less stringent than the visible emission limitation established by OAC rule 3745-31-05(A)(3).	
The particulate emission limitation established by this rule is less stringent than the particulate emission limitation established by OAC rule 3745-31-05(A)(3).	
5.1 pounds of VOC per gallon of solids, after	

## 2. Additional Terms and Conditions

- 2.a** The permittee has chosen to comply with the limit from OAC rule 3745-21-09(U)(1)(i) through the use of combined control measures using a carbon adsorber as the primary means of control and a thermal oxidizer which is used to purge and destroy VOC emissions and to regenerate the carbon bed. The thermal oxidizer only operates on a batch basis as needed to regenerate the carbon bed.
- 2.b** The permittee has proposed to obtain facility-wide HAP restrictions in their Title V permit prior to the first compliance deadline for MACT Subpart M. Provided the HAP restrictions in the Title V permit are issued Final prior to the compliance deadline of January 2, 2007, the requirements of this rule will not apply to this emissions unit. If the permittee does not obtain the HAP restrictions in their Title V permit, then the requirements of Subpart M will apply to this emissions unit and the permittee must be able to show compliance by the compliance deadline.

## II. Operational Restrictions

1. Maintain and operate a carbon adsorber and thermal oxidizer as follows:
  - a. the permittee shall employ a capture and control system at all times of operation of this emissions unit which ensures and maintains that emissions do not exceed the allowable emission limits;
  - b. the average combustion temperature within the thermal oxidizer, for any 3-hour block of time when purging the carbon adsorber for regeneration, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrates the emissions unit is in compliance; and
  - c. the average VOC outlet concentration (in ppm) from the carbon adsorber shall not be more than twenty per cent greater than the average VOC outlet concentration established by the stack test in order to ensure that breakthrough of the carbon adsorber does not occur during operation of the coating line.
2. The permittee shall operate the dry filtration system for control of particulate emissions during all times of operation of the coating line.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for the line:
  - a. the name and identification number of each coating, as applied;
  - b. the VOC content of each coating, in pounds per gallon, as applied;
  - c. the number of hours of operation while coating is being performed controlled by the carbon adsorber;
  - d. the amount, in gallons, of each coating employed;
  - e. the uncontrolled daily VOC carbon adsorber stack emission rate, in pounds per day, determined by summing (b x d) for each coating employed;
  - f. the controlled daily VOC carbon adsorber stack emission rate, in pounds per day, determined by multiplying the result of 1.e above by the capture efficiency of the carbon adsorber, and then multiplying by (1 - the control efficiency of the carbon adsorber);
  - g. the average hourly emission rate for the stack emissions from the carbon adsorber, in pounds per hour, (f/c);
  - h. the daily VOC fugitive emissions which are not captured by the carbon adsorber determined by multiplying the result from 1.e above by (1 - capture efficiency of the carbon adsorber);
  - i. the average hourly fugitive emission rate for emissions which are not captured by the carbon adsorber, in pounds per hour (g/c).

Note: the capture and control efficiencies noted above shall be determined from the most recent stack test which demonstrates compliance.

2. The permittee shall collect and record the following information for the line for each day when the carbon adsorber is purged and regenerated by the thermal oxidizer:
  - a. the total uncontrolled VOC emissions for the days during which the coating line was operating prior to operation of the thermal oxidizer determined by summing the daily uncontrolled VOC emissions from III.1.e above;
  - b. the total VOC emissions retained on the carbon bed for the days during which the coating line was operating prior to operation of the thermal oxidizer determined by multiplying the sum from III.2.a above by the capture efficiency of

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the carbon adsorber and then multiplying by the control efficiency of the carbon adsorber;

- c. the operating hours during which the carbon bed is purged and vented to the thermal oxidizer;
- d. the average hourly VOC emission rate from the thermal oxidizer stack determined by multiplying the total from 2.b above by (1 - the control efficiency of the thermal oxidizer) and divide by 2.c.

Note: the capture and control efficiencies noted above shall be determined from the most recent stack test which demonstrates compliance.

3. The permittee shall maintain monthly records for this emissions unit for the purpose of determining VOC emissions due to cleanup usage:
  - a. the name and identification number of each cleanup material, as applied;
  - b. the VOC content of each cleanup material and VOC content of each waste stream, in pounds per gallon, as applied;
  - c. the amount, in gallons, of each cleanup material employed and cleanup waste stream generated; and
  - d. the net monthly VOC emission rate, in pounds per month, determined by summing (b x c) for each cleanup material employed and subtracting the waste stream VOC (b x c) for each waste stream generated; and
  - e. sum monthly emissions from 3.d above in order to determine annual emissions due to cleanup material and divide the total by 2000 lbs to determine emissions in tons/year.
4. The permittee shall collect and record the following information each day for the coating line in accordance with OAC rule 3745-21-09(B)(3)(j):
  - a. the name and identification number of each coating, as applied;
  - b. the mass of VOC per unit volume of coating solids as applied, the volume solids content, as applied, and the volume, as applied, of each coating;

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- c. the maximum VOC content (mass of VOC per unit volume of coating solids, as applied) or the daily volume weighted average VOC content (mass of VOC per unit volume of coating solids, as applied) of all the coatings;
- d. the calculated, controlled VOC emission rate, in mass of VOC per unit volume of coating solids, as applied. The controlled VOC emission rate shall be calculated using (a) either the maximum VOC content or the daily volume-weighted VOC content recorded in accordance with paragraph 4.c above, and (b) the overall control efficiency for the control equipment (carbon adsorber and thermal oxidizer combined) as determined during the most recent emission test that demonstrated that the source was in compliance;
- e. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated coating line;
- f. all three-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the carbon adsorber is being purged for regeneration, was more than fifty degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrates that the emissions unit is in compliance; and
- g. all three-hour periods of operation, when the coating line is operating and emissions are controlled by the carbon adsorber, during which the average VOC concentration or reading of organics in the exhaust gases is more than twenty per cent 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 emissions unit was in compliance.

**IV. Reporting Requirements**

1. The permittee shall notify the Cleveland DAQ in writing of any daily record showing that the calculated, controlled VOC emission rate exceeds the applicable pounds of VOC per gallon of solids, after control limitation. A copy of such record shall be sent to the Cleveland DAQ within forty-five days after the exceedance occurs.
2. The permittee shall submit quarterly temperature deviation (excursion) reports to Cleveland DAQ in writing that identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when purging the carbon adsorber for regeneration, was more than 50 degrees Fahrenheit below the average

Emissions Unit ID: K005

temperature during the most recent emission test that demonstrates that the emission unit is in compliance.

3. The permittee shall submit quarterly VOC outlet concentration deviation (excursion) reports to Cleveland DAQ in writing that identify all 3-hour blocks of time during which the average VOC outlet concentration from the carbon adsorber, when the emissions unit was in operation and emissions were controlled by the carbon adsorber, was more than twenty percent greater than the average VOC outlet concentration during the most recent emission test that demonstrates that the emission unit is in compliance.
4. The permittee shall submit quarterly emission rate deviation reports to Cleveland DAQ of any exceedances of the average pound per hour VOC emission limits (i.e., fugitive, carbon adsorber stack, and thermal oxidizer stack) established in the permit and identify the actual average pound per hour emission rate for each deviation.
5. The permittee shall submit an annual exceedance report to the Cleveland DAQ that identifies any exceedance of the annual emission rate for cleanup material. The report shall identify any corrective actions taken to correct the problem.

**V. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
5.1 lbs of VOC per gallon of solids, after control

## Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in Section A.III.4 and the emission testing specified in Section A.V.2. USEPA Method 24 shall be used to determine VOC content of the worst case coatings. The permittee shall either conduct a method 24 analysis of the coating or obtain a method 24 analysis of the coating from the coating supplier. If the permittee mixes complying coatings at the coating line, it is not necessary to perform a method 24 analysis of the VOC content for the resulting mixture.

- b. Emission Limitation  
from coatings: 4.5 lbs VOC/hr (fugitive)

## Applicable Compliance Method

Compliance shall be based upon the record keeping requirements in Section A.III. and the emission testing specified in Section A.V.2

- c. Emission Limitation  
from coatings: 1.5 lbs VOC/hr (from carbon bed stack)

## Applicable Compliance Method

Compliance shall be based upon the record keeping requirements in Section A.III. and the emission testing specified in Section A.V.2

- d. Emission Limitation  
from coatings: 15 lbs VOC/hr (from thermal oxidizer stack)

## Applicable Compliance Method

Compliance shall be based upon the record keeping requirements in Section A.III. and the emission testing specified in Section A.V.2

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- e. Emission Limitation  
from coatings: 25.76 tpy VOC total

## Applicable Compliance Method

The annual emission limitation was established based on the emissions unit operating a total of 8760 hours per year split between operation of the carbon adsorber and the thermal oxidizer . The coating line and carbon adsorber will operate a maximum of 8496 hours/year and the thermal oxidizer will operate a maximum of 264 hours/year. The hourly fugitive and carbon adsorber stack emissions are multiplied by 8496 hours of operation per year each and divided by 2000 pounds per ton, and the annual contribution from the thermal oxidizer is determined from the amount of VOC adsorbed per year on the carbon bed and multiplied by (1 - oxidizer control efficiency) and divided by 2000 pounds per ton. The total annual emission rate is determined by summing the annual fugitive, carbon bed stack, and thermal oxidizer stack emission rates.

- f. Emission Limitation  
from cleanup: 3.9 tpy VOC

## Applicable Compliance Method

Compliance shall be based upon the record keeping requirements in Section A.III and reporting requirements from Section A.IV. Formulation data shall be used to determine the VOC content of the cleanup material.

- g. Emission Limitation  
0.04 lb PE/hr

## Applicable Compliance Method

The particulate emission limit was established at the emissions unit's potential to emit. Compliance shall be determined from the following one-time calculation:

$$\text{gal/hr} \times \text{density} \times \text{fraction solids by weight} \times (1 - \text{TE}) \times (1 - \text{CE}) = \text{lb PE/hr}$$

$$3 \text{ gal/hr} \times 8.3 \text{ lbs/gal} \times 0.51 \text{ lb solids/lb coating} \times (1 - 0.65) \times (1 - 0.99) = 0.04 \text{ lb PE/hr}$$

Where,

TE = transfer efficiency of the coating operation; and  
CE = control efficiency of the dry filter

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- h. Emission Limitation  
0.2 tpy PE

**Applicable Compliance Method**

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

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

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

The emission testing shall be conducted to demonstrate compliance with the allowable VOC emission limitations for fugitive VOC emissions from coatings, carbon adsorber stack emissions, thermal oxidizerstack emissions, and the allowable VOC content limitation of 5.1 lbs VOC/gallon of solids, after control.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s):for VOC, Method 25 or 25A or 25B of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity and are testing for worst case emissions during the cyclical or batch operation or continuous operation while using their worst case product, unless otherwise specified or approved by the Cleveland Division of Air Quality (Cleveland DAQ).

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

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and outlet of each control device) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10(C). 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.

Due to the batch operation of the thermal oxidizer, the permittee shall perform two separate stack tests as follows:

- a. One test shall be performed for the determination of fugitive emissions from coatings, the carbon adsorber stack emission rate, the capture efficiency for fugitive emissions, and the control efficiency of the carbon adsorber. This test shall be performed as the carbon bed is approaching full capacity.
- b. The second test shall be performed for the determination of the thermal oxidizer stack emission rate and the control efficiency of the thermal oxidizer. If it is not possible to run three complete runs, compliance shall be based on a single run if necessary. This test shall be performed as the carbon bed is approaching full capacity and is ready to be purged for regeneration. Alternatively, if it is not possible to measure the inlet VOC concentration to the thermal oxidizer, the VOC mass inlet to the thermal oxidizer may be estimated from records of the quantity of VOC emitted from coatings during the adsorption cycle, and applying the overall control efficiency of the carbon adsorption system as determined by testing in accordance with section A.V.2.a.

The results of the capture and control efficiencies determined from the stack tests for each control device shall be used to determine compliance with the limitation of 5.1 lbs VOC per gallon of solids, after control.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. 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 Cleveland DAQ's refusal to accept the results of the emission test(s).

Personnel from the Cleveland DAQ 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

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characterization of the emissions from the emissions unit and/or the performance of the control equipment.

The results of each test shall be converted from carbon to VOC in accordance with OAC rule 3745-21-10(C)(7) which states the following:

To convert a mass emission value from VOC as carbon to VOC, divide the mass emission value of VOC as carbon by the weight fraction of carbon in the average molecular weight of the VOC emission. The determination of this weight fraction of carbon may be based on standard analytical techniques or material formulation data.

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 Cleveland DAQ 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 Cleveland DAQ.

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

None.

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**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K005 - Paint mixing area including two automated electrostratic rotating disk spray systems and two manual electrostatic spray booths a curing oven with exhaust all controlled by a carbon adsorber system with on-site thermal oxidizer batch regeneration.		

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

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

1. The permit to install for this emissions unit K005 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied to this emissions unit for each toxic pollutant, using data from the permit to install application,

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and modeling was performed for the toxic pollutant(s) emitted at over a ton per year using the SCREEN 3.0 model or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the use of the SCREEN 3.0 (or other approved) model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as required in Engineering Guide #70. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: xylene

TLV (mg/m<sup>3</sup>): 434

Maximum Hourly Emission Rate (lbs/hr): 1.90

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 1291MAGLC (ug/m<sup>3</sup>): 10,339

Pollutant: ethylbenzene

TLV (mg/m<sup>3</sup>): 434

Maximum Hourly Emission Rate (lbs/hr): 0.29

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 199MAGLC (ug/m<sup>3</sup>): 10,339

Pollutant: toluene

TLV (mg/m<sup>3</sup>): 188

Maximum Hourly Emission Rate (lbs/hr): 0.61

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 416MAGLC (ug/m<sup>3</sup>): 4,486

Pollutant: n-butanol

TLV (mg/m<sup>3</sup>): 61

Maximum Hourly Emission Rate (lbs/hr): 0.29

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 199MAGLC (ug/m<sup>3</sup>): 1,444

Pollutant: medium aromatic hydrocarbons

TLV (mg/m<sup>3</sup>): 573

Maximum Hourly Emission Rate (lbs/hr): 0.49

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 332MAGLC (ug/m<sup>3</sup>): 13,633

Pollutant: acetone

TLV (mg/m<sup>3</sup>): 1,188

Maximum Hourly Emission Rate (lbs/hr): 0.33

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 227MAGLC (ug/m<sup>3</sup>): 28,279

Pollutant: methyl n-amyl ketone

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TLV (mg/m3): 234

Maximum Hourly Emission Rate (lbs/hr): 2.91

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,978

MAGLC (ug/m3): 5,560

Pollutant: MEK

TLV (mg/m3): 590

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Maximum Hourly Emission Rate (lbs/hr): 0.34

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 763

MAGLC (ug/m3): 14,050

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the

"Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.