



Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

5/7/2012

Bill Williams
Volcanic Heater, Inc.
12260 North Rockhill Ave.
Alliance, OH 44601

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1576015002
Permit Number: P0109714
Permit Type: OAC Chapter 3745-31 Modification
County: Stark

Certified Mail

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

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

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

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

If you have any questions, please contact Canton City Health Department at (330)489-3385 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPCWeb page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Canton



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Volcanic Heater, Inc.**

Facility ID:	1576015002
Permit Number:	P0109714
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	5/7/2012
Effective:	5/7/2012
Expiration:	12/15/2018



Division of Air Pollution Control
Permit-to-Install and Operate
for
Volcanic Heater, Inc.

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Authorization

Facility ID: 1576015002
Application Number(s): A0044024
Permit Number: P0109714
Permit Description: Modification to increase coating usage above currently-permitted 10 gal/day (ref G.P.3.7) by using VOC-compliant coatings (3.5 lb/gal) per OAC 3745-21-09(U)(1)(d).
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$200.00
Issue Date: 5/7/2012
Effective Date: 5/7/2012
Expiration Date: 12/15/2018
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Volcanic Heater, Inc.
12260 North Rockhill Ave.
Alliance, OH 44601

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

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544
(330)489-3385

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0109714

Permit Description: Modification to increase coating usage above currently-permitted 10 gal/day (ref G.P.3.7) by using VOC-compliant coatings (3.5 lb/gal) per OAC 3745-21-09(U)(1)(d).

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

Emissions Unit ID:	K001
Company Equipment ID:	Paint Booth
Superseded Permit Number:	P0104125
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

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

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

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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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

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

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

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

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

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

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

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

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

¹ Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

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

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

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

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

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

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

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) 2. below (Definitions)
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.
2. Definitions as used in this permit:

As-applied: the formulation of a coating during the application on or impregnation into a substrate, including any dilution solvents or thinners added at the source before application of the coating. [OAC rule 3745-21-01(D)]

Cleaning material: a solvent used to remove contaminants and other materials such as dirt, grease, oil, and dried (e.g., depainting) or wet coating from a substrate before or after coating application; or from equipment associated with a coating operation, such as spray booths, spray guns, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both. [OAC rule 3745-21-01(D)]

Exempt solvents: any of the compounds which are specifically identified as not being volatile organic compounds under the definition of "volatile organic compound" in OAC rule 3745-21-01(B).

Organic compound: any chemical compound containing carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, ammonium carbonate, methane (except methane from landfill gases), and ethane. [OAC rule 3745-21-01(B)]

Solids: all nonvolatile matter in a coating material. Percent solids + percent volatile matter = 100%.

Volatile matter: all non-solid matter in a coating material, including water. Percent solids + percent volatile matter = 100%.

Volatile organic compounds (VOC): a subset of organic compounds which participate in atmospheric photochemical reactions. Organic compounds which are specifically identified as not being volatile organic compounds are listed under the definition of "volatile organic compound" in OAC rule 3745-21-01(B).

C. Emissions Unit Terms and Conditions



1. K001, Paint Booth

Operations, Property and/or Equipment Description:

Paint spray booth for coating miscellaneous metal parts. Particulate emissions are controlled by a 99% efficient passive dry filter.

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

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

a. b)(1)f., d)(10) – d)(13) and e)(5)

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 [Best Available Technology (BAT)]	<p>Volatile organic compound (VOC) emissions shall not exceed 28.1 lb/hr and 5.12 tons per year from coatings, surface-preparation cleaning materials, and cleanup materials combined.</p> <p>Filterable particulate emissions (PE) shall not exceed 0.11 lb/hr and 0.02 tons per year.</p> <p>See b)(2)b. and b)(2)c. below.</p> <p>The requirements established pursuant to this rule also include the requirements of OAC rules 3745-21-09(U)(1)(d) and 3745-17-11(C).</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3), as effective 12/01/06 [Less than 10 ton/yr BAT exemption]	See b)(2)d. below.
c.	OAC rule 3745-21-09(U)(1)(d)	See Section b)(2)a. below.
d.	OAC rule 3745-17-07(A)(1)	The visible particulate emission limitations established pursuant to this rule do not apply to this emissions unit because it is not subject to any mass emission limitation in any of the rules listed in OAC rule 3745-17-07(A)(3)(h). [More specifically, because this emissions unit is a surface coating process, it is not subject to any mass emission limitation in OAC rule 3745-17-11(B)].
e.	OAC rule 3745-17-11(C)	The control measure and work practice requirements established pursuant to this rule are equivalent to the control measure and work practice requirements established pursuant to OAC rule 3745-31-05(A)(3), as effective 11/30/2001. See b)(2)d. below.
f.	OAC rule 3745-114 and ORC 3704.03(F)	See d)(10) – d)(13) and e)(5) below.

(2) Additional Terms and Conditions

- a. Coatings applied in the coating operations shall not exceed 3.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, as applied.
- b. Compliance with OAC rule 3745-31-05(A)(3), shall also be demonstrated as follows:
 - i. compliance with Operational Restrictions c)(1) - c)(2) below; and
 - ii. compliance with Monitoring and/or Recordkeeping Requirements d)(4) thru d)(9) below.
- c. With the emissions limits and control measures mentioned in term b)(1) a. above, the permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform with ORC changes effective August 3, 2006 (S.B. 265 changes), such

that BAT is no longer required by State regulations for sources having potential to emit, taking into account controls, less than ten tons per year of emissions of an NAAQS pollutant or precursor. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirements to satisfy BAT still exist as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then the emission limits above under b)(1)a. no longer apply to PE* and VOC emissions – see next section, b)(2)d.

* For the purposes of this permit, all emissions of the NAAQS pollutant PE/PM₁₀ are assumed to be filterable (i.e., there is no condensable PM₁₀), and therefore all PE/PM₁₀ is assumed to be a subset of total filterable PE, for which the potential to emit, taking into account controls, is less than ten tons per year.

- d. This term only applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan. In that case only, the following Terms and Conditions will apply instead of those listed under b)(1)a.:
- i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE* emissions from this emissions unit since the calculated annual emission rate for PE* is less than ten tons per year taking into account the controls described in term c)(1) – c)(2) below.
 - ii. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this emissions unit since the calculated annual emission rate for VOC is less than ten tons per year. Note: the requirements in b)(2)a. above still apply.
 - iii. Control measures and work practices shall be utilized as described in terms c)(1) – c)(2) and d)(4) -- d)(9) below, not as BAT requirements, but rather as compliance with the requirements of OAC rule 3745-17-11(C), requirements for surface coating processes. [Note: because this emissions unit is a surface coating process, OAC rule 3745-17-11(C) applies instead of OAC rule 3745-17-11(B).]

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee, having chosen to demonstrate compliance through the use of compliant coatings, shall collect and record the following information each month for the coating line :
 - a. The name and/or identification number of each material employed on the coating line, as-received from the supplier (examples include coatings, thinners, catalysts and additives).
 - b. The volumetric mix ratio for each coating formulation, as-applied. Also, the name and/or identification number of each coating formulation, as-applied, if such formulation is uniquely identified by the permittee. Note: In this paragraph and in c. – d. below, the terminology “coating...as-applied” shall mean either a single coating material applied as-received, or a coating formulation after an as-received coating material has been diluted with a thinner and/or mixed with any other materials at the source before application.
 - c. The VOC content, in pounds per gallon of coating, excluding the volume of water and exempt solvents, of each coating, as-applied, calculated in accordance with the procedure described for $C_{VOC,2}$ in g)(1) below, under “Miscellaneous Requirements.”
 - d. The number of gallons, excluding the volume of water and exempt solvents, of each coating employed, as-applied, calculated in accordance with the procedure described in g)(2) below, under “Miscellaneous Requirements.”
 - e. The monthly VOC emissions from all the coatings employed, in pounds [i.e., the sum of c. times d. for each coating employed].
- (2) The permittee shall collect and record the following information each month for the cleaning materials employed in this emissions unit:
 - a. The name and/or identification number of each cleaning material employed.
 - b. The actual VOC content in pounds per gallon for each cleaning material, calculated in accordance with the procedure described for $C_{VOC,1}$ in g)(3) below, under “Miscellaneous Requirements.”
 - c. The number of gallons of each cleaning material employed.
 - d. The number of gallons of each cleaning material recovered and/or sent off-site for disposal.
 - e. The net number of gallons of each cleaning material consumed [i.e., c. – d.].
 - f. The total monthly VOC emissions from all cleaning materials employed, in pounds [i.e., the sum of b. times e. for each such material employed].

- (3) The permittee shall calculate and record the total annual VOC emissions from coatings and cleaning materials for the twelve-month reporting period specified for the Permit Evaluation Report (PER) in the Authorization section of this permit [i.e., the sum of the monthly VOC emissions from the coating materials from d)(1)e. plus the sum of the monthly emissions from cleaning materials from d)(2)f.].
- (4) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the dry particulate filter system, along with documentation of any modifications deemed necessary by the permittee.
- (5) The permittee shall conduct periodic inspections of the dry particulate filter system to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals, with any modifications deemed necessary by the permittee. These periodic inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer, and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency.
- (6) In addition to the periodic inspections described above, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry particulate filter system while the emissions unit is shut down, and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.
- (7) The permittee shall document each inspection (periodic and annual) of the dry particulate filter system, and shall maintain the following information:
 - a. the date of the inspection;
 - b. a description of each/any problem identified and the date it was corrected;
 - c. a description of any maintenance and repairs performed; and
 - d. the name of the person who performed the inspection.
- (8) The permittee shall maintain records that document any time periods when the dry particulate filter system was not in service when the emissions unit was in operation, as well as a record of all operations during which the dry particulate filter was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee.
- (9) The permittee shall maintain the recordkeeping required by terms d)(1) thru d)(8) above at the facility for a period of not less than five years, and these records shall be made available to Ohio EPA upon request.
- (10) The permit-to-install and operate (PTIO) application for this emissions unit, K001, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute," ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio

EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A," as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices;" or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices;" the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the maximum potential operating hours of the emissions unit, i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$(TLV/10) \times (8/24) \times (5/7) = (4)(TLV)/(24)(7) = MAGLC$$

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

Toxic Contaminant: Xylene (CAS No. 1330207)

TLV (mg/m³): 434

Maximum Hourly Emission Rate (lb/hr): 28 lb/hr

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 1,863

MAGLC (µg/m³): $10,330[(4)(434)/(24)(7)] = 10.33 \text{ mg/m}^3 = 10,330 \text{ µg/m}^3$

The permittee, has demonstrated that emissions of xylene from emissions unit K001 is calculated to be less than eighty per cent of the maximum acceptable ground level

concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute," ORC 3704.03(F).

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

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

- (12) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute," ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to

- be in compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (13) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal, or they may be mailed as a hard copy to the Canton City Health Department, Air Pollution Control Division.
- (2) The permittee shall notify the Canton City Health Department, Air Pollution Control Division in writing (see (1) above) of any monthly record, as recorded in d)(1)c. above, showing the use of noncomplying coatings, defined as any coating with VOC content greater than 3.5 pounds VOC per gallon of coating, excluding water and exempt solvents, as-applied. The notification shall include a copy of all such records that occur during a given calendar month, and shall be sent to the Canton City Health Department, Air Pollution Control Division within 30 days following the end of the calendar month during which the exceedance(s) occurred.
- (3) The permittee shall notify the Canton City Health Department, Air Pollution Control Division in writing (see (1) above) of any record showing that the dry filtration system was not in service or was not operating in accordance with the manufacturer's recommendations, instructions, or operating manuals when this emissions unit was in operation. The notification shall include a copy of such record and shall be submitted within 30 days after the event occurs.
- (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Canton City Health Department, Air Pollution Control Division by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. PER forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered. The permittee shall also provide the following information in the annual PER:
- a. the total VOC emissions from this emissions unit, as recorded in d)(3) above, for the same twelve-month period covered by the annual PER.

- (5) The permittee shall include any changes made to a parameter or value used in the dispersion model that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit, or the exhaust stack have been made, the PER shall include a statement to this effect.
- f) **Testing Requirements**
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
- a. Emissions Limitation:
- 3.5 pounds VOC per gallon of coating, excluding water and exempt solvents, of all coatings, as-applied.
- Applicable Compliance Method:
- Compliance shall be based upon the record keeping specified in d)(1)c. above.
- b. Emissions Limitation:
- If term b)(1)a. above is applicable (BAT limitation), the following limitations apply:
- 28.1 lb/hr of VOC emissions
- Applicable Compliance Method:
- This emissions limitation was established by calculating the maximum hourly potential-to-emit for the following processes combined:
1. Surface-preparation cleaning material usage, based on the material with the highest VOC content.
 2. The spray process, based on the maximum permitted VOC content of 3.5 lb/gal of coating, as-applied.
 3. Cleanup material usage, based on the material with the highest VOC content.
- Spray Process:
- The maximum hourly potential-to-emit for the coating spray process was calculated as shown below, based on a maximum material usage of 20 gal/day as limited by upstream manufacturing capability, a minimum spray time of 2.5 hr needed to consume 20 gal, and the maximum permitted actual VOC content of 3.5 lb/gal; i.e., for a coating containing no water or exempt solvents such that all volatiles are VOC. (Material usage information provided by the permittee in the permit application.)

$$(20 \text{ gal/day}) \div (2.5 \text{ hr/day}) = 8.0 \text{ gal/hr}_{\text{MAX COATING APPLICATION RATE}}$$

$$(8.0 \text{ gal/hr}) \times (3.5 \text{ lb}_{\text{VOC}}/\text{gal}) = 28.0 \text{ lb}_{\text{VOC}}/\text{hr}$$

Surface Prep and Cleanup Material Usage Combined:

The same low-VOC solvent material is used by the permittee for both surface preparation cleaning and equipment cleanup. The maximum hourly potential-to-emit was calculated as shown below, based on the maximum combined daily usage of 3 gal, a minimum usage time of 1.0 hr needed to consume 3 gal, and a VOC content of 0.033 lb/gal. (Material usage information and material data were provided by the permittee in the permit application.)

$$(3 \text{ gal/day}) \div (1.0 \text{ hr/day}) = 3.0 \text{ gal/hr}_{\text{MAX CLEANING SOLVENT USAGE RATE}}$$

$$(3.0 \text{ gal/hr}) \times (0.033 \text{ lb}_{\text{VOC}}/\text{gal}) = 0.099 \approx 0.10 \text{ lb}_{\text{VOC}}/\text{hr}$$

Potential-to-Emit Summation:

$$(28.0 \text{ lb}_{\text{VOC}}/\text{hr})_{\text{SPRAY}} + (0.10 \text{ lb}_{\text{VOC}}/\text{hr})_{\text{CLEAN}} = 28.1 \text{ lb}_{\text{VOC}}/\text{hr}$$

If required, compliance shall be demonstrated by demonstrating that the worst-case material content and usage rates that were used to calculate maximum potential-to-emit as shown above have not been exceeded. Specifically:

1. Material content shall be based upon the record keeping specified in d)(1) and d)(2) above.
2. Coating application rate shall not exceed 8 gal/hr.
3. Cleaning material usage rate does not exceed 3.0 gal/hr.

Emissions Limitation:

If term b)(1)a. above is applicable (BAT limitation), the following limitation applies:

5.12 ton/yr of VOC emissions

Applicable Compliance Method:

This emissions limitation was established by calculating the maximum annual potential-to-emit for the following processes combined:

1. Surface-preparation cleaning material usage, based on the material with the highest VOC content.
2. The spray process, based on the maximum permitted VOC content of 3.5 lb/gal, as-applied.
3. Cleanup material usage, based on the material with the highest VOC content.

Spray Process:

The maximum annual potential-to-emit for the coating spray process was calculated based on a maximum material usage of 20 gal/day and a maximum number of spraying days of 146 days/yr, both limited by upstream manufacturing capability, and the maximum permitted actual VOC content of 3.5 lb/gal; i.e., for a coating containing no water or exempt solvents such that all volatiles are VOC. (Material usage information provided by the permittee in the permit application.)

$$(20 \text{ gal/day}) \times (146 \text{ days/yr}) \times (3.5 \text{ lb}_{\text{VOC}}/\text{gal}) \div (2000 \text{ lb/ton}) = 5.11 \text{ ton}_{\text{VOC}}/\text{yr}$$

Surface Prep and Cleanup Material Usage:

The same low-VOC solvent material is used by the permittee for both surface preparation cleaning and equipment cleanup. The maximum annual potential-to-emit was calculated as shown below, based on the maximum combined daily usage of 3 gal and a VOC content of 0.033 lb/gal. (Material usage information and material data were provided by the permittee in the permit application.)

$$(3 \text{ gal/day}) \times (146 \text{ days/yr}) \times (0.033 \text{ lb}_{\text{VOC}}/\text{gal}) \div (2000 \text{ lb/ton}) = 0.007 \text{ ton}_{\text{VOC}}/\text{yr}$$

Potential-to-Emit Summation:

$$(5.11 \text{ ton}_{\text{VOC}}/\text{yr})_{\text{SPRAY}} + (0.007 \text{ ton}_{\text{VOC}}/\text{yr})_{\text{CLEAN}} = 5.117 \approx 5.12 \text{ ton}_{\text{VOC}}/\text{yr}$$

Compliance shall be based upon the record keeping specified in d)(3) above.

c. Emissions Limitation:

If term b)(1)a. above is applicable (BAT limitation) the following limitations apply:

Filterable particulate emissions (PE) shall not exceed 0.11 lb/hr and 0.02 tons per year.

Applicable Compliance Method:

The hourly emissions limitation was established by calculating the maximum hourly potential-to-emit, with controls, for the spray process.

First, the uncontrolled potential-to-emit was calculated based on a maximum material usage of 20 gal/day as limited by upstream manufacturing capability, a minimum spray time of 2.5 hr needed to consume 20 gal, the material with the highest solids content as applied (IP-86 primer, approx. 80% solids by weight catalyzed = 9.1 lb/gal solids), and a transfer efficiency of 85%. (Material usage information, material data and transfer efficiency were provided by the permittee in the permit application.)

$$(20 \text{ gal/day}) \div (2.5 \text{ hr/day}) \times (9.1 \text{ lb/gal}) \times (1 - 0.85) = 10.92 \text{ lb}_{\text{PE}}/\text{hr}_{\text{UNCONTROLLED}}$$

Next, a filter control efficiency of 99% was applied, based on manufacturer's data of 99.84% efficiency (provided by the permittee in the permit application), which was rounded down to 99% as a conservative measure:

$$(10.92 \text{ lb}_{\text{PE}}/\text{hr})_{\text{UNCONTROLLED}} \times (1 - 0.99) = 0.11 \text{ lb}_{\text{PE}}/\text{hr}_{\text{AFTER CONTROLS}}$$

If required, hourly PE emissions compliance shall be demonstrated based upon emissions testing performed according to Method 5 in Appendix A of 40 CFR Part 60.

The annual emissions limitation was established by calculating the maximum annual potential-to-emit, with controls, for the coating spray process based on $0.11 \text{ lb}_{\text{PE}}/\text{hr}_{\text{AFTER CONTROLS}}$ as calculated above, a spray time of 2.5 hr/day, and a maximum number of spraying days of 146 days/yr due to upstream manufacturing capability limitations (as provided by the permittee in the permit application).

$$(0.11 \text{ lb}_{\text{PE}}/\text{hr}) \times (2.5 \text{ hr}/\text{day}) \times (146 \text{ days}/\text{yr}) \div (2000 \text{ lb}/\text{ton}) = 0.02 \text{ ton}_{\text{PE}}/\text{yr}$$

Compliance with the annual limitation, if required, can only be demonstrated by first requiring a demonstration of compliance with the hourly limitation, at which point compliance with the annual limitation shall also be assumed, including the previously mentioned operating constraints of 2.5 hr/day and 146 days/yr due to upstream manufacturing capability limitations.

g) **Miscellaneous Requirements**

- (1) The following method shall be used to calculate the VOC content, in pounds per gallon, excluding water and exempt solvents, of each coating or coating formulation, as-applied, in accordance with paragraph (B)(8) of OAC rule 3745-21-10 for $C_{\text{VOC},2}$:

$$C_{\text{VOC},2} = (D_c)(W_{\text{VOC}}) / (V_s + V_{\text{VOC}})$$

where:

D_c = the overall density of the coating, in pounds of coating per gallon of coating.

W_{VOC} = the weight fraction of VOC in the coating, in pounds VOC per pound of coating, calculated as shown below.

V_s = the volume fraction of solids in the coating, in gallons of solids per gallon of coating.

V_{VOC} = the volume fraction of VOC in the coating, in gallons VOC per gallon of coating, calculated as shown below.

and where:

$$W_{\text{VOC}} = W_{\text{VM}} - W_w - W_{\text{ES}}$$

W_{VM} = weight fraction of volatile matter in the coating, in pounds of volatile matter per pound of coating.

W_W = weight fraction of water in the coating, in pounds of water per pound of coating.

W_{ES} = weight fraction of exempt solvent(s) in the coating, in pounds of exempt solvent(s) per pound of coating.

and where:

$$V_{VOC} = V_{VM} - V_W - V_{ES}$$

V_{VM} = volume fraction of volatile matter in the coating, in gallons of volatile matter per gallon of coating.

V_W = volume fraction of water in the coating, in gallons of water per gallon of coating.

V_{ES} = volume fraction of exempt solvents in the coating, in gallons of exempt solvent(s) per gallon of coating.

Notes:

- a. If a coating is applied as-received without the addition of any dilution solvent (thinner) or any other material, then the “as-applied” value for $C_{VOC,2}$ is the same as the “as-received” value.
- b. If a coating is not applied as-received, but rather is mixed with dilution solvent (thinner) and/or catalyst and/or other additive before application, then the value for $C_{VOC,2}$ shall be calculated as shown below for the specific coating formulation, as-applied after mixing:
 - i. First, the equation above for $C_{VOC,2}$ shall be used to calculate a separate $C_{VOC,2}$ value for each material in a coating formulation using the as-received data from the supplier. This would include a separate $C_{VOC,2}$ value for any dilution solvent (thinner), catalyst, or additive, in addition to the coating material itself as-received. As applicable, the word “coating” in the definition of each parameter above should be replaced by the appropriate term for each type of material. For example, for a “thinner” material, D_C would be defined as “the overall density of the thinner, in pounds of thinner per gallon of thinner.”
 - ii. Next, $C_{VOC,2}$ for the coating formulation, as-applied after mixing, shall be calculated as a volume-weighted average:

$$(C_{VOC,2})_{AS-APPLIED} = (V_{COATING})(C_{VOC,2 COATING}) + (V_X)(C_{VOC,2 X}) + (V_Y)(C_{VOC,2 Y}) + (V_Z)(C_{VOC,2 Z}) \text{ etc.}$$

where:

COATING refers to the coating material itself as-received.

X, Y, and Z refer to other materials in the coating formulation, such as thinner, catalyst, or other additive, as applicable.

V_{COATING} = volume fraction of the as-received coating material itself in the coating formulation as-applied, based on the volumetric mix ratio*.

$V_{\text{X, Y OR Z}}$ = volume fraction of any other materials in the coating formulation, such as thinner, catalyst, or other additive, as applicable, based on the volumetric mix ratio*.

* The volume fraction for each component in the mixture can be calculated from the volumetric mix ratio as shown in the following example: Consider the simple case of a coating and thinner formulation with a 4:1 volumetric mix ratio, meaning 4 parts coating to 1 part thinner:

$$V_{\text{COATING}} = (4 \text{ parts coating}) / (5 \text{ parts total}) = 0.80$$

$$V_{\text{THINNER}} = (1 \text{ part thinner}) / (5 \text{ parts total}) = 0.20$$

- (2) The following method shall be used to calculate the volume, in gallons, excluding water and exempt solvents, of each coating or coating formulation, as-applied. (This adjusted volume value will be multiplied by the adjusted VOC content value defined as $C_{\text{VOC},2}$ to calculate VOC emissions as required in Monitoring and Recordkeeping term d)(1)e above.)

$$\text{Volume}_{\text{EXCLUDING WATER AND ES}} = (\text{Actual Volume}) \times (1 - V_{\text{W}} - V_{\text{ES}})$$

where:

V_{W} = volume fraction of water in the coating or coating formulation, as-applied.

V_{ES} = volume fraction of exempt solvents in the coating or coating formulation, as-applied.

- (3) The following method shall be used to calculate the actual VOC content, in pounds per gallon, of each cleaning material, in accordance with paragraph (B)(8) of OAC rule 3745-21-10 for $C_{\text{VOC},1}$:

$$C_{\text{VOC},1} = (D_{\text{CLEAN}})(W_{\text{VOC}}) = (\text{VOC content})_{\text{CLEAN}}$$

where:

D_{CLEAN} = the overall density of the cleaning material, in pounds per gallon.

W_{VOC} = the weight fraction of VOC in the cleaning material, in pounds VOC per pound of cleaning material, calculated as shown below:

$$W_{\text{VOC}} = W_{\text{VM}} - W_{\text{W}} - W_{\text{ES}}$$

W_{VM} = weight fraction of volatile matter in the cleaning material, in pounds of volatile matter per pound of cleaning material.

W_{W} = weight fraction of water in the cleaning material, in pounds of water per pound of cleaning material.

W_{ES} = weight fraction of exempt solvents in the cleaning material, in pounds of exempt solvents per pound of cleaning material.