



2/11/2015

Brent Bowers
Sonoco-Phoenix, Warner Road Facility
2121 Warner Rd. SE
Canton, OH 44707-2273

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1576051610
Permit Number: P0103959
Permit Type: Renewal
County: Stark

Dear Permit Holder:

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

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

How to appeal this permit

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

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

Certified Mail

Table with 2 columns: Yes/No and various permit conditions like TOXIC REVIEW, SYNTHETIC MINOR TO AVOID MAJOR NSR, CEMS, MACT/GACT, NSPS, NESHAPS, NETTING, MODELING SUBMITTED, SYNTHETIC MINOR TO AVOID TITLE V, FEDERALLY ENFORCABLE PTIO (FEPTIO), SYNTHETIC MINOR TO AVOID MAJOR GHG.

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

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

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.

Sincerely,



Erica R. Engel-Ishida, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Canton



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Sonoco-Phoenix, Warner Road Facility**

Facility ID:	1576051610
Permit Number:	P0103959
Permit Type:	Renewal
Issued:	2/11/2015
Effective:	2/11/2015
Expiration:	2/11/2020



Division of Air Pollution Control
Permit-to-Install and Operate
for
Sonoco-Phoenix, Warner Road Facility

Table of Contents

Authorization	1
A. Standard Terms and Conditions	4
1. What does this permit-to-install and operate ("PTIO") allow me to do?.....	5
2. Who is responsible for complying with this permit?	5
3. What records must I keep under this permit?	5
4. What are my permit fees and when do I pay them?.....	5
5. When does my PTIO expire, and when do I need to submit my renewal application?	5
6. What happens to this permit if my project is delayed or I do not install or modify my source?	6
7. What reports must I submit under this permit?	6
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?	6
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ...	6
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?	7
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?	7
12. What happens if one or more emissions units operated under this permit is/are shut down permanently?	7
13. Can I transfer this permit to a new owner or operator?.....	7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?	8
15. What happens if a portion of this permit is determined to be invalid?	8
B. Facility-Wide Terms and Conditions.....	9
C. Emissions Unit Terms and Conditions	19
1. Emissions Unit Group – Water-Based End Liner Group: K015, K022, K025, K028, and K047	20
2. Emissions Unit Group – Solvent-Based End Liner Group: K020 and K045	26
3. Emissions Unit Group – Conversion Press Group: K016, K021, K024, K027, K030 and K048.....	33
4. Emissions Unit Group – E-Coat Repair Group: K026 and K043	41
5. Emissions Unit Group – Post-Score Repair Spray Group: K040, K041, K046 and K049.....	47



Authorization

Facility ID: 1576051610
Application Number(s): A0036007, A0046077
Permit Number: P0103959
Permit Description: FEPTIO with synthetic minor restrictions to avoid Title V for single HAP, total HAPs, and VOCs. Renewal for EUs K015, K016, K020, K021, K022, K024, K025, K026, K027, K028, K030, K040, K041 & K043. First operating permit for K045, K046, K047, K048 & K049. Sonoco-Phoenix manufactures metal can ends for food products. Emissions from K046 & K049 are controlled by a regenerative thermal oxidizer (RTO). All other EUs are uncontrolled.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 2/11/2015
Effective Date: 2/11/2015
Expiration Date: 2/11/2020
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Sonoco-Phoenix, Warner Road Facility
2121 Warner Road SE
Canton, OH 44707

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

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

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


Craig W. Butler
Director



Authorization (continued)

Permit Number: P0103959

Permit Description: FEPTIO with synthetic minor restrictions to avoid Title V for single HAP, total HAPs, and VOCs. Renewal for EUs K015, K016, K020, K021, K022, K024, K025, K026, K027, K028, K030, K040, K041 & K043. First operating permit for K045, K046, K047, K048 & K049. Sonoco-Phoenix manufactures metal can ends for food products. Emissions from K046 & K049 are controlled by a regenerative thermal oxidizer (RTO). All other EUs are uncontrolled.

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

Group Name: Conversion Press Group

Emissions Unit ID:	K016
Company Equipment ID:	Line 208, conversion
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K021
Company Equipment ID:	Line 203, conversion press
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K024
Company Equipment ID:	Line 206 Conversion
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K027
Company Equipment ID:	Line 207 Conversion
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K030
Company Equipment ID:	Line 201 Conversion
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K048
Company Equipment ID:	K048
Superseded Permit Number:	15-01694
General Permit Category andType:	Not Applicable

Group Name: E-Coater Group

Emissions Unit ID:	K026
Company Equipment ID:	Line 207 E-Coat
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K043
Company Equipment ID:	Line 206, e-coat rep
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable



Group Name: Post-Score Repair Group

Emissions Unit ID:	K040
Company Equipment ID:	Line 208, post-repai
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K041
Company Equipment ID:	Line 201 Post repair
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K046
Company Equipment ID:	Line 203 Post Repair
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K049
Company Equipment ID:	Line 200 Post Repair Spray
Superseded Permit Number:	15-01694
General Permit Category andType:	Not Applicable

Group Name: Solvent-Based End Liner Group

Emissions Unit ID:	K020
Company Equipment ID:	Line 203, blanked end liner
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K045
Company Equipment ID:	Line 205 End Liner
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable

Group Name: Water-Based End Liner Group

Emissions Unit ID:	K015
Company Equipment ID:	Line 208, End Liner
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K022
Company Equipment ID:	Line 206 End Liner
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K025
Company Equipment ID:	Line 207 End Liner
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K028
Company Equipment ID:	Line 201 End Liner
Superseded Permit Number:	15-01679
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K047
Company Equipment ID:	K047
Superseded Permit Number:	15-01694
General Permit Category andType:	Not Applicable



Final Permit-to-Install and Operate
Sonoco-Phoenix, Warner Road Facility
Permit Number: P0103959
Facility ID: 1576051610
Effective Date: 2/11/2015

A. Standard Terms and Conditions



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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

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

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

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



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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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



change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

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

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

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

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



Final Permit-to-Install and Operate
Sonoco-Phoenix, Warner Road Facility
Permit Number: P0103959
Facility ID: 1576051610
Effective Date: 2/11/2015

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) paragraph 2. - 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) paragraph 3. - emissions limitations and/or control requirements;
 - (2) paragraph 5. - monitoring and/or recordkeeping requirements; and
 - (3) paragraph 6.b). - quarterly deviation reports.

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 [or other components] added at the source before application of the coating. [OAC rule 3745-21-01(D)]

As-received: the formulation of a coating material or component (e.g., one-part coatings, each component of two-part coatings, thinners, reducers, and other additives) as received from the supplier. As-received is equivalent to "as-purchased."

Basecoat: for can coating lines, the exterior base coating of a two-piece can or the exterior and interior base coating of a three-piece can or three-piece can end. [OAC rule 3745-21-01(D)]

Cleaning material or cleanup 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)]

Coating or surface coating: a material applied onto or saturated within a substrate for decorative, protective or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, adhesives and inks. [OAC rule 3745-21-01(D)]

Coating line: an operation consisting of a series of one or more coating applicators and any associated flash-off areas, drying areas and ovens wherein a surface coating is applied, dried, and/or cured. It is not necessary for an operation to have an oven, or flash-off area, or drying area in order to be included within this definition. [OAC rule 3745-21-01(D)]

End sealing compound: a synthetic rubber or plastic compound which is applied onto can ends and which functions as a gasket when the end is assembled on the can. [OAC rule 3745-21-01(D)]



Excluding water and exempt solvents means subtracting the volume (or volume fraction) of water and other volatile materials which are not VOC (and thus are known as “exempt solvents”) from the total volume of a coating material. [Adapted from OAC rule 3745-21-01(D)].

Exempt solvent: 1. volatile matter in a coating or cleaning material other than VOC or water. [OAC rule 3745-21-10(B)(5)] 2. any of the compounds that are specifically identified as *not* being “volatile organic compounds” under the definition of “volatile organic compound” in paragraph (B)(16) of OAC rule 3745-21-01.

Hazardous air pollutant (HAP): any air pollutant listed under Section 112(b) of the Clean Air Act (USC Section 7412).

Miscellaneous metal part or product: any metal part or metal product *except* the following: cans, coils, metal furniture, large appliances, and aluminum or copper wire prior to its formation into an electromagnetic coil. [OAC rule 3745-21-01(D)]

One-part, or one-component coating: a coating that is ready for application as it comes out of its container to form an acceptable dry film. For the purpose of this definition, a thinner, necessary to reduce the viscosity, is not considered a second component. [Adapted from OAC rule 3745-21-01(D)]

Organic compound (OC): 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%.

Toxic Air Contaminant (TAC): an air contaminant that has been identified by the Ohio EPA as having known toxicological effects, pursuant to ORC 3704.03(F)(3)(c). The complete list of toxic air contaminants regulated in Ohio can be found in OAC rule 3745-114-01.

Two-part, or two-component coating: a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film. May also be known as a multi-component coating, especially if the as-applied mixture includes another additive material in addition to the catalyst or hardener.[Adapted from OAC rule 3745-21-01(D)]

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 that participate in atmospheric photochemical reactions. Organic compounds that are specifically identified as *not* being “volatile organic compounds” are listed under the definition of “volatile organic compound” in paragraph (B)(16) of OAC rule 3745-21-01. When used in coating or cleaning materials, those compounds in the list just described are known as “exempt solvents.”

3. Applicable Facility-Wide Emissions Limitations and/or Control Requirements

- a) The following applicable rules and/or requirements and applicable emissions limitations and/or control measures apply to the following 19 emissions units combined: K015, K016, K020, K021, K022, K024, K025, K026, K027, K028, K030, K040, K041, K043, K045, K046, K047, K048 and K049. The combined emissions from these units shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)(1) [Synthetic Minor restrictions to avoid Title V applicability and MACT applicability under 40 CFR Part 63, Subpart KKKK]	Emissions of any individual hazardous air pollutant (HAP) shall not exceed 9.0 tons per year, based upon a rolling, 12-month summation of the monthly emissions. Emissions of all hazardous air pollutants (HAPs) combined shall not exceed 24.0 tons per year, based upon a rolling, 12-month summation of the monthly emissions. Emissions of volatile organic compounds (VOC) shall not exceed 99.0tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions.

b) Additional Terms and Conditions

(1) None.

4. Operational Restrictions

a) None.

5. Monitoring and/or Recordkeeping Requirements

a) The permittee shall collect and record the following information each month for all materials containing any hazardous air pollutant (HAP) and/or volatile organic compound (VOC)* that are employed in any of the following emissions units: K015, K016, K020, K021, K022, K024, K025, K026, K027, K028, K030, K040, K041, K043, K045, K046, K047, K048 and K049:

* As described in the Definitions above (see *exempt solvents, organic compounds and volatile organic compounds*), some materials contain “exempt solvents,” which are organic compounds (OCs) that have been identified as being exempt from the definition of “VOC” for regulatory purposes because they do not participate in photochemical reactions. A common example of an exempt solvent is acetone, which is used as a thinner and/or cleaning material for some types of coatings.

Only the subset of total organic compounds (OCs) that are defined as VOCs are included in the definition of “regulated air pollutant” in OAC rule 3745-77-01 for the purpose of Title V major source applicability. Because of this, recordkeeping is required only for VOCs in order to demonstrate compliance with the synthetic minor restriction in 3.a)(1) above. However, as described in term A.4 of the Standard Terms and Conditions of this permit, there is a rule-based requirement in OAC Chapter 3745-78 for the permittee to report the actual emissions of total OCs on an annual basis for the purpose of emissions fees. For this reason, it is highly recommended that the permittee maintain records of the OC content and usage-based OC emissions for all OC-containing materials along with the recordkeeping required below for



all HAP-containing and VOC-containing materials. This may include the need to keep records for some materials that contain only exempt solvents (i.e., zero VOCs), and so would otherwise be excluded.

- (1) the name and/or identification number of each material employed (examples of material types include, but are not limited to: end-sealing compounds, post-score repair coatings, E-coatings, thinners, tab lubricants, rust inhibitors, printer inks applied to the product, and cleaning materials);
 - (2) the name, and if applicable, CAS No., of each individual HAP contained in each material identified in (1) above, and the content, in pounds per gallon, of each individual HAP in each such material, as applied, calculated in accordance with the procedure described for $C_{HAP,i}$ in 8.a) below, under Miscellaneous Requirements;
 - (3) the actual VOC content, in pounds per gallon as applied, of each material identified in (1) above, calculated in accordance with the procedure described for $C_{VOC,1}$ in 8.b) below, under Miscellaneous Requirements;
 - (4) for each emissions unit, the number of gallons employed during the month of each material identified in (1) above that contains any HAP or more than zero VOC (in the case of cleanup materials, the number of gallons employed shall mean the net number of gallons, defined as the gross number of gallons employed during the month minus the number of gallons recovered and/or sent off-site for disposal during the month);
 - (5) for each emissions unit, the monthly emissions of each individual HAP, in pounds or tons, to be calculated as follows:
 - a. For each **uncontrolled** emissions unit, multiply the number of gallons of each HAP-containing material employed during the month from (4) above by the content in lb/gal of each HAP contained in the material from (2) above. Then, for each individual HAP, sum the results for all materials containing that specific HAP (and employed in this emissions unit) to get the total emissions of each HAP, in pounds (or divide by 2000 pounds per ton if recording in tons at this point).
 - b. For each **controlled** emissions unit, repeat the steps in the paragraph above, then multiply the result for each HAP by 1 minus the overall control efficiency (expressed as a decimal fraction) for the control system that was determined during the most recent emissions test that demonstrated the emissions unit was in compliance*.
- * See C.5.g)(2) in the Emissions Unit Terms and Conditions for the Post-Score Repair Spray Emissions Unit Group for information about the most recent performance (emissions) tests that demonstrated compliance, and for the specific control efficiency value that is to be used by the permittee based on those tests, along with provisions for making adjustments based upon future performance tests.
- (6) for each emissions unit, the emissions of all HAPs combined, in pounds or tons, to be calculated as the sum of all the individual HAP emissions from either (5)a. or (5)b. above, whichever is applicable;



- (7) for each emissions unit, the monthly VOC emissions, in pounds or tons, to be calculated as follows:
- a. For each **uncontrolled** emissions unit, multiply the number of gallons of each VOC-containing material employed during the month from (4) above by the actual VOC content in lb/gal from (3) above. Then sum the results for all VOC-containing materials employed in this emissions unit to get the total emissions of VOC, in pounds (or divide by 2000 pounds per ton if recording in tons at this point).
 - b. For each **controlled** emissions unit, repeat the steps in the paragraph above, then multiply the result by 1 minus the overall control efficiency (expressed as a decimal fraction) for the control system that was determined during the most recent emissions test that demonstrated the emissions unit was in compliance*.
- * See C.5.g)(2) in the Emissions Unit Terms and Conditions for the Post-Score Repair Spray Emissions Unit Group for information about the most recent performance (emissions) tests that demonstrated compliance, and for the specific control efficiency value that is to be used by the permittee based on those tests, along with provisions for making adjustments based upon future performance tests.
- (8) the facility-wide monthly emissions of each individual HAP, in tons, i.e., the summation of the individual HAP emissions for each emissions unit from (5)a. and (5)b. above for all emissions units combined (if necessary, convert from pounds to tons by dividing by 2000 pounds per ton);
- (9) the facility-wide monthly emissions of all HAPs combined, in tons, i.e., the summation of the emissions of all HAPs combined for each emissions unit from (6) above for all emissions units combined (if necessary, convert from pounds to tons by dividing by 2000 pounds per ton);
- (10) the facility-wide monthly VOC emissions, in tons, i.e., the summation of the VOC emissions for each emissions unit from (7)a. and (7)b. above for all emissions units combined (if necessary, convert from pounds to tons by dividing by 2000 pounds per ton);
- (11) the facility-wide rolling, 12-month summation of emissions of each individual HAP, in tons, i.e., the summation of the facility-wide monthly emissions of each individual HAP from (8) above for the most recent month and the previous 11 months;
- (12) the facility-wide rolling, 12-month summation of all HAPs emissions combined, in tons, i.e., the summation of the facility-wide monthly emissions of all HAPs combined from (9) above for the most recent month and the previous 11 months; and
- (13) the facility-wide rolling, 12-month summation of VOC emissions, in tons, i.e., the summation of the facility-wide monthly VOC emissions from (10) above for the most recent month and the previous 11 months.



These emissions units have been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the monthly emissions upon issuance of this permit.

6. Reporting Requirements

a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

b) The permittee shall submit quarterly deviation (excursion) reports for the following emissions units that identify:

(1) all deviations (excursions) of the following emissions limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

<u>Emissions Unit ID</u>	<u>Term & Condition</u>
K015, K016, K020, K021, K022, a. – c. below K024, K025, K026, K027, K028, K030, K040, K041, K043, K045, K046, K047, K048 and K049	
a.	all exceedances of the facility-wide rolling, 12-month individual HAP emission limitation of 9.0 tons as recorded in 5.a)(11) above;
b.	all exceedances of the facility-wide rolling, 12-month total combined HAPs emission limitation of 24.0 tons as recorded in 5.a)(12) above; and
c.	allexceedances of the facility-wide rolling, 12-month VOC emission limitation of 99.0 tons as recorded in 5.a)(13) above.

<u>Also, for Emissions Unit IDs</u>	<u>Term & Condition</u>
<u>K046 and K049:</u>	any period of time (start time and date, and end time and date) when emissions unit(s) K046 and/or K049 was/were in operation and the process emissions were not vented to the RTO.



(This term is redundant to a portion of C.5.e)(3)b. in the Emissions Unit Terms and Conditions for the Post-Score Repair Spray Emissions Unit Group. However, it is also listed here because the controlled emissions for these EUs are used in the recordkeeping associated with the synthetic minor limitations.)

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

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

The quarterly reports shall be submitted each year by January 31 (covering October - December), April 30 (covering January - March), July 31 (covering April - June), and October 31 (covering July - September), unless an alternative schedule has been established and approved by the Canton City Health Department, Air Pollution Control Division.

- c) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

7. Testing Requirements

- a) Compliance with the emission limitations and/or control requirements specified in section 3. of these facility-wide terms and conditions shall be determined in accordance with the following methods :

- (1) Emission Limitation:

Emissions of any individual Hazardous Air Pollutant (HAP) shall not exceed 9.0 tons per year, based upon a rolling, 12-month summation of the monthly emissions from emissions units K015, K016, K020, K021, K022, K024, K025, K026, K027, K028, K030, K040, K041, K043, K045, K046, K047, K048 and K049 combined.

Applicable Compliance Method:

Compliance shall be based on the recordkeeping found in term 5.a)(11) above.

- (2) Emission Limitation:

Emissions of all Hazardous Air Pollutants (HAPs) combined shall not exceed 24.0 tons per year, based upon a rolling, 12-month summation of the monthly emissions from emissions units K015, K016, K020, K021, K022, K024, K025, K026, K027, K028, K030, K040, K041, K043, K045, K046, K047, K048 and K049 combined.



Applicable Compliance Method:

Compliance shall be based on the recordkeeping found in term 5.a)(12) above.

(3) Emission Limitation:

Emissions of volatile organic compounds (VOC) shall not exceed 99.0 tons per year, based upon a rolling, 12-month summation of the monthly emissions from emissions units K015, K016, K020, K021, K022, K024, K025, K026, K027, K028, K030, K040, K041, K043, K045, K046, K047, K048 and K049 combined.

Applicable Compliance Method:

Compliance shall be based on the recordkeeping found in term 5.a)(13) above.

8. Miscellaneous Requirements

Values for material properties required in a) and b) below shall be determined either by the procedures set forth in U.S. EPA Method 24* or from formulation data provided by the manufacturer of the material, except for individual HAP, individual TAC, and exempt solvents information that can *only* be obtained from formulation data.

* Method 24, as described in 40 CFR Part 60, Appendix A, is applicable for the determination of volatile matter content, water content, density, volume solids, and weight solids of paint, varnish, lacquer, or other related surface coatings.

- a) The following method shall be used to calculate the individual HAP content, in pounds per gallon, for each individual HAP in each HAP-containing material:

$$C_{HAP, i} = (D)(W_{HAP, i})$$

where:

D = the overall density of the material, in pounds per gallon.

$W_{HAP, i}$ = the weight fraction of the individual HAP "i" in the material

- b) The following method shall be used to calculate the actual VOC content ($C_{VOC,1}$), in pounds per gallon, of each VOC-containing material:

$$C_{VOC,1} = (D)(W_{VOC}) \quad \text{See Notes 1. and 2. below}$$

where:

D = the overall density of the material, in pounds per gallon.

W_{VOC} = the weight fraction of VOC in the material, in pounds of VOC per pound of material.

$$= W_{VM} - W_W - W_{ES}$$

where:



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

[For coatings, if this weight fraction is determined by ASTM D2369-04, "Standard Test Method for Volatile Content of Coatings," the drying conditions shall be one hundred ten degrees Celsius for one hour, except where otherwise authorized by the director based on an alternate analytical procedure that is satisfactorily demonstrated to the director by the coating manufacturer to be more representative of the actual cure mechanism of the coating.]

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

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

Notes for 8.b):

1. For coatings, if the "as-applied" value is required for $C_{VOC,1}$, this will be the same as the "as-received" value only for the case of one-part coatings that are applied without the addition of any thinner, reducer or other additive. For all other cases, see Note 2.
2. For one-part coatings that are thinned or reduced before application (including dilution with water), and for all two-part coatings (which may also include thinners, reducers or other additives), the "as-applied" value for $C_{VOC,1}$ must be calculated as a volume-weighted average for the coating mixture, in which case the applicable parameter shall be identified as $(C_{VOC,1})_{MIX}$. The following formula shall be used to calculate $(C_{VOC,1})_{MIX}$:

$$(C_{VOC,1})_{MIX} = \sum_{i=1}^n (V_i) (C_{VOC,1i})$$

where:

i = subscript denoting a specific material in the coating mixture.

n = the total number of different materials in the coating mixture.

V_i = the volume fraction of each material "i" in the coating mixture, based on the volumetric mix ratio.

Individual parameter values must be calculated or obtained for each material "i" in the coating mixture.



Final Permit-to-Install and Operate
Sonoco-Phoenix, Warner Road Facility
Permit Number: P0103959
Facility ID: 1576051610
Effective Date: 2/11/2015

C. Emissions Unit Terms and Conditions



1. Emissions Unit Group – Water-Based End Liner Group: K015, K022, K025, K028, and K047

EU ID	Operations, Property and/or Equipment Description
K015	Line 208 End Liner
K022	Line 206 End Liner
K025	Line 207 End Liner
K028	Line 201 End Liner
K047	Line 200 End Liner

The process for the emissions units in this group consists of airless spray application of a water-based, zero-VOC end sealing compound to the inner lip seal of can ends. The only emissions are uncontrolled VOC from isopropyl alcohol cleaning solvent, described by the permittee as “IPA misting solution.”

- 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. d)(2)
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)a.
- 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(D), as effective 6/30/2008 [Synthetic Minor restrictions to avoid Title V applicability]	Synthetic minor restrictions for the emissions units in this Emissions Unit Group have been incorporated into Section B, Facility-Wide Terms and Conditions.
b.	OAC rule 3745-31-05(A)(3), as effective 4/27/1998 for K015, and K022; and as effective 11/30/2001 for K025, K028, and K047 [Best Available Technology (BAT)]	The end sealing compound employed in all emissions units in this Emissions Unit Group shall contain no volatile organic compounds (VOC). The cleaning material employed in all



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Ref PTIs K015 PTI 15-1328, 10/16/1998 K022 PTI 15-1328, 10/16/1998 K025 PTI 15-01433, 9/10/2002 K028 PTI 15-01679, 1/15/2008 K047 N/A – see b)(2)a. below	emissions units in this Emissions Unit Group shall contain no more than 6.6 pounds of VOC per gallon. For all emissions units in this Emissions Unit Group, see b)(2)b. below.
c.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006 [Provision for less than 10 ton/yr BAT exemption]	For emissions unit K047 only, see b)(2)c. below.
d.	OAC rules 3745-21-09(D)(1)(e) and/or (D)(2)(e) [Emission limits for a can end sealing compound coating line]	The VOC emissions limitations established pursuant to this rule for any can end sealing compound employed in this Emissions Unit Group are less stringent than the zero-VOC limitation established for said end sealing compound pursuant to OAC rule 3745-31-05(A)(3). For emissions unit K047, also see b)(2)c. below.
e.	OAC rule 3745-17-11 [Restrictions on particulate emissions from industrial processes]	Exempt pursuant to paragraph (A)(1)(j) of this rule because the process for this Emissions Unit Group is a surface coating process (e.g., for sealers, adhesives, and deadeners) that employs airless spray and/or bead-type (extrusion) application methods.”
f.	ORC 3704.03(F)(4) and OAC rule 3745-114-01 [Toxic Air Contaminants]	N/A -- see d)(2) below.

(2) Additional Terms and Conditions

- a. For emissions unit K047, the VOC emissions limitations shown above in b)(1)b. were established as BAT for the present permit, No. P0103959, based on what BAT would have been pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001. The limitations were determined based on an engineering judgment made in comparison to the other emissions units in this Emissions Units Group and their respective BAT limitations in the PTIs listed in b)(1)b.

The reason for reconstructing BAT for K047 is as follows: when initial installation PTI No. 15-01694 was issued 3/13/2008, it included a voluntary restriction to limit



VOC emissions from K047 to less than ten tons per year (specifically, 1.64 tons/yr) in order to avoid BAT pursuant to OAC rule 3745-31-05(A)(3), as effective December 1, 2006. As described in b)(2)b. below, the rule allowing the less-than-ten-tons per year exemption has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). So for the present permit, it was necessary to reconstruct BAT as it would have been for K047 without the exemption.

- b. With the emissions limitations and control measures mentioned in term b)(1) b. above, the permittee has satisfied 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 installed or modified on or after August 3, 2006 and having the 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).

Of the emissions units in this Emissions Unit Group, K015, K022, K025 and K028 are not affected by this rule change since they were installed prior to August 3, 2006 and have not been modified since. Only K047 is affected since it was installed September 15, 2008. 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 for K047 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 emissions limitations listed above in b)(1)b. no longer apply to the VOC emissions from emissions unit K047, since its potential to emit for VOC is less than ten tons per year taking into account the voluntary restrictions described in b)(2)c.i. below.

- c. 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 to emissions unit K047 instead of those listed under b)(1)b:
- i. Pursuant to paragraph (C) of the December 1, 2006 version of OAC rule 3745-31-05, this permit takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) by ensuring that the potential emissions of VOC from emissions unit K047 shall be less than ten tons per year as a rolling, 12 month summation of the monthly emissions:
- (a) the end sealing compound employed in emissions unit K047 shall contain zero VOC; and
- (b) the VOC content of the cleaning material(s) employed in emissions unit K047 shall not exceed 6.6 pounds per gallon.



Term (b) above was carried over from PTI 15-01694, issued 3/13/2008.
Term (a) was implied in the same PTI, since the tpy limit in that permit was established based only on the cleaning material.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each emissions unit in this Emissions Unit Group, the permittee shall collect and record the following information each month:
- a. the name and/or identification number of each material employed [duplication of a requirement in paragraph 5.a)(1) in Section B. of this permit*];
 - b. the actual VOC content in pounds per gallon for each material identified in "a" above, calculated in accordance with the procedure described for $C_{VOC,1}$ in Section B. of this permit, Facility-Wide Terms and Conditions, paragraph 8.b) [duplication of a requirement in paragraph 5.a)(3) in Section B. of this permit*]; and
 - c. the number of gallons employed during the month of each material identified in "a" above that contains more than zero VOC (in the case of cleaning materials, the number of gallons employed shall mean the net number of gallons, defined as the gross number of gallons employed during the month minus the number of gallons recovered and/or sent off-site for disposal during the month) [duplication of a requirement in paragraph 5.a)(4) in Section B. of this permit*].

*All of the above requirements are included in the Monitoring and/or Recordkeeping Requirements in Section B. of this permit, Facility-Wide Terms and Conditions, and need not be kept as separate or redundant records for this Emissions Unit Group.

- (2) None of the end sealing compounds used in the emissions units in this Emissions Unit Group contain Toxic Air Contaminants (TACs), as defined in OAC rule 3745-114-01. Also, it is the permittee's stated intention, as re-affirmed in permit renewal application No. A0046077, received 11/26/2012, to use only isopropyl alcohol (a non-TAC) as a cleaning material in these emissions units. Therefore, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4), does not apply to this Emissions Units Group. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified federally enforceable permit-to-install and operate (FEPTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to exceed 1.0 ton per year may require the permittee to apply for and obtain a new federally enforceable permit-to-install and operate (FEPTIO).

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will



accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

f) Testing Requirements

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

a. Emissions Limitation:

The end sealing compound employed in all emissions units K015, K022, K025, K028, and K047 shall contain no volatile organic compounds (VOC). For emissions unit K047, this limitation applies as BAT only if b)(1)b. above is applicable. Otherwise see f)(1)c. below.

Applicable Compliance Method:

This emissions limitation was based on the permittee's stated intention of using only zero-VOC end sealing compound in these emissions units, as re-affirmed in permit renewal application No. A0046077, received 11/26/2012.

Compliance shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above.

b. Emissions Limitation:

The VOC content of the cleaning material(s) employed in emissions units K015, K022, K025, K028, and K047 shall not exceed 6.6 pounds per gallon. For emissions unit K047, this limitation applies as BAT only if b)(1)b. above is applicable. Otherwise see f)(1)c. below.

Applicable Compliance Method:

This emissions limitation was established based on the VOC content of isopropyl alcohol (6.6 lb_{VOC}/gal) and the permittee's stated intention of using only isopropyl



alcohol as a cleaning material in these emissions units, as re-affirmed in permit renewal application No. A0046077, received 11/26/2012. (This emissions limitation does not limit the permittee to using only isopropyl alcohol, however. Other cleaning solvents may be used, provided the specified VOC content is not exceeded.)

Compliance shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above.

c. Emissions Limitations:

If term b)(1)c. above is applicable (provision for less than 10 ton/yr BAT exemption) for emissions unit K047, the following apply as voluntary restrictions to ensure that the potential emissions of VOC from emissions unit K047 will be less than ten tons per year as a rolling, 12 month summation of the monthly emissions:

- i. the end sealing compound employed in emissions unit K047 shall contain zero VOC; and
- ii. the VOC content of the cleaning material(s) employed in emissions unit K047 shall not exceed 6.6 pounds per gallon.

Applicable Compliance Method:

Compliance with "i" and "ii" above shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above.

If required, compliance with the less than 10 ton/yr exemption shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above and the following calculations:

Multiply the number of gallons of each VOC-containing cleaning material employed during the most recent month by its actual VOC content. Then (if more than one cleaning material was used) sum the results for all VOC-containing cleaning materials employed in this emissions unit during the most recent month. Divide by 2000 pounds per ton to get the total emissions of VOC, in tons. Add the total for the most recent month to the total from the previous eleven months to obtain the rolling, 12-month summation.

g) Miscellaneous Requirements

- (1) None.



2. Emissions Unit Group – Solvent-Based End Liner Group: K020 and K045

EU ID	Operations, Property and/or Equipment Description
K020	Line 203 End Liner
K045	Line 205 End Liner & Converter (EZ-Open End Mfg. Line)

The process for the emissions units in this group consists of airless spray application of a solvent-based, zero-HAPs end sealing compound to the inner lip seal of can ends. The process also includes a second material for the purpose of lubricating the tip of the nozzle to prevent build-up of end sealing compound. Emissions are uncontrolled VOC from both materials.

- 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. d)(2)
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)a.
- 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(D), as effective 6/30/2008 [Synthetic Minor restrictions to avoid Title V applicability]	Synthetic minor restrictions for the emissions units in this Emissions Unit Group have been incorporated into Section B, Facility-Wide Terms and Conditions.
b.	OAC rule 3745-31-05(A)(3) [Best Available Technology (BAT)] Ref PTIs K020 - PTI 15-01433, Admin Mod, 9/10/2002 K045 - PTI 15-01590, 8/9/2005	Volatile organic compound (VOC) emissions shall not exceed the amount listed by EU ID below: K020 - 10.0 lb/hr K045 - 6.5 lb/hr



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rules 3745-21-09(D)(1)(e) and/or (D)(2)(e) [Emission limits for a can end sealing compound coating line]	3.7 pounds of VOC per gallon of coating, excluding water and exempt solvents (where "coating" refers only to the end sealing compound applied in these emissions units.)
d.	OAC rule 3745-17-11 [Restrictions on particulate emissions from industrial processes]	Exempt pursuant to paragraph (A)(1)(j) of this rule because the process for this Emissions Unit Group is a surface coating process (e.g., for sealers, adhesives, and deadeners) that employs airless spray and/or bead-type (extrusion) application methods."
e.	ORC 3704.03(F)(4) and OAC rule 3745-114-01 [Toxic Air Contaminants]	N/A - see d)(2) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) For each emissions unit in this Emissions Unit Group, the permittee shall collect and record the following information each month:

- a. the name and/or identification number of each material employed [duplication of a requirement in paragraph 5.a)(1) in Section B. of this permit*];
- b. the actual VOC content in pounds per gallon for each material identified in "a" above, calculated in accordance with the procedure described for $C_{VOC,1}$ in Section B. of this permit, Facility-Wide Terms and Conditions, paragraph 8.b) [duplication of a requirement in paragraph 5.a)(3) in Section B. of this permit*];
- c. (having chosen to demonstrate compliance by using only compliant coatings) the VOC content, in pounds per gallon of coating, excluding the volume of water and exempt solvents, of each end sealing compound as applied, calculated in accordance with the procedure described for $C_{VOC,2}$ in g)(1) below, under Miscellaneous Requirements; and
- d. the number of gallons employed during the month of each material identified in "a" above that contains more than zero VOC (in the case of cleaning materials,



the number of gallons employed shall mean the net number of gallons, defined as the gross number of gallons employed during the month minus the number of gallons recovered and/or sent off-site for disposal during the month) [duplication of a requirement in paragraph 5.a)(4) in Section B. of this permit*].

*The requirements in "a," "b" and "d" above are included in the Monitoring and/or Recordkeeping Requirements in Section B. of this permit, Facility-Wide Terms and Conditions, and need not be kept as separate or redundant records for this Emissions Unit Group. The requirements in "c" above are not included in the Facility-Wide Terms and Conditions because they are not required for demonstrating compliance with the facility-wide synthetic minor restrictions. However, nothing in this paragraph prevents the permittee from incorporating the requirements in "c" above into the same system used to meet the recordkeeping requirements included in the Facility-Wide Terms and Conditions.

- (2) It is the permittee's stated intention, as re-affirmed in permit renewal application No. A0046077, received 11/26/2012, to not use any materials containing Toxic Air Contaminants (TACs), as defined in OAC rule 3745-114-01, in the emissions units in this Emissions Units Group. Therefore, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4), does not apply. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified federally enforceable permit-to-install and operate (FEPTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to exceed 1.0 ton per year may require the permittee to apply for and obtain a new federally enforceable permit-to-install and operate (FEPTIO).

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall notify the Canton City Health Department, Air Pollution Control Division of any monthly record showing the use of noncomplying coatings in emissions unit K020 or K045; i.e., any end sealing compound employed in any of the emissions units in this Emissions Unit Group that exceeds the limit of 3.7 pounds of VOC per gallon, excluding water and exempt solvents. The notification shall include a copy of



such record and shall be submitted within 30 days following the end of the calendar month during which the exceedance(s) occurred.

- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

f) Testing Requirements

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

a. Emissions Limitation:

Hourly volatile organic compound (VOC) emissions shall not exceed the amount listed by EU ID below:

K020 10.0 lb/hr
 K045 6.5 lb/hr

Applicable Compliance Method:

The above emissions limitations were established as BAT in the following PTIs:

K020 PTI 15-01433 - Admin Mod, 9/10/2002
 K045 PTI 15-01590 - Initial installation, 8/9/2005

As shown below, the potential hourly VOC emission rate for each emissions unit was demonstrated to be less than the respective hourly emission limitation based upon maximum material usage rates provided by the permittee in permit renewal application No. A0046077, received 11/26/2012, and either the maximum VOC content allowable by rule, if applicable, or otherwise the actual VOC content of current materials, also as provided in the permit renewal application. The permittee is not limited to using any specific materials, nor any specific VOC content values, unless provided by rule. The permittee is also not limited to the hourly material usage rates provided in the permit renewal application. Alternate materials and higher hourly usage rates may be used, provided compliance with the applicable hourly VOC emission limitation can be demonstrated.

K020

END SEALING COMPOUND
 $(2.04 \text{ gal/hr}) \times (3.7 \text{ lb}_{\text{VOC}}/\text{gal})_{\text{MAX BY RULE}} = 7.55 \text{ lb}_{\text{VOC}}/\text{hr}$

LUBRICATION MATERIAL FOR NOZZLE TIP
 $(0.27 \text{ gal/hr}) \times (0.14 \text{ lb}_{\text{VOC}}/\text{gal})_{\text{ACTUAL}} = 0.04 \text{ lb}_{\text{VOC}}/\text{hr}$

Total: $7.55 + 0.04 = 7.59 \text{ lb}_{\text{VOC}}/\text{hr}$



7.59 lb_{VOC}/hr < 10.0 lb_{VOC}/hr

K020 – alternate operating scenario

The permit renewal application received 11/26/2012 showed that a water-based end sealing compound having zero VOC content may sometimes be used in K020 as an alternative to the standard solvent-based compound. In that case, the nozzle tip lubrication material would also be replaced with isopropyl alcohol. The maximum hourly VOC emissions would be as follows:

END SEALING COMPOUND

$$(1.61 \text{ gal/hr}) \times (0.0 \text{ lb}_{\text{VOC}}/\text{gal}) = 0.0 \text{ lb}_{\text{VOC}}/\text{hr}$$

ISOPROPYL ALCOHOL MISTING SOLUTION

$$(0.08 \text{ gal/hr}) \times (6.60 \text{ lb}_{\text{VOC}}/\text{gal})_{\text{ACTUAL}} = 0.53 \text{ lb}_{\text{VOC}}/\text{hr}$$

$$\text{Total: } 0.0 + 0.53 = 0.53 \text{ lb}_{\text{VOC}}/\text{hr}$$

$$0.53 \text{ lb}_{\text{VOC}}/\text{hr} < 10.0 \text{ lb}_{\text{VOC}}/\text{h}$$

K045

END SEALING COMPOUND

$$(0.95 \text{ gal/hr}) \times (3.7 \text{ lb}_{\text{VOC}}/\text{gal})_{\text{MAX BY RULE}} = 3.52 \text{ lb}_{\text{VOC}}/\text{hr}$$

LUBRICATION MATERIAL FOR NOZZLE TIP

$$(0.14 \text{ gal/hr}) \times (0.14 \text{ lb}_{\text{VOC}}/\text{gal})_{\text{ACTUAL}} = 0.02 \text{ lb}_{\text{VOC}}/\text{hr}$$

INK JET PRINTER INK

$$(0.011 \text{ gal/hr}) \times (6.42 \text{ lb}_{\text{VOC}}/\text{gal})_{\text{ACTUAL}} = 0.07 \text{ lb}_{\text{VOC}}/\text{hr}$$

$$\text{Total: } 3.52 + 0.02 + 0.07 = 3.61 \text{ lb}_{\text{VOC}}/\text{hr}$$

$$3.61 \text{ lb}_{\text{VOC}}/\text{hr} < 6.5 \text{ lb}_{\text{VOC}}/\text{hr}$$

b. Emissions Limitation:

The VOC content of the coatings employed shall not exceed 3.7 pounds of VOC per gallon of coating, excluding water and exempt solvents (where “coating” refers only to the end sealing compound applied in these emissions units).

Applicable Compliance Method:

Compliance shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above.

g) Miscellaneous Requirements

Values for material properties required in g)(1) below shall be determined either by the procedures set forth in U.S. EPA Method 24* or from formulation data provided by the manufacturer of the material, except for individual HAP, individual TAC, and exempt solvents information that can *only* be obtained from formulation data.



* Method 24, as described in 40 CFR Part 60, Appendix A, is applicable for the determination of volatile matter content, water content, density, volume solids, and weight solids of paint, varnish, lacquer, or other related surface coatings.

- (1) The following method shall be used to calculate the VOC content of each coating in pounds of VOC per gallon of coating, excluding water and exempt solvents, as applied. This value is defined as $C_{VOC,2}$ in OAC rule 3745-21-10. Either of the following two options may be used to calculate $C_{VOC,2}$:

Option 1

$$C_{VOC,2} = (D_C)(W_{VOC}) / (V_S + V_{VOC})$$

Option 2

$$C_{VOC,2} = C_{VOC,1} / (1 - V_W - V_{ES})$$

Option 2 was derived from Option 1 by making the following substitutions: In the numerator, $(D_C)(W_{VOC})$ was replaced by $C_{VOC,1}$ (see Section B., paragraph 8.b, above) because, by definition, $C_{VOC,1} = (D_C)(W_{VOC})$. In the denominator, $(V_S + V_{VOC})$ was replaced by $(1 - V_W - V_{ES})$ because for any coating-related material, $V_S + V_{VOC} + V_W + V_{ES} = 1$, so by rearrangement, $(V_S + V_{VOC}) = (1 - V_W - V_{ES})$.

Option 2 is more intuitive than Option 1 because it corresponds directly to the definition for $C_{VOC,2}$ as "pounds of VOC per gallon of coating excluding water and exempt solvents."

where:

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

$$W_{VOC} = W_{VM} - W_W - W_{ES}$$

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

where:

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

[For coatings, if this weight fraction is determined by ASTM D2369-04, "Standard Test Method for Volatile Content of Coatings," the drying conditions shall be one hundred ten degrees Celsius for one hour, except where otherwise authorized by the director based on an alternate analytical procedure that is satisfactorily demonstrated to the director by the coating manufacturer to be more representative of the actual cure mechanism of the coating.]

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

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



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

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

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

where:

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

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

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



3. Emissions Unit Group – Conversion Press Group: K016, K021, K024, K027, K030 and K048

EU ID	Operations, Property and/or Equipment Description
K016	Line 208 Conversion Press
K021	Line 203 Conversion Press
K024	Line 206 Conversion Press
K027	Line 207 Conversion Press
K030	Line 201 Conversion Press
K048	Line 200 Conversion Press

The process for the emissions units in this group consists of wipe application of a zero-HAPs lubricant material (“tab lubricant”) onto the tooling used to form, score and attach pull-tabs on blanked can ends. Emissions are uncontrolled VOC from the tab lubricant. In one of the EUs in the group, K016, VOC emissions are also generated from a post-score repair coating that is applied by means of a felt pad.

- 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. d)(3)
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)a.
- 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(D), as effective 6/30/2008 [Synthetic Minor restrictions to avoid Title V applicability]	Synthetic minor restrictions for the emissions units in this Emissions Unit Group have been incorporated into Section B, Facility-Wide Terms and Conditions.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 [Best Available Technology (BAT)]	Volatile organic compound (VOC) emissions shall not exceed the amount listed by EU ID below:



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Ref. PTIs K016 PTI 15-01433, 9/10/2002 K021 PTI 15-01433, 9/10/2002 K024 PTI 15-01433, 9/10/2002 K027 PTI 15-01433, 9/10/2002 K030 PTI 15-01433, 9/10/2002 K048 N/A – see b)(2)a. below	K016 - 1.5 lb/hr K021 - 2.0 lb/hr K024 - 1.2 lb/hr K027 - 1.2 lb/hr K030 - 1.2 lb/hr K048 - 2.0 lb/hr For all emissions units in this Emissions Unit Group, see b)(2)b. below.
c.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006 [Provision for less than 10 ton/yr BAT exemption]	For emissions unit K048 only, see b)(2)c. below.
d.	OAC rule 3745-21-09(U)(2)(e)(iii) [Daily coating usage restriction to avoid the pounds of VOC per gallon of coating, excluding water and exempt solvents limitations in paragraph (U)(1) of this rule]	For each of the emissions units K021, K024, K027, K030, and K048, maximum daily usage of tab lubricant shall not exceed 10 gallons. For emissions unit K016, the maximum daily usage of tab lubricant and post-score repair coating combined shall not exceed 10 gallons. See d)(2) below.
e.	OAC rule 3745-17-11 [Restrictions on particulate emissions from industrial processes]	Exempt pursuant to paragraph (A)(1)(j) of this rule because the process for this Emissions Unit Group is a surface coating process (e.g., for sealers, adhesives, and deadeners) that employs airless spray and/or bead-type (extrusion) application methods.” The above exemption applies because both the tab lube and, for K016, the post-repair coating are applied by a daub/wipe processes where no airborne particulates are emitted.
f.	ORC 3704.03(F)(4) and OAC rule 3745-114-01 [Toxic Air Contaminants]	N/A - see d)(3) below.



(2) Additional Terms and Conditions

- a. For emissions unit K048, the VOC emissions limitation of 2.0 lb/hr shown above in b)(1)b. was established as BAT for the present permit, No. P0103959, based on what it would have been pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001. The 2.0 lb/hr limitation was determined based on an engineering judgment made in comparison to the other emissions units in this Emissions Units Group and their respective BAT limitations in PTI No. 15-01433, as modified 9/10/2002.

The reason for reconstructing BAT for K048 is as follows: when initial installation PTI No. 15-01694 was issued 3/13/2008, it included a voluntary restriction to limit VOC emissions from K048 to less than ten tons per year in order to avoid BAT pursuant to OAC rule 3745-31-05(A)(3), as effective December 1, 2006. As described in b)(2)b. below, the rule allowing the less-than-ten-tons per year exemption has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). So for the present permit, it was necessary to reconstruct BAT as it would have been for K048 without the exemption.

- b. With the emissions limitations and control measures mentioned in term b)(1)b. above, the permittee has satisfied 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 installed or modified on or after August 3, 2006 and 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).

Of the emissions units in this Emissions Unit Group, K016, K021, K024, K027 and K030 are not affected by this rule change since they were installed prior to August 3, 2006 and have not been modified since. Only K048 is affected since it was installed September 15, 2008. 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 emissions limitation listed above in b)(1)b. no longer applies to the VOC emissions from emissions unit K048, since its potential to emit for VOC is less than ten tons per year taking into account the voluntary restriction described in b)(2)c.i. below.

- c. This rule paragraph 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 to emissions unit K048 instead of those listed under b)(1)b:
- i. Pursuant to paragraph (C) of the December 1, 2006 version of OAC rule 3745-31-05, this permit takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding Best



Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) by ensuring that the potential emissions of VOC from emissions unit K048 shall be less than ten tons per year as a rolling, 12 month summation of the monthly emissions:

- (a) the tab lubricant employed in emissions unit K048 shall not exceed 5.80 pounds of VOC per gallon.

Term (a) above was been carried over from PTI 15-01694, issued 3/13/2008, except that the VOC content of the tab lubricant has been administratively modified from 5.75 lb/gal to 5.80 lb/gal based on updated formulation data.

c) Operational Restrictions

- (1) See b)(1)d. above.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each emissions unit in this Emissions Unit Group, the permittee shall collect and record the following information each month:

- a. the name and/or identification number of each material employed [duplication of a requirement in paragraph 5.a)(1) in Section B. of this permit*];
- b. the actual VOC content in pounds per gallon for each material identified in "a" above, calculated in accordance with the procedure described for $C_{VOC,1}$ in Section B. of this permit, Facility-Wide Terms and Conditions, paragraph 8.b) [duplication of a requirement in paragraph 5.a)(3) in Section B. of this permit*]; and
- c. the number of gallons employed during the month of each material identified in "a" above that contains more than zero VOC (in the case of cleaning materials, the number of gallons employed shall mean the net number of gallons, defined as the gross number of gallons employed during the month minus the number of gallons recovered and/or sent off-site for disposal during the month) [duplication of a requirement in paragraph 5.a)(4) in Section B. of this permit*].

*All of the above requirements are included in the Monitoring and/or Recordkeeping Requirements in Section B. of this permit, Facility-Wide Terms and Conditions, and need not be kept as separate or redundant records for this Emissions Unit Group.

- (2) The permittee, having elected to avoid the pounds of VOC per gallon of coating, excluding water and exempt solvents limitations in paragraph (U)(1) of OAC rule 3745-21-09, pursuant to the applicable daily coating usage limitation of ten gallons in paragraph (U)(2)(e)(iii) of the same rule, shall collect and record the following information each day:

- a. the name and/or identification number of each tab lubricant and post-score repair coating material employed;



- b. For each of the emissions units K021, K024, K027, K030, and K048, the number of gallons of each tab lubricant material employed during the day; for emissions unit K016 only, the number of gallons of each tab lubricant and post-score repair coating material employed during the day; and
 - c. For each of the emissions units K021, K024, K027, K030, and K048, if more than one type of tab lubricant is used in a single day, the total number of gallons of all tab lubricant materials employed during the day; for emissions unit K016 only, if more than one type of tab lubricant and/or post-score repair coating material is used in a single day, the total number of gallons of all tab lubricants and post-score repair coating materials combined that were employed during the day.
- (3) It is the permittee's stated intention, as re-affirmed in permit renewal application No. A0046077, received 11/26/2012, to not use any materials containing Toxic Air Contaminants (TACs), as defined in OAC rule 3745-114-01, in the emissions units in this Emissions Units Group. Therefore, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4), does not apply. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified federally enforceable permit-to-install and operate (FEPTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to exceed 1.0 ton per year may require the permittee to apply for and obtain a new federally enforceable permit-to-install and operate (FEPTIO).
- e) Reporting Requirements
- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
 - (2) For each of the emissions units K021, K024, K027, K030, and K048, the permittee shall notify the Canton City Health Department, Air Pollution Control Division of any daily record showing the use of more than ten gallons of tab lubricant. The notification shall include a copy of such record and shall be submitted within 45 days after the exceedance(s) occurs.
 - (3) For emissions unit K016 only, the permittee shall notify the Canton City Health Department, Air Pollution Control Division of any daily record showing the use of more



than ten gallons of tab lubricant and post-score repair coating materials combined. The notification shall include a copy of such record and shall be submitted within 45 days after the exceedance(s) occurs.

- (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

f) Testing Requirements

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

- a. Emissions Limitation:

Hourly volatile organic compound (VOC) emissions shall not exceed the amount listed by EU ID below:

- K016 - 1.5 lb/hr
- K021 - 2.0 lb/hr
- K024 - 1.2 lb/hr
- K027 - 1.2 lb/hr
- K030 - 1.2 lb/hr
- K048 - 2.0 lb/hr

For emissions unit K048, the limitation shown above applies only if b)(1)b. above is applicable. Otherwise see f)(1)b. below

Applicable Compliance Method:

The emissions limitations specified above for K016, K021, K024, K027 and K030 were established as BAT in PTI 15-01433 (Admin Mod, 9/10/2002). The emissions limitation specified above for K048 is explained in b)(2)a. above.

As shown below, the potential hourly VOC emission rate for each emissions unit was demonstrated to be less than the respective hourly emission limitation based upon maximum material usage rates and VOC content values of current materials provided by the permittee in permit renewal application No. A0046077, received 11/26/2012. The permittee is not limited to using any specific materials, nor any specific VOC content values for the purpose of compliance with the above hourly emissions limitations. The permittee is also not limited to the hourly material usage rates provided in the permit renewal application. Alternate materials and higher hourly usage rates may be used, provided compliance with the applicable hourly VOC emission limitation can be demonstrated.

K016

TAB LUBRICANT
 $(0.09 \text{ gal/hr}) \times (5.80 \text{ lb}_{\text{VOC}}/\text{gal}) = 0.52 \text{ lb}_{\text{VOC}}/\text{hr}$



POST-SCORE REPAIR COATING
 $(0.07 \text{ gal/hr}) \times (6.41 \text{ lb}_{\text{VOC}}/\text{gal}) = 0.45 \text{ lb}_{\text{VOC}}/\text{hr}$

Total: $0.52 + 0.45 = 0.97 \text{ lb}_{\text{VOC}}/\text{hr}$

$0.97 \text{ lb}_{\text{VOC}}/\text{hr} < 1.5 \text{ lb}_{\text{VOC}}/\text{hr}$

K021 and K048

TAB LUBRICANT
 $(0.18 \text{ gal/hr}) \times (5.80 \text{ lb}_{\text{VOC}}/\text{gal}) = 1.04 \text{ lb}_{\text{VOC}}/\text{hr}$

$1.04 \text{ lb}_{\text{VOC}}/\text{hr} < 2.0 \text{ lb}_{\text{VOC}}/\text{hr}$

K024, K027 and K030

TAB LUBRICANT
 $(0.10 \text{ gal/hr}) \times (5.80 \text{ lb}_{\text{VOC}}/\text{gal}) = 0.58 \text{ lb}_{\text{VOC}}/\text{hr}$

$0.58 \text{ lb}_{\text{VOC}}/\text{hr} < 1.2 \text{ lb}_{\text{VOC}}/\text{hr}$

b. Emissions Limitation:

If term b)(1)c. above is applicable (provision for less than 10 ton/yr BAT exemption), the following applies as a voluntary limitation for emissions unit K048 to ensure that its potential emissions of VOC will be less than ten tons per year as a rolling, 12 month summation of the monthly emissions:

- i. the tab lubricant employed in emissions unit K048 shall not exceed 5.80 pounds of VOC per gallon.

Applicable Compliance Method:

Compliance with "i" above shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above.

If required, compliance with the less than 10 ton/yr exemption shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above and the following calculations:

Multiply the number of gallons of each tab lubricant material employed during the most recent month by its actual VOC content. Then (if more than one tab lubricant was used) sum the results for all tab lubricants employed in this emissions unit during the most recent month. Divide by 2000 pounds per ton to get the total emissions of VOC, in tons. Add the total for the most recent month to the total from the previous eleven months to obtain the rolling, 12-month summation.



c. Operational Restrictions:

For each of the emissions units K021, K024, K027, K030, and K048, maximum daily usage of tab lubricant shall not exceed 10 gallons.

For emissions unit K016 only, the maximum daily usage of tab lubricant and post-score repair coating material combined shall not exceed 10 gallons.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the recordkeeping requirements specified in d)(2) above.

g) Miscellaneous Requirements

- (1) None.



4. Emissions Unit Group – E-Coat Repair Group: K026 and K043

EU ID	Operations, Property and/or Equipment Description
K026	Line 207 E-Coat Repair
K043	Line 206 E-Coat Repair

The process for the emissions units in this group consists of electrolytic dip application of a clear repair coat material to converted can ends for the purpose of applying a protective, corrosion-preventive coating to the exposed steel of the tab score line. Following the dip process, the can ends are rinsed with DI water, then conveyed through a blower to remove most of the water, then conveyed through a 425 deg F electric oven for the purpose of curing the coating and evaporating any residual water.

- 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. d)(2)
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)a.
- 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(D), as effective 6/30/2008 [Synthetic Minor restrictions to avoid Title V applicability]	Synthetic minor restrictions for the emissions units in this Emissions Unit Group have been incorporated into Section B, Facility-Wide Terms and Conditions.
b.	OAC rule 3745-31-05(A)(3) [Best Available Technology (BAT)] Ref. PTIs K026 - PTI 15-01433, 2/5/2001 K043 - PTI 15-01433, 2/5/2001	Volatile organic compound (VOC) emissions shall not exceed the amount listed by EU ID below: K026 - 0.66 lb/hr K043 - 0.66 lb/hr



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-21-09(U)(1)(a) [Emissions limit for a clear coating]	4.3 pounds of VOC per gallon of coating, excluding water and exempt solvents.
d.	OAC rule 3745-17-11 [Restrictions on particulate emissions from industrial processes]	Exempt pursuant to paragraph (A)(1)(h) of this rule because the process for this Emissions Unit Group is a surface coating process that employs only dip coatings.
e.	ORC 3704.03(F)(4) and OAC rule 3745-114-01 [Toxic Air Contaminants]	N/A - see d)(2) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) For each emissions unit in this Emissions Unit Group, the permittee shall collect and record the following information each month:

- a. the name and/or identification number of each material employed [duplication of a requirement in paragraph 5.a)(1) in Section B. of this permit*];
- b. the actual VOC content in pounds per gallon for each material identified in “a” above, calculated in accordance with the procedure described for $C_{VOC,1}$ in Section B. of this permit, Facility-Wide Terms and Conditions, paragraph 8.b) [duplication of a requirement in paragraph 5.a)(3) in Section B. of this permit*];
 - i. for the E-coating material, the actual VOC content in pounds per gallon may be recorded either as-received, or as-applied, where as-applied means after dilution in the dip tank with deionized water;
- c. (having chosen to demonstrate compliance by using only compliant coatings), the VOC content, in pounds per gallon, excluding the volume of water and exempt solvents, of each E-coating mixture as applied, calculated in accordance with the procedure described for $C_{VOC,2}$ in g)(1) below, under Miscellaneous Requirements; and
- d. the number of gallons employed during the month of each material identified in “a” above that contains more than zero VOC [duplication of a requirement in paragraph 5.a)(4) in Section B. of this permit*];



- i. for the E-coating material, the number of gallons employed must be recorded either as-received, or as-applied, but must be consistent with the way the actual VOC content was recorded in "b.i." above; and
- ii. in the case of cleanup materials, the number of gallons employed shall mean the net number of gallons, defined as the gross number of gallons employed during the month minus the number of gallons recovered and/or sent off-site for disposal during the month.

*The requirements in "a," "b" and "d" above are included in the Monitoring and/or Recordkeeping Requirements in Section B. of this permit, Facility-Wide Terms and Conditions, and need not be kept as separate or redundant records for this Emissions Unit Group. The requirements in "c" above are not included in the Facility-Wide Terms and Conditions because they are not required for demonstrating compliance with the facility-wide synthetic minor restrictions. However, nothing in this paragraph prevents the permittee from incorporating the requirements in "c" above into the same system used to meet the recordkeeping requirements included in the Facility-Wide Terms and Conditions.

- (2) It is the permittee's stated intention, as re-affirmed in permit renewal application No. A0046077, received 11/26/2012, to not use any materials containing Toxic Air Contaminants (TACs), as defined in OAC rule 3745-114-01, in the emissions units in this Emissions Units Group. Therefore, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4), does not apply. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified federally enforceable permit-to-install and operate (FEPTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to exceed 1.0 ton per year may require the permittee to apply for and obtain a new federally enforceable permit-to-install and operate (FEPTIO).

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.



- (2) The permittee shall notify the Canton City Health Department, Air Pollution Control Division of any monthly record showing the use of noncomplying coatings in emissions unit K026 or K043; i.e., any coating material employed in any of the emissions units in this Emissions Unit Group that exceeds the limit of 4.3 pounds of VOC per gallon, excluding water and exempt solvents. The notification shall include a copy of such record and shall be submitted within 30 days following the end of the calendar month during which the exceedance(s) occurred.
- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

f) Testing Requirements

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

a. Emissions Limitation:

Volatile organic compound (VOC) emissions shall not exceed the amount listed by EU ID below:

K026 0.66 lb/hr
K043 0.66 lb/hr

Applicable Compliance Method:

By administrative modification, the above limitations were adjusted from PTI 15-01433 as follows: For K026, the BAT limit was 0.46 lb_{VOC}/hr, and for K043, the BAT limit was 0.36 lb_{VOC}/hr. The changes were based on corrections to maximum potential usage rate for the E-coat material of 2.75 gal/hr as provided by the permittee in permit renewal application No. A00460777, received 11/26/2012, and the VOC content of the E-coat mixture of 0.24 lb/gal as applied, meaning after the as-received E-coat material (0.97 lb_{VOC}/gal per the 2008 Environmental Data sheet) has been diluted in the dip tank with deionized water to 5% solids by weight.

$$(0.24 \text{ lb}_{\text{VOC}}/\text{gal}) \times (2.75 \text{ gal/hr}) = 0.66 \text{ lb}_{\text{VOC}}/\text{hr}$$

b. Emissions Limitation:

The VOC content of the E-Coat coatings employed shall not exceed 4.3 pounds of VOC per gallon of coating, excluding water and exempt solvents.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the recordkeeping requirements specified in section d)(1) above.



g) Miscellaneous Requirements

Values for material properties required in g)(1) below shall be determined either by the procedures set forth in U.S. EPA Method 24* or from formulation data provided by the manufacturer of the material, except for individual HAP, individual TAC, and exempt solvents information that can *only* be obtained from formulation data.

* Method 24, as described in 40 CFR Part 60, Appendix A, is applicable for the determination of volatile matter content, water content, density, volume solids, and weight solids of paint, varnish, lacquer, or other related surface coatings.

(1) The following method shall be used to calculate the VOC content of each coating in pounds of VOC per gallon of coating, excluding water and exempt solvents, as applied**. This value is defined as $C_{VOC,2}$ in OAC rule 3745-21-10. Either Option 1 or Option 2 below may be used to calculate $C_{VOC,2}$.

** For the E-coat material, if the only difference between the as-received formulation and the as-applied mixture in the dip tank is additional dilution with water, the as-received value for $C_{VOC,2}$ will not be affected by the additional water, so the as-received value can and should be used to demonstrate compliance, even when the requirement states “as applied.”

Option 1

$$C_{VOC,2} = (D_C)(W_{VOC}) / (V_S + V_{VOC})$$

Option 2

$$C_{VOC,2} = C_{VOC,1} / (1 - V_W - V_{ES})$$

Comments:

1. Option 2 was derived from Option 1 by making the following substitutions: In the numerator, $(D_C)(W_{VOC})$ was replaced by $C_{VOC,1}$ (see Section B., paragraph 8.b, above) because, by definition, $C_{VOC,1} = (D_C)(W_{VOC})$. In the denominator, $(V_S + V_{VOC})$ was replaced by $(1 - V_W - V_{ES})$ because for any coating-related material, $V_S + V_{VOC} + V_W + V_{ES} = 1$, so by rearrangement, $(V_S + V_{VOC}) = (1 - V_W - V_{ES})$.
2. Option 2 is more intuitive than Option 1 because it corresponds directly to the definition for $C_{VOC,2}$ as “pounds of VOC per gallon of coating excluding water and exempt solvents.”

where:

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

$$W_{VOC} = W_{VM} - W_W - W_{ES}$$

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

where:

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



[For coatings, if this weight fraction is determined by ASTM D2369-04, "Standard Test Method for Volatile Content of Coatings," the drying conditions shall be one hundred ten degrees Celsius for one hour, except where otherwise authorized by the director based on an alternate analytical procedure that is satisfactorily demonstrated to the director by the coating manufacturer to be more representative of the actual cure mechanism of the coating.]

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

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

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

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

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

where:

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

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

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



5. Emissions Unit Group – Post-Score Repair Spray Group: K040, K041, K046 and K049

EU ID	Operations, Property and/or Equipment Description
K040	Line 208 Post-Score Repair Spray – Uncontrolled
K041	Line 201 Post-Score Repair Spray – Uncontrolled
K046	Line 203 Post-Score Repair Spray – Controlled by RTO
K049	Line 200 Post-Score Repair Spray – Controlled by RTO

The process for the emissions units in this group consists of airless spray application of a coating following the tab-scoring process for the purpose of applying a protective, corrosion-preventive coating only to the immediate vicinity of the exposed steel of the score line. Following the coating process, parts are dried in ovens at less than 250 deg F. EUs K040 and K041 have electric ovens, and EUs K046 and K049 have natural gas-fired ovens, 0.4 mmBtu/hr each. EUs K046 and K049 are controlled by a common regenerative thermal oxidizer (RTO) having a 90% minimum design control efficiency (for the RTO itself).

- 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. d)(6) - d)(9) and e)(4)a.
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. b)(1)a.
- 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(D), as effective 6/30/2008 [Synthetic Minor restrictions to avoid Title V applicability and MACT applicability under 40 CFR Part 63, Subpart KKKK]	Synthetic minor restrictions for the emissions units in this Emissions Unit Group have been incorporated into Section B, Facility-Wide Terms and Conditions. For emissions units K046 and K049 only, the synthetic minor restrictions take into



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		account the federally enforceable rule requiring the use of the RTO under OAC rule 3745-21-09(B)(6), as described in b)(1)e. below.
b.	<p>OAC rule 3745-31-05(A)(3), as effective 4/27/1998 for K040 and K041; and as effective 11/30/2001 for K046 and K049</p> <p>[Best Available Technology (BAT)]</p> <p>Ref. PTIs K040 - PTI 15-1369, 5/19/1999 K041 - PTI 15-1376, 10/27/1999 K046 - N/A – see b)(2)a. below K049 - N/A – see b)(2)a. below</p>	<p>For emissions units K040 and K041, post-score repair coating shall not exceed 5.15 pounds of VOC per gallon of coating, excluding water and exempt solvents, as applied. Cleaning material shall not exceed 6.67 pounds of VOC per gallon.</p> <p>For emissions units K046 and K049, post-score repair coating shall not exceed 6.15 pounds of VOC per gallon of coating, excluding water and exempt solvents, as applied. Cleaning material shall not exceed 7.26 pounds of VOC per gallon.</p> <p>For all emissions units in this Emissions Units Group, see b)(2)b. below.</p> <p>Also see b)(2)d. and c)(1) below.</p>
c.	<p>OAC rule 3745-31-05(A)(3), as effective 12/01/2006</p> <p>[Provision for less than 10 ton/yr BAT exemption]</p> <p>Ref. PTIs K046 - PTI 15-01679, 1/15/2008 K049 - PTI 15-01694, 3/13/2008</p>	For emissions units K046 and K049, see b)(2)c. below.
d.	<p>OAC rule 3745-21-09(U)(2)(e)(iii)</p> <p>[Daily coating usage restriction to avoid the pounds of VOC per gallon of coating, excluding water and exempt solvents limitations in paragraph (U)(1) of this rule]</p>	<p>For emissions units K040 and K041 only, the maximum daily usage rate of post-score repair coating for each of these emissions units shall not exceed ten gallons.</p> <p>See d)(2) below.</p>
e.	<p>OAC rule 3745-21-09(B)(6)</p> <p>[In lieu of complying with the pounds of VOC per gallon of solids limitations in paragraph (U)(1) of this</p>	All of the VOC emissions from emissions units K046 and K049 (i.e., the VOC emissions generated by the application of repair coat and from cleaning material usage) shall be vented to a regenerative



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	rule]	thermal oxidizer (RTO). The capture and control system shall provide not less than an 81 percent reduction, by weight, in the overall VOC emissions from each of these coating lines, and the control (destruction) efficiency of the RTO itself shall not be less than 90 percent, by weight, for the VOC emissions vented to it. See d)(3) – d)(5) below.
f.	ORC 3704.03(F)(4) and OAC rule 3745-114-01 [Toxic Air Contaminants]	See d)(6) - d)(9), and e)(4)a. below.
g.	OAC rule 3745-17-11 [Restrictions on particulate emissions from industrial processes]	Exempt pursuant to paragraph (A)(1)(j) of this rule: “surface coating processes (e.g., for sealers, adhesives, and deadeners) that employ airless spray and bead-type (extrusion) application methods.”

(2) Additional Terms and Conditions

- a. When the initial installation PTIs were issued for emissions units K046 and K049 (PTI 15-01679, 1/15/2008; and PTI 15-01694, 3/13/2008, respectively), both of these permits included a voluntary restriction to use a regenerative thermal oxidizer (RTO) that would limit VOC emissions from each to less than ten tons per year in order to avoid BAT pursuant to OAC rule 3745-31-05(A)(3), as effective December 1, 2006. As described in b)(2)b. below, the rule allowing the less-than-ten-tons per year exemption has not yet been approved by U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP). So for the present permit, P0103959, it was necessary to reconstruct BAT as it would have been for K046 and K049 without the exemption; i.e., pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001. Accordingly:

For emissions units K046 and K049, Best Available Technology pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, is as follows: post-score repair coating shall not exceed 6.15 pounds of VOC per gallon of coating, excluding water and exempt solvents, as applied. Cleaning material shall not exceed 7.26 pounds of VOC per gallon.

The above limitations were determined based on an engineering judgment made by comparing the similarities and differences between the processes in K046 and K049 and the other emissions units in this Emissions Units Group, K040 and K041, and their respective BAT limitations in the PTIs listed in b)(1)b.



- b. With the emissions limitations and control measures mentioned in term b)(1)b. above (including b)(2)a.), the permittee has satisfied 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 installed or modified on or after August 3, 2006 and 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).

Of the emissions units in this Emissions Unit Group, K040 and K041 are not affected by this rule change since they were installed prior to August 3, 2006 and have not been modified since. Emissions units K046 and K049 are affected since they were installed April 7, 2008 and September 20, 2008, respectively. 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 emissions limitations listed above in b)(1)b. (including b)(2)a.) no longer apply to the VOC emissions from emissions units K046 and K049, since each has the potential to emit less than ten tons of VOC per year taking into account controls. The emissions limitations listed above in b)(1)b. will still apply to the VOC emissions from emissions units K040 and K041.

- c. 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 to the VOC emissions from emissions units K046 and K049 instead of those listed under b)(1)b. (including b)(2)a.):

i. the Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from emissions units K046 and K049 since the calculated annual emissions rate for VOC is less than ten tons per year each taking into account the following federally enforceable terms and conditions:

- (a) all of the VOC emissions from emissions units K046 and K049 (i.e., the VOC emissions generated by the application of repair coat and from cleaning material usage) shall be vented to a regenerative thermal oxidizer (RTO) that shall, at minimum, comply with the capture and control requirements of OAC rule 3745-21-09(B)(6), as described in b)(1)e. above.

- d. When the initial installation PTIs were issued for emissions units K046 and K049 (PTI 15-01679, 1/15/2008; and PTI 15-01694, 3/13/2008, respectively), both of these permits addressed natural gas only as an operational restriction for fuel in the RTO. Emissions of PE, NO_x, CO and VOC from the combustion of natural gas in the RTO and in the 0.4 mmBtu/hr drying ovens were not addressed because they were considered negligible. The application instructions at the time the PTIs listed above were issued required inclusion of only those pollutants with



proposed emission rates greater than de minimis (unless an emissions limit had been established by state or federal regulations). Under these instructions, PE, NOx and CO did not meet the threshold for inclusion in the applications for the referenced PTIs. Also, VOC emissions from the combustion of natural gas were not included in the potential-to-emit calculations because these were considered to be a negligible portion of the total VOC emissions.

c) Operational Restrictions

- (1) The permittee shall fire only natural gas as fuel in the RTO servicing emissions units K046 and K049.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each emissions unit in this Emissions Unit Group, the permittee shall collect and record the following information each month:

- a. the name and/or identification number of each material employed [duplication of a requirement in paragraph 5.a)(1) in Section B. of this permit*];
- b. the actual VOC content in pounds per gallon for each material identified in “a” above, calculated in accordance with the procedure described for $C_{VOC,1}$ in Section B. of this permit, Facility-Wide Terms and Conditions, paragraph 8.b) [duplication of a requirement in paragraph 5.a)(3) in Section B. of this permit*];
- c. (having chosen to demonstrate compliance by using only compliant coatings), the VOC content, in pounds per gallon, excluding the volume of water and exempt solvents, of each post-score repair coating as applied, calculated in accordance with the procedure described for $C_{VOC,2}$ in g)(1) below, under Miscellaneous Requirements; and
- d. the number of gallons employed during the month of each material identified in “a” above that contains more than zero VOC (in the case of cleanup materials, the number of gallons employed shall mean the net number of gallons, defined as the gross number of gallons employed during the month minus the number of gallons recovered and/or sent off-site for disposal during the month) [duplication of a requirement in paragraph 5.a)(4) in Section B. of this permit*].

* The requirements in “a,” “b” and “d” above are included in the Monitoring and/or Recordkeeping Requirements in Section B. of this permit, Facility-Wide Terms and Conditions, paragraph 5.a), and need not be kept as separate or redundant records for this Emissions Unit Group. The requirements in “c” above are not included in the Facility-Wide Terms and Conditions because they are not required for demonstrating compliance with the facility-wide synthetic minor restrictions. However, nothing in this paragraph prevents the permittee from incorporating the requirements in “c” above into the same system used to meet the recordkeeping requirements included in the Facility-Wide Terms and Conditions.

- (2) The following applies to emissions units K040 and K041 only: The permittee, having elected to avoid the pounds of VOC per gallon of coating, excluding water and exempt



solvents limitations in paragraph (U)(1) of OAC rule 3745-21-09, pursuant to the applicable daily coating usage limitation of ten gallons in paragraph (U)(2)(e)(iii) of the same rule, shall collect and record the following information each day:

- a. the name and/or identification number of each post-score repair coating material employed;
- b. the number of gallons of each post-score repair coating material employed at each emission unit during the day; and
- c. (if more than one type of post-score repair coating is used in a single day) the total number of gallons of all post-score repair coating materials employed at each emissions unit during the day.

The above recordkeeping requirements are listed pursuant to paragraph (B)(3)(d) of OAC rule 3745-21-09, which also requires that the records shall be maintained at the facility for a period of three years.

- (3) The following applies to emissions units K046 and K049 only: In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the regenerative thermal oxidizer (RTO), for any 3-hour block of time when the emissions unit(s) controlled by the RTO is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance*.

* See g)(2) below (under Miscellaneous Requirements) for information about the most recent performance (emissions) tests that demonstrated compliance, and for specific temperature values that are to be used by the permittee based on those tests, along with provisions for making adjustments based upon future performance

- (4) The following applies to emissions units K046 and K049 only: The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the RTO when the emissions unit(s) controlled by the RTO is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) controlled by the RTO is/are in operation:
 - a. a log of the operating time for the capture (collection) system, RTO control device, monitoring equipment, and the associated coating line(s) (i.e., emissions units K046 and/or K049); and
 - b. all 3-hour blocks of time, when emissions unit(s) K046 and/or K049 was/were in operation, during which the average combustion temperature within the RTO was more than 50 degrees Fahrenheit below the average combustion temperature



measured during the most recent performance test that demonstrated that the emissions unit(s) was/were in compliance*.

* See g)(2) below (under Miscellaneous Requirements) for information about the most recent performance (emissions) tests that demonstrated compliance, and for specific temperature values that are to be used by the permittee based on those tests, along with provisions for making adjustments based upon future performance.

The above recordkeeping requirements are listed pursuant to paragraphs (B)(3)(l) and (B)(3)(n) of OAC rule 3745-21-09, which also require that the records shall be maintained at the facility for a period of three years.

- (5) Whenever the monitored average combustion temperature within the RTO deviates from the range or limit established in accordance with this permit (based on a 3-hour block of time, as recorded in d)(4)b. above), the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
- a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;
 - d. the name(s) of the personnel who conducted the investigation; and
 - e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the temperature readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.



Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

- (6) The permit-to-install (PTI) applications for emissions units K040, K041, K046 and K049 were evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute," ORC 3704.03(F)(4), was applied to these emissions units operating simultaneously 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 for emissions units K040, K041, K046 and K049 combined 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 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 emitted from emissions units K040, K041, K046 and K049 combined, (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 was divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard was then adjusted to account for the duration of the exposure or the maximum potential operating hours of the emissions units, 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 “worst case” toxic contaminant from among the significant toxic contaminants, defined as having potential emissions of 1 or more tons/year*:

Toxic Contaminant: MIBK (methyl isobutyl ketone, CAS No. 108-10-1)

TLV (mg/m³): 82 (corresponds to a TWA value of 20 ppm for MIBK, adopted in 2009)

Max. Hourly Emission Rate (lb/hr): 13.93**

Predicted 1-Hour Maximum Ground Level Concentration (µg/m³): 1,327

MAGLC (µg/m³): 1,952 ((4)(82 mg/m³) / (24)(7)) x (1000 µg/mg) = 1,952 µg/m³

* MIBK, xylene, and ethyl benzene all have potential emissions of 1 or more tons/year. MIBK represents the “worst case” because it has the highest hourly emission rate combined with the lowest Threshold Limit Value (TLV).

**13.93 lb/hr was the maximum hourly emission rate for MIBK shown in PTIs 15-01679 and 15-01694 for all emissions units combined. This was the value used to obtain the predicted 1-Hour Maximum Ground Level Concentration of 1,327 µg/m³ shown above. The combined maximum hourly emission rate for MIBK was revised slightly to 13.60 lb/hr in Application No. A0046077, received 11/26/2012, but new modeling was not necessary since this value was less than that used in the previous modeling. Also, the original emission rate value of 13.93 lb/hr was retained here because of its direct connection with the original modeling results.

The permittee has demonstrated that emissions of MIBK from emissions units K040, K041, K046 and K049 combined are calculated to be less than 80% 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)(4).

- (7) Prior to making any physical changes to or changes in the method of operation of emissions units K040, K041, K046 and/or K049 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 K040, K041, K046 and/or K049 or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).



If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO 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.

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F)(4):
 - 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)(4);
 - 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)(4), 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)(4), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (9) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model that was used to demonstrate compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F)(4), through the predicted 1-hour maximum ground level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- (10) For each day during which the permittee burns a fuel other than natural gas in the RTO servicing emissions units K046 and K049, the permittee shall maintain a record of the type and quantity of fuel burned.



e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) For each of the emissions units K040 and K041, the permittee shall notify the Canton City Health Department, Air Pollution Control Division of any daily record from d)(2) above showing the use of more than ten gallons of post-score repair coating material. The notification shall include a copy of such record and shall be submitted within 45 days after the exceedance(s) occurs.
- (3) The permittee shall submit quarterly summaries of the following records from d)(4) above, as required pursuant to OAC rule 3745-21-09(B)(3)(m):
 - a. a log of the daily operating time for the capture (collection) system, the RTO control device, the monitoring equipment, and the emissions unit(s) controlled by the RTO (i.e., K046 and/or K049);
 - b. any records of downtime (date and length of time) for the capture (collection) system, the RTO control device, and/or the monitoring equipment when the emissions unit(s) controlled by the RTO was/were in operation; and
 - c. all 3-hour blocks of time (when emissions unit(s) K046 and/or K049 was/were in operation) during which the average combustion temperature within the RTO was more than 50 degrees Fahrenheit below the average combustion temperature measured during the most recent performance test that demonstrated that the emissions unit(s) was/were in compliance.

These quarterly summary reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters. These reports may be submitted along with (e.g., as attachments to) the quarterly deviation reports required in Section B. of this permit, Facility-Wide Terms and Conditions.

- (4) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.



The permittee shall identify in the annual PER the following information:

- a. as recorded in d)(9) above, 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)(4), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include an affirmative statement to this effect.
- b. as recorded in d)(10) above, all days during which a fuel other than natural gas was burned in the RTO servicing emissions units K046 and K049, and the type and quantity of fuel burned on those days.
- c. as recorded in d)(4) and d)(5) above regarding the operation of the regenerative thermal oxidizer (RTO):
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the RTO was outside of the acceptable range;
 - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the RTO;
 - iii. each incident of deviation described in "i" or "ii" above where a prompt investigation was not conducted;
 - iv. each incident of deviation described in "i" or "ii" above where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the RTO into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - v. each incident of deviation described in "i" or "ii" above where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- f) **Testing Requirements**
 - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitation:

For emissions units K040 and K041, post-score repair coating shall not exceed 5.15 pounds of VOC per gallon of coating, excluding water and exempt solvents, as applied.



Applicable Compliance Method:

Compliance shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above.

b. Emissions Limitation:

For emissions units K040 and K041, cleaning material shall not exceed 6.67 pounds of VOC per gallon.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above.

c. Emissions Limitation:

For emissions units K046 and K049, post-score repair coating shall not exceed 6.15 pounds of VOC per gallon of coating, excluding water and exempt solvents, as applied. This limitation applies only if b)(1)b. above is applicable instead of b)(1)c.; i.e., OAC rule 3745-31-05(A)(3), as effective 11/30/2001 instead of OAC rule 3745-31-05(A)(3), as effective 12/01/2006.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above.

d. Emissions Limitation:

For emissions units K046 and K049, cleaning material shall not exceed 7.26 pounds of VOC per gallon. This limitation applies only if b)(1)b. above is applicable instead of b)(1)c.; i.e., OAC rule 3745-31-05(A)(3), as effective 11/30/2001 instead of OAC rule 3745-31-05(A)(3), as effective 12/01/2006.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the recordkeeping requirements specified in d)(1) above.

e. Emissions Limitation:

From b)(1)d. above, for emissions units K040 and K041 only, the maximum daily usage rate of post-score repair coating for each of these emissions units shall not exceed ten gallons.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the recordkeeping requirements specified in d)(2) above.



f. Control Measures:

From b)(1)e. above, the capture and control systems for emissions units K046 and K049 shall provide not less than an 81 percent reduction, by weight, in the overall VOC emissions from each coating line, and the control (destruction) efficiency of the RTO itself shall not be less than 90 percent, by weight, for the VOC emissions vented to it.

Applicable Compliance Method:

Periodically, compliance with the capture and control efficiency requirements described above itself shall be demonstrated based on the results of emission testing conducted in accordance with f)(2) below.

Ongoing compliance shall be demonstrated indirectly based upon the monitoring and recordkeeping requirements specified in d)(3) – d)(5) above, and also the reporting requirements in e)(3) above. “Indirectly” means that the combustion temperature within the RTO, as a 3-hour average, is maintained at no more than 50 degrees Fahrenheit below the average combustion temperature measured during the most recent performance (emissions) test that demonstrated that the emissions unit(s) was/were in compliance*. This serves as an indicator that the control (destruction) efficiency of the RTO itself can be assumed to be approximately the same as it was during those emissions tests.

* See g)(2) below (under Miscellaneous Requirements) for information about the most recent performance (emissions) tests that demonstrated compliance, and for specific temperature and control efficiency values that are to be used by the permittee based on those tests, along with provisions for making adjustments based upon future performance tests.

(2) Emission Testing Requirements – The permittee shall conduct, or have conducted, emission testing for emissions units K046 and K049 (which are both controlled by the same regenerative thermal oxidizer (RTO)) in accordance with the following requirements:

- a. The emission testing shall be conducted within 6 months prior to the expiration date of this permit. The actual starting date for this required testing shall be established as the baseline date for subsequent retesting, which shall be conducted every five (5) years.
- b. The emission testing shall be conducted to demonstrate compliance with the minimum allowable overall control efficiency (capture efficiency x control efficiency) of 81%, by weight, and a minimum control (destruction) efficiency of 90%, by weight, for the VOC emissions vented to the RTO.
- c. 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 U.S. EPA’s “Guidelines for Determining Capture Efficiency,” dated January 9, 1995, or the most recent revision. (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.)

- d. The control (destruction) efficiency (i.e., the percent reduction in VOC mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. 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.
- e. The operating temperature of the RTO shall be continuously measured and recorded per term d)(4) above. The operating temperature measurements should be averaged every 15 minutes (15-minute blocks of time) during emission testing. A copy of the complete temperature monitoring data, and the 15-minute averages for the day that the emission test was conducted, shall be included with the test report required in term f)(2)i. below. The 15-minute average data will be used to establish the average temperature of the RTO referenced in term d)(3) above.
- f. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division (Canton APC). Although this generally consists of operating all controlled emissions units at their maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- g. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division (Canton APC). 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 Canton APC's refusal to accept the results of the emission test(s).
- h. Personnel from Canton APC shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- i. 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 Canton APC within 30 days following completion of the test(s). The



permitteemay request additional time for the submittal of the written report, where warranted, with prior approval from Canton APC.

g) Miscellaneous Requirements

- (1) Values for material properties required below shall be determined either by the procedures set forth in U.S. EPA Method 24* or from formulation data provided by the manufacturer of the material, except for individual HAP, individual TAC, and exempt solvents information that can *only* be obtained from formulation data.

* Method 24, as described in 40 CFR Part 60, Appendix A, is applicable for the determination of volatile matter content, water content, density, volume solids, and weight solids of paint, varnish, lacquer, or other related surface coatings.

The following method shall be used to calculate the VOC content of each coating in pounds of VOC per gallon of coating, excluding water and exempt solvents, as applied. This value is defined as $C_{VOC,2}$ in OAC rule 3745-21-10. Either of following two options may be used to calculate $C_{VOC,2}$:

Option 1

$$C_{VOC,2} = (D_C)(W_{VOC}) / (V_S + V_{VOC})$$

Option 2

$$C_{VOC,2} = C_{VOC,1} / (1 - V_W - V_{ES})$$

Option 2 was derived from Option 1 by making the following substitutions: In the numerator, $(D_C)(W_{VOC})$ was replaced by $C_{VOC,1}$ (see Section B., paragraph 8.b, above) because, by definition, $C_{VOC,1} = (D_C)(W_{VOC})$. In the denominator, $(V_S + V_{VOC})$ was replaced by $(1 - V_W - V_{ES})$ because for any coating-related material, $V_S + V_{VOC} + V_W + V_{ES} = 1$, so by rearrangement, $(V_S + V_{VOC}) = (1 - V_W - V_{ES})$.

Option 2 is more intuitive than Option 1 because it corresponds directly to the definition for $C_{VOC,2}$ as “pounds of VOC per gallon of coating excluding water and exempt solvents.”

where:

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

$$W_{VOC} = W_{VM} - W_W - W_{ES}$$

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

where:

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

[For coatings, if this weight fraction is determined by ASTM D2369-04, "Standard Test Method for Volatile Content of Coatings," the drying conditions shall be one hundred ten degrees Celsius for one hour, except where otherwise authorized by



the director based on an alternate analytical procedure that is satisfactorily demonstrated to the director by the coating manufacturer to be more representative of the actual cure mechanism of the coating.]

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

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

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

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

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

where:

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

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

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

- (2) Information about performance (emissions) test results plus specific temperature and control efficiency values that shall be used by the permittee based on those tests, and provisions for making adjustments based upon future tests:

As of the final issue date of this permit, the most recent performance (emissions) tests that demonstrated compliance for EUs K046 and K049 are summarized below:

The test for EU K046 was conducted October 27 – 28, 2008, and the average combustion temperature within the RTO was 1551 deg F. Capture efficiency was 100%. Destruction efficiency in the RTO itself was 97.7%, and because of 100% capture, this was also the overall control efficiency.

The test for EU K049 was conducted February 16 – 17, 2009, and the average combustion temperature within the RTO was 1550 deg F. Capture efficiency was 100%. Destruction efficiency in the RTO itself was 99.1%, and because of 100% capture, this was also the overall control efficiency.

When the average temperatures from the two test dates described above are averaged together and rounded up to the nearest whole degree, the resulting average temperature is 1551 deg F. Therefore, as of the final issue date of this permit, 1551 deg F shall be the benchmark value for the combustion temperature within the RTO. It follows then, that 1501 deg F is the current value of the temperature referenced throughout these



terms and conditions as “50 degrees Fahrenheit below the average combustion temperature measured during the most recent performance (emissions) test that demonstrated that the emissions unit(s) was/were in compliance.”

For overall control efficiency (capture and control), the permittee shall use 97.7% for the purpose of emissions calculations for both EUs K046 and K049. 97.7% is the lower of the two overall control efficiency values measured in the tests described above, and it was selected as a conservative measure.

The benchmark temperature of 1551 deg F and the overall (capture and control) efficiency of 97.7% described above shall be in effect until new performance (emissions) testing is conducted that demonstrates that the emissions unit(s) is/are in compliance, at which time the permittee shall adjust the benchmark temperature, the corresponding 50-degrees-below temperature, and the overall control efficiency based on the test results. The new values shall be effective without requiring a modification to the terms and conditions of this permit.