



3/3/2014

Mr. Steven Travis
Sherwin-Williams Company
101 Prospect Ave. N.W.
Cleveland, OH 44115

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0125041181
Permit Number: P0113887
Permit Type: Renewal
County: Franklin

Certified Mail

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

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Columbus Dispatch. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically 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. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street Suite 700
PO Box 1049
Columbus, Ohio 43216-1049

and Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778.

Sincerely,

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

Cc: U.S. EPA Region 5 Via E-Mail Notification
Ohio EPA-CDO

PUBLIC NOTICE

3/3/2014 Issuance of Draft Air Pollution Permit-To-Install and Operate

Sherwin-Williams Company

2121 New World Drive,

Columbus, OH 43207

Franklin County

FACILITY DESC.: Paint and Coating Manufacturing

PERMIT #: P0113887

PERMIT TYPE: Renewal

PERMIT DESC: FEPTIO renewal for coatings and paint manufacturer.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: Barbara Walker, Ohio EPA DAPC, Central District Office, 50 West Town Street, 6th Floor P.O. Box 1049, Columbus, OH 43216-1049. Ph: (614)728-3778



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

Sherwin-Williams Company is an existing coatings and paint manufacturer located at 2121 New World Drive in Columbus, Ohio. The facility is an existing Synthetic Minor Title V (SMTV) facility with facility-wide emission limitations of 99.9 tons/yr OC, 24.9 tons/yr total HAP, and 9.9 tons/yr individual HAP. The synthetic minor permit allows the facility to avoid Title V permitting and the Miscellaneous Coating Manufacturing NESHAP (40 CFR Part 63, Subpart HHHHH). This permit will renew the terms and conditions of PTI 01-2366 (02/21/1991), PTI 01-3613 (12/30/1992), PTI 01-6677 (06/25/1997), PTI 01-08498 (02/16/2006), PTI 01-08601 (01/10/2008), and FEPTIO P0082828 (11/06/2008).

3. Facility Emissions and Attainment Status:

Facility emissions are primarily PE, VOC and HAP. The facility has installed a baghouse followed by a regenerative thermal oxidizer (RTO) to control VOC and particulate emissions. The facility is located in Franklin County, Ohio, which is in marginal non-attainment for ozone and annual PM_{2.5}.

4. Source Emissions:

The majority of tanks located at the facility are all controlled by the baghouse and the RTO. The RTO has a zeolite condenser wheel prior to the oxidation chamber. To ensure the continued efficiency of the condenser wheel, particulate matter needs to be removed from the air stream prior to the condenser. The current control setup has the baghouse, with bag leak detection systems and audible and visual alarms in the facility, in line before the condenser wheel. In an instance where particulate emissions continue in the air stream, secondary HEPA filters are in-line just before the condenser wheel. Maintaining the baghouse and the HEPA filters is a component of properly maintaining and operating the RTO, therefore, standard language for baghouse deviations investigations will not be added to the permit.

Four head inline one gallon filling line (P134)

(PTI 01-6677)

The emission unit is a four head inline one gallon filling line with emissions vented to the facility RTO. The underlying PTI does not take into account the control equipment on this line that was installed in 2011. **The emission limitations will be updated to reflect updated control equipment.** No change in process or materials has occurred

P180 – Solvent Distillation System

(FEPTIO P0082828)

The system is a 200 gallon/hour solvent distillation system that is vented to a condenser. The system reclaims solvent that is reused throughout the facility to clean tanks and equipment. The solvent has a typical composition of 13% methyl ethyl ketone, 55% xylene and 20% n-butyl acetate with a calculated uncontrolled PTE of 2.3 tons OC/yr and a controlled PTE of 1.0 ton/yr. The highest emissions occur when the reclaimed solvent is 100% MEK, resulting in emissions of 0.93 lbs MEK/hr and 4.05 tons MEK/yr.



The EU is subject to old and new OAC rule 3745-31-05(A)(3) and will be subject to the facility-wide restrictions on OC and VOC emissions.

SCREEN3 modeling was performed for the 2008 PTIO for this emission unit. The process has not changed and the materials used have not changed so updated modeling is not required. Variables for SCREEN3 were: emission rate of 0.93 lb/hr released a 1 cfm from a 2 in diameter vent 27 feet above grade. The maximum concentration of 530 ug/m³ did not exceed the MAGLC of 14,047 ug/m³.

1,000 gal HSD solvent based process tanks (High-speed disperser) P117, P118, P138, P171, P174

(PTI 01-6677 for P117 and P118, PTI 01-08498 for P138, PTI 01-08601 for P171 and P174)

The process tanks disperse, mix and grind ingredients to form an intermediate material to make coatings. The tanks are vented to a baghouse and an RTO. This permit will administratively modify PTI 01-6677 and 01-08498 to correct the emission limitations to be for a 1,000 gallon tank (the existing PTI has the tank permitted with the 500 and 800 gallon tank limits although applications show 1,000). BAT was previously established at PTE for the emission units and will be carried throughout this permit.

This renewal will remove the rule reference to OAC rule 3745-21-07 as this rule has been rescinded. These emission units are not subject to the new OAC rule 3745-21-07(M) as determined through the Ashland decision (the emissions units are dispersers/mixers).

1,000 gal T&S solvent based process tanks (P058 – P065, P160 – P165, P173)

(PTI 01-2366 for P058 – P065, PTI 01-08498 for P160 – P165, and PTI 01-08601 for P173)

The thin and shade tanks are used to blend coatings while adding raw materials that will adjust the coating to the final specifications. The tanks are all vented to a baghouse and an RTO.

The permit will administratively modify the emission limitations for tanks P058 – P065 to account for the change in control equipment (from the carbon absorber when the original PTI was issued). At the facilities request, the modification will adjust the emission limitations to match the emission limitations for the other like tanks (match PTI 01-08498 and 01-08601).

This renewal will remove the rule reference to OAC rule 3745-21-07 as this rule has been rescinded. These emission units are not subject to the new OAC rule 3745-21-07(M) as determined through the Ashland decision (the emissions units are dispersers/mixers).

1,000 gallon T&S water based process tanks (P037, P038, P123, P124, P139 – P143)

(PTI 01-6677 for P037, P038, P123, and P124, PTI 01-08498 for P139 – P143)

The thin and shade tanks are used to blend coatings while adding raw materials that will adjust the coating to the final specifications. The tanks are vented to the baghouse and RTO but are not required to vent to control as the process is water-based with an operational restriction on VOC content.

This permit will administratively modify PTI 01-6677 to change the emissions from pound per hour to pound per batch and to match all like emission units with equal emission limitations. No increase in emission limitation is occurring with this modification.



1,500 gallon HSD water based process tanks (P013 – P018)
(PTI 01-6677)

The facility requested that the emission limitation for OC be updated to lb/batch from lb/hour. There has been no change to the equipment or to the process and the annual emission limitation is remaining the same.

This renewal will remove the rule reference to OAC rule 3745-21-07 as this rule has been rescinded. These emission units are not subject to the new OAC rule 3745-21-07(M) as determined through the Ashland decision (the emissions units are dispersers/mixers).

The facility submitted modeling information for air toxics in 1997 and demonstrated using SCREEN3 that emissions of toluene under the worst case coating is well under the MAGLC.

1,500 gallon T&S solvent based process tanks (P111-P114, P116)
(PTI 01-6677)

The facility requested that the emission limitation for OC be updated to lb/batch from lb/hour. There has been no change to the equipment or to the process and the annual emission limitation is remaining the same.

This renewal will remove the rule reference to OAC rule 3745-21-07 as this rule has been rescinded. These emission units are not subject to the new OAC rule 3745-21-07(M) as determined through the Ashland decision (the emissions units are dispersers/mixers).

2,000 gallon T&S solvent based process tanks (P051 – P057, P146 – P150)
(PTI 01-2366 for P051 – P057, PTI 01-08498 for P146 – P150)

For PTI 01-2366, the facility requested that the emission limitation for VOC be changed to lb/batch from lb/hr. There has been no change to the process or the emission unit equipment. However, the control equipment has changed over time and now all tanks vent to the baghouse and RTO. Therefore, the emission limitations from PTI 01-2366 will be matched to the other PTIs for like emission units from PTI 01-08498 and PTI 01-08601.

This renewal will remove the rule reference to OAC rule 3745-21-07 as this rule has been rescinded. These emission units are not subject to the new OAC rule 3745-21-07(M) as determined through the Ashland decision (the emissions units are dispersers/mixers).

2,000 gallon T&S water based process tanks (P034 – P036, P125 – P127, P151, P175)
(PTI 01-6677 for P034 – P036 and P125 – P127, PTI 01-08498 for P151, PTI 01-08601 for P175)

For PTI 01-6677, the facility requested that the emission limitation for VOC be changed to lb/batch from lb/hr. There has been no change to the process or the emission unit equipment. The administrative modification will be matched to the emission limitations for P151 from PTI 01-08498.

The tanks are vented to the baghouse and RTO but are not required to vent to control as the process is water-based with an operational restriction on VOC content.

2,250 gallon HSD solvent based process tanks (P021 – P023, P026, P027, P176)
(PTI 01-2366 for P021-P023, P026, P027 and PTI 01-08601 for P175)



In PTI 01-2366, BAT was established as "Compliance with OAC rule 3745-21-07(G)(2)" with emission limitations of 8 lb/hr and 40 lb/day. OAC rule 3745-21-07(G)(2) has since been revised in its entirety. As BAT was established as being equivalent to OAC rule 3745-21-07, guidance states that the limitations be converted to a "straight BAT limit." Therefore, BAT will be modified in this renewal to 40 lbs VOC/day and 7.3 tons VOC/year.

OAC rule 3745-17-11 still applies to the emission units as particulate emissions are emitted from the addition of solids. OAC rule 3745-17-11 is less restrictive than the emission limitation established under BAT.

The terms and conditions of PTI 01-08601 for P176 have not been modified for this permit.

The facility requested that the permit for these emission units contain the conditions found for a like emission unit (P172) in PTI 01-08601.

4,000 gal Thin & Shade solvent based tanks (P177, P178)

Renewing of all terms from PTI 01-08601 from 01/10/2008. The permit is updated to reflect emission limitations on VOCs, not OCs.

4,000 gal T & S water based process tanks (P031 – P033, P042 – P046)

(PTI 01-6677)

The facility requested that the emission limitation for OC be updated to lb/batch from lb/hour. There has been no change to the equipment or to the process and the annual emission limitation is remaining the same. The control equipment has changed from carbon canisters to an RTO and a baghouse.

This renewal will remove the rule reference to OAC rule 3745-21-07 as this rule has been rescinded. These emission units are not subject to the new OAC rule 3745-21-07(M) as determined through the Ashland decision (the emissions units are dispersers/mixers).

The facility requested that the permit for these emission units contain the conditions found for a like emission unit (P177) in PTI 01-08601.

5 gallon filling lines (P077, P084, P129, P130, P133)

(PTI 01-3066 for P077, PTI 01-3569 for P084, PTI 01-6677 for P129, P130, and P133)

The underlying PTIs for the 5 gallon filling lines do not take into account the control equipment on these lines that was installed in 2011. The emission limitations will be updated to reflect updated control equipment. No change in process or materials has occurred.

PTI 01-3066 and PTI 01-3569 established BAT as compliance with OAC rule 3745-21-07 and use of particular control equipment. The fill lines are now connected to the newer RTO and baghouse.

PTI 01-6677 establishes lower emission limitations for P129 and P130, which are like equipment as the EUs in PTIs 01-3066 and 01-3569. At the facilities request, the emission limitations will be made similar for these emission units.

P133 is a single head filling line and the emission limitations will be identical to those found in its current PTI (PTI 01-6677).



5,000 gallon Thin & Shade solvent based tanks (P047 – P050, P066 – P076)
(PTI 01-2366)

The facility requested that the emission limitation for OC be updated to lb/batch from lb/hour. There has been no change to the equipment or to the process. The control equipment has changed from carbon canisters to an RTO.

This renewal will remove the rule reference to OAC rule 3745-21-07 as this rule has been rescinded. These emission units are not subject to the new OAC rule 3745-21-07(M) as determined through the Ashland decision (the emissions units are dispersers/mixers).

55 gallon fill line (P080, P131, P132)
(PTI 01-3396 for P080, PTI 01-6677 for P131 and P132)

PTI 01-3396 established BAT as compliance with OAC rule 3745-21-07 and use of a strainer for control.

PTI 01-6677 establishes lower emission limitations for P131 and P132, which are like equipment as the EU in PTI 01-3396. At the facilities request, the emission limitations will be made similar for these emission units.

Small Batch HSD tanks (P085, P088, P090, P091, and P157)
(PTI 01-3613 for P085, P088, P090, and P091. PTI 01-08498 for P157)

The facility requested that the emission limitations from PTI 01-3613 be made equal to the emission limitations found in PTI 01-08498. The emission limitation change is a decrease in overall emissions from each emission unit (from 7.3 tons per year to 4.1 tons per year). A change in control equipment, not a change in process, allows for the decrease in emissions for VOCs. A fabric filter will still be required for all PE.

The air toxics information and modeling information submitted to Ohio EPA for 01-08498 will be carried through for this permit as no process change has occurred.

This renewal will remove the rule reference to OAC rule 3745-21-07 as this rule has been rescinded. These emission units are not subject to the new OAC rule 3745-21-07(M) as determined through the Ashland decision (the emissions units are dispersers/mixers).

Small Batch mixer tanks (P092 – P097, P099 – P102)
(PTI 01-3613)

The facility requested that the emission limitations from PTI 01-3613 be made equal to the emission limitations found in PTI 01-08498 for small batch HDS tanks (without the PE limitation as the mixers have no particulate emissions). The emission limitation change is a decrease in overall emissions from each emission unit (from 7.3 tons per year to 4.1 tons per year). A change in control equipment, not a change in process, allows for the decrease in emissions for VOCs. A fabric filter will still be required for all PE.

The air toxics information and modeling information submitted to Ohio EPA for 01-08498 will be carried through for this permit as no process change has occurred.



This renewal will remove the rule reference to OAC rule 3745-21-07 as this rule has been rescinded. These emission units are not subject to the new OAC rule 3745-21-07(M) as determined through the Ashland decision (the emissions units are dispersers/mixers).

5. Conclusion:
Permit monitoring and recordkeeping, while maintaining compliance with other terms and conditions in the permit, should ensure compliance with applicable state and federal rules.
6. Please provide additional notes or comments as necessary:

None
7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
<u>VOC</u>	<u>99.9</u>
<u>iHAP</u>	<u>9.9</u>
<u>tHAP</u>	<u>24.9</u>
<u>PE</u>	<u>54.6</u>



DRAFT

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Sherwin-Williams Company**

Facility ID:	0125041181
Permit Number:	P0113887
Permit Type:	Renewal
Issued:	3/3/2014
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install and Operate
for
Sherwin-Williams Company

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Draft Permit-to-Install and Operate

Sherwin-Williams Company

Permit Number: P0113887

Facility ID: 0125041181

Effective Date: To be entered upon final issuance

Authorization

Facility ID: 0125041181
Application Number(s): A0037911, A0040307, A0047308
Permit Number: P0113887
Permit Description: FEPTIO renewal for coatings and paint manufacturer.
Permit Type: Renewal
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 3/3/2014
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

Sherwin-Williams Company
2121 New World Drive
Columbus, OH 43207

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:

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

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: P0113887
Permit Description: FEPTIO renewal for coatings and paint manufacturer.

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

- Emissions Unit ID: P134**
Company Equipment ID: Line 2
Superseded Permit Number: 01-6677
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P176**
Company Equipment ID: T&S 506
Superseded Permit Number: 01-08601
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P180**
Company Equipment ID: Solvent Distillation System
Superseded Permit Number: P0082828
General Permit Category and Type: Not Applicable

Group Name: 1,000 gallon HSD

Emissions Unit ID:	P117
Company Equipment ID:	HSD 414
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P118
Company Equipment ID:	HSD 415
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P138
Company Equipment ID:	HSD 416
Superseded Permit Number:	01-08498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P171
Company Equipment ID:	HSD 417B
Superseded Permit Number:	01-08601
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P174
Company Equipment ID:	T&S 502
Superseded Permit Number:	01-08601
General Permit Category and Type:	Not Applicable

Group Name: 1,000 gallon T&S solvent based

Emissions Unit ID:	P058
Company Equipment ID:	T&S 332
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P059
Company Equipment ID:	T&S 333
Superseded Permit Number:	01-2366



General Permit Category andType:	Not Applicable
Emissions Unit ID:	P060
Company Equipment ID:	T&S 334
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P061
Company Equipment ID:	T&S 335
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P062
Company Equipment ID:	T&S 336
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P063
Company Equipment ID:	T&S 337
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P064
Company Equipment ID:	T&S 338
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P065
Company Equipment ID:	T&S 339
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P160
Company Equipment ID:	T&S 389
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P161
Company Equipment ID:	T&S 390
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P162
Company Equipment ID:	T&S 391
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P163
Company Equipment ID:	T&S 392
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P164
Company Equipment ID:	T&S 393
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P165
Company Equipment ID:	T&S 394
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P173
Company Equipment ID:	T&S 505
Superseded Permit Number:	01-08601
General Permit Category andType:	Not Applicable



Group Name: 1,000 gallon water based

Emissions Unit ID:	P037
Company Equipment ID:	T&S 310
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P038
Company Equipment ID:	T&S 311
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P123
Company Equipment ID:	T&S 320
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P124
Company Equipment ID:	T&S 354
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P139
Company Equipment ID:	T&S 382
Superseded Permit Number:	01-08498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P140
Company Equipment ID:	T&S 383
Superseded Permit Number:	01-08498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P141
Company Equipment ID:	T&S 384
Superseded Permit Number:	01-08498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P142
Company Equipment ID:	T&S 385
Superseded Permit Number:	01-08498
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P143
Company Equipment ID:	T&S 386
Superseded Permit Number:	01-08498
General Permit Category and Type:	Not Applicable

Group Name: 1,500 gallon HSD

Emissions Unit ID:	P013
Company Equipment ID:	HSD 401A
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P014
Company Equipment ID:	HSD 401B
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P015
Company Equipment ID:	HSD 402A
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P016
Company Equipment ID:	HSD 402B
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable



Emissions Unit ID:	P017
Company Equipment ID:	HSD 403A
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P018
Company Equipment ID:	HSD 403B
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable

Group Name: 1,500 gallon T&S solvent based

Emissions Unit ID:	P111
Company Equipment ID:	T&S 368
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P112
Company Equipment ID:	T&S 369
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P113
Company Equipment ID:	T&S 370
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P114
Company Equipment ID:	T&S 374
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P116
Company Equipment ID:	T&S 373
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable

Group Name: 2,000 gallon T&S solvent based

Emissions Unit ID:	P051
Company Equipment ID:	T&S 325
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P052
Company Equipment ID:	T&S 326
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P053
Company Equipment ID:	T&S 327
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P054
Company Equipment ID:	T&S 328
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P055
Company Equipment ID:	T&S 329
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P056
Company Equipment ID:	T&S 330
Superseded Permit Number:	01-2366



General Permit Category andType:	Not Applicable
Emissions Unit ID:	P057
Company Equipment ID:	T&S 331
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P146
Company Equipment ID:	T&S 375
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P147
Company Equipment ID:	T&S 376
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P148
Company Equipment ID:	T&S 377
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P149
Company Equipment ID:	T&S 378
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P150
Company Equipment ID:	T&S 379
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable

Group Name: 2,000 gallon T&S water based

Emissions Unit ID:	P034
Company Equipment ID:	T&S 307
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P035
Company Equipment ID:	T&S 308
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P036
Company Equipment ID:	T&S 309
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P125
Company Equipment ID:	T&S 351
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P126
Company Equipment ID:	T&S 352
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P127
Company Equipment ID:	T&S 353
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P151
Company Equipment ID:	T&S 381
Superseded Permit Number:	01-08498
General Permit Category andType:	Not Applicable



Emissions Unit ID:	P175
Company Equipment ID:	T&S 503
Superseded Permit Number:	01-08601
General Permit Category and Type:	Not Applicable

Group Name: 2,250 gallon HSD

Emissions Unit ID:	P021
Company Equipment ID:	HSD 410
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P022
Company Equipment ID:	HSD 411A
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P023
Company Equipment ID:	HSD 411B
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P026
Company Equipment ID:	HSD 413A
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P027
Company Equipment ID:	HSD 413B
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable

Group Name: 4,000 gallon T&S solvent based

Emissions Unit ID:	P177
Company Equipment ID:	T&S 504
Superseded Permit Number:	01-08601
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P178
Company Equipment ID:	T&S 501
Superseded Permit Number:	01-08601
General Permit Category and Type:	Not Applicable

Group Name: 4,000 gallon T&S water based

Emissions Unit ID:	P031
Company Equipment ID:	T&S 304
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P032
Company Equipment ID:	T&S 305
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P033
Company Equipment ID:	T&S 306
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P042
Company Equipment ID:	T&S 315
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P043



Company Equipment ID:	T&S 316
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P044
Company Equipment ID:	T&S 317
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P045
Company Equipment ID:	T&S 318
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P046
Company Equipment ID:	T&S 319
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable

Group Name: 5 gallon fill line

Emissions Unit ID:	P077
Company Equipment ID:	Neupak S
Superseded Permit Number:	01-3066
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P084
Company Equipment ID:	Line 3 - 5 Gallon Filling Line
Superseded Permit Number:	01-3569
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P129
Company Equipment ID:	5 Gallon Filling Line
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P130
Company Equipment ID:	5 Gallon Filling Line
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P133
Company Equipment ID:	Single Head 5-gal Pail Filling Line - SB
Superseded Permit Number:	01-6677
General Permit Category andType:	Not Applicable

Group Name: 5,000 gallon T&S

Emissions Unit ID:	P047
Company Equipment ID:	T&S 321
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P048
Company Equipment ID:	T&S 322
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P049
Company Equipment ID:	T&S 323
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P050
Company Equipment ID:	T&S 324
Superseded Permit Number:	01-2366
General Permit Category andType:	Not Applicable



Emissions Unit ID:	P066
Company Equipment ID:	T&S 340
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P067
Company Equipment ID:	T&S 341
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P068
Company Equipment ID:	T&S 342
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P069
Company Equipment ID:	T&S 343
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P070
Company Equipment ID:	T&S 344
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P071
Company Equipment ID:	T&S 345
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P072
Company Equipment ID:	T&S 346
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P073
Company Equipment ID:	T&S 347
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P074
Company Equipment ID:	5000 Gallon Thin and Shade Tank #348
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P075
Company Equipment ID:	T&S 349
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P076
Company Equipment ID:	T&S 350
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable

Group Name: 55 gallon fill line with hood

Emissions Unit ID:	P080
Company Equipment ID:	55 Gallon Filling
Superseded Permit Number:	01-3396
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P131
Company Equipment ID:	55 Gallon Drum Filling Line
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P132



Company Equipment ID:	55 Gallon Drum Filling Line
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable

Group Name: 700 gallon T&S solvent based

Emissions Unit ID:	P103
Company Equipment ID:	T&S 360
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P104
Company Equipment ID:	T&S 361
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P105
Company Equipment ID:	T&S 362
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P106
Company Equipment ID:	T&S 363
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P107
Company Equipment ID:	T&S 364
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P108
Company Equipment ID:	T&S 365
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P109
Company Equipment ID:	T&S 366
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P110
Company Equipment ID:	T&S 367
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P115
Company Equipment ID:	T&S 372
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P120
Company Equipment ID:	T&S 371
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable

Group Name: 750 gallon HSD

Emissions Unit ID:	P019
Company Equipment ID:	HSD 404A
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P020
Company Equipment ID:	HSD 404B
Superseded Permit Number:	01-6677
General Permit Category and Type:	Not Applicable



Emissions Unit ID:	P024
Company Equipment ID:	HSD 412A
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P025
Company Equipment ID:	HSD 412B
Superseded Permit Number:	01-2366
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P172
Company Equipment ID:	HSD 418
Superseded Permit Number:	01-08601
General Permit Category and Type:	Not Applicable

Group Name: Small batch disperser stations

Emissions Unit ID:	P085
Company Equipment ID:	Small Batch HSD #D451
Superseded Permit Number:	01-3613
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P088
Company Equipment ID:	Small Batch HSD #D452
Superseded Permit Number:	01-3613
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P090
Company Equipment ID:	Small Batch HSD #D453
Superseded Permit Number:	01-3613
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P091
Company Equipment ID:	Small Batch HSD #D454
Superseded Permit Number:	01-3613
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P157
Company Equipment ID:	Small Batch HSD D455
Superseded Permit Number:	01-08498
General Permit Category and Type:	Not Applicable

Group Name: Small batch mixer stations

Emissions Unit ID:	P092
Company Equipment ID:	Small Batch Mixer #701
Superseded Permit Number:	01-3613
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P093
Company Equipment ID:	Small Batch Mixer #702
Superseded Permit Number:	01-3613
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P095
Company Equipment ID:	Small Batch Mixer #731
Superseded Permit Number:	01-3613
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P096
Company Equipment ID:	Small Batch Mixer #732
Superseded Permit Number:	01-3613
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P097
Company Equipment ID:	Small Batch Mixer #733
Superseded Permit Number:	01-3613



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General Permit Category andType:	Not Applicable
Emissions Unit ID:	P098
Company Equipment ID:	Small Batch Mixer #707
Superseded Permit Number:	01-3613
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P099
Company Equipment ID:	Small Batch Mixer #735
Superseded Permit Number:	01-3613
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P100
Company Equipment ID:	Small Batch Mixer #736
Superseded Permit Number:	01-3613
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P101
Company Equipment ID:	Small Batch Mixer #737
Superseded Permit Number:	01-3613
General Permit Category andType:	Not Applicable
Emissions Unit ID:	P102
Company Equipment ID:	Small Batch Mixer #738
Superseded Permit Number:	01-3613
General Permit Category andType:	Not Applicable



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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 Ohio EPA DAPC, Central District Office 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



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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.



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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) None.

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) Allowable Facility Emission Limitations:

The emissions of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from all emissions units at this facility as well as any de minimis emissions units, permanent exempt pursuant to OAC rule 3745-31-03 located at the facility and any future installed emissions units, combined, shall not exceed 9.9 tons per year for any individual HAP and 24.9 tons per year for any combination of HAPs, based upon rolling, 12-month summations of the HAP emissions.

The emissions of volatile organic compounds (VOCs) from all emissions units at this facility, as well as any de minimis emission units, permanent exempt pursuant to OAC rule 3745-31-03 emission units located at the facility, and any future installed emission units, combined, shall not exceed 99.9 tons per year based upon a rolling, 12-month summation of the VOC emissions.

(2) Recordkeeping Requirements

The permittee shall on a monthly basis maintain the following information for the entire facility:

- a. the rolling, 12-month summation of individual HAP emissions;
- b. the rolling, 12-month summation of combined HAP emissions; and
- c. the rolling, 12-month summation of VOC emissions.

(3) Reporting Requirements:

The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all exceedances of the rolling, 12-month individual HAP emission limitation;
- b. all exceedances of the rolling, 12-month combined HAP emission limitation; and
- c. all exceedances of the rolling, 12-month VOC emission limitation.

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.



(4) Applicable Compliance Method

Compliance with these emission limitations shall be determined through emission unit specific monitoring and recordkeeping requirements for the entire facility.

2. The permittee, by complying with the federally enforceable terms and conditions, will not be subject to Title V permitting and provisions in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Coating Manufacturing 40 CFR Part 63 Subpart HHHHH. The restrictions to potential to emit (PTE) for all emission units, as documented with on-site record keeping at this facility, will ensure that the individual HAP, and total combined HAP and VOC, emissions will not exceed the Title V and MACT applicability thresholds.
3. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63 Subpart CCCCCC, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources: Paints and Allied Products Manufacturing. Although Ohio EPA has determined that this Generally Available Control Technology NESHAP (GACT) applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised, that all requirements associated with this rule are in effect and shall be enforced by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.



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Sherwin-Williams Company

Permit Number: P0113887

Facility ID: 0125041181

Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions



1. P134, Line 2

Operations, Property and/or Equipment Description:

4 head inline 1 gallon filling line

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. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 01-6677, 06/25/1997)	Volatile organic compound (VOC) emissions shall not exceed 2.6 pounds per hour and 0.4 ton per year. See b)(2)a. and b)(2)b.

(2) Additional Terms and Conditions

a. While filling solvent based coatings, the filling line volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.

b. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(A)(3) for the control of VOC emissions and based upon the "worst case" coating. The



monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (3) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification..

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via Ohio EPA's e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]



- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer; and
 - iii. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
 - b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:
2.6 lb/hour of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.



The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by Ohio EPA, Central District Office. 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office 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



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

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

- b. Emission Limitation:
0.4 ton/yr of VOC

Applicable Compliance Method:

Provided compliance is shown with the hourly emission limitation, compliance with the annual limitation shall also be demonstrated.

- g) Miscellaneous Requirements

- (1) None.



2. P180, Solvent Distillation System

Operations, Property and/or Equipment Description:

Solvent distillation system vented to condenser (200 gallon/hour)

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

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

a. b)(1)c., d)(3) through d)(6), and e)(4)

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 (PTIO P0082828, 11/06/2008)	Volatile organic compound (VOC) emissions shall not exceed 1.84 pounds per hour and 4.05 tons per year. See b)(2)b.
b.	OAC rule 3745-31-05(A)(3), as effective 12/01/2006	See b)(2)c.
c.	ORC rule 3704.03(F)(4)(d) (Air Toxics)	See d)(3) through d)(6) and e)(4)

(2) Additional Terms and Conditions

a. All of the VOC emissions from this emissions unit shall be vented to a condenser that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph



(A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

- c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit-to-Install and Operate (PTIO) P0113887 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment), as proposed by the permittee, for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

- i. The system condenser shall be maintained regularly per the manufacturer's recommendations in order to maintain the highest effective level of VOC emission control. Maintenance of the condenser shall be recorded in an operations log maintained at this facility;
- ii. The emissions of VOC from this emissions unit shall not exceed 4.05 tons per rolling, 12-month summation.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain daily records that document any time periods when the condenser was not in service when the emissions unit was in operation.
- (2) At the end of each calendar month, the permittee shall calculate and record the following information for each day of operation during the preceding month:
 - a. the number of batches of solvent processed in this emissions unit;
 - b. an identification of how the emissions were calculated for each batch;
 - c. the summation of actual VOC and HAP emissions for each month of operation, from all product batches processed each month; and
 - d. the summation of actual VOC and HAP emissions from this emissions unit during the rolling, 12-month period of operation calculated by summing the emissions from each month of operation to the previous 11-month summations.



(3) The permit-to-install and operate (PTIO) application for this emissions unit, P180, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

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

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: methyl ethyl ketone (MEK).

TLV (mg/m3): 590



Maximum Hourly Emission Rate (lbs/hr): 1.84

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 530

MAGLC (ug/m3): 14,047

The permittee, has demonstrated that emissions of MEK, from emissions unit P180, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

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

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

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (6) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via Ohio EPA's e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:



- i. any daily record that documents a time period when the condenser was not in service when the emission unit was in operation as identified by recordkeeping in d)(1).
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

[OAC rule 3745-15-03(B)(1)(b)] and [OAC rule 3745-15-03(C)]

- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], and Option A, Engineering Guide #70

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. Emission Limitation:

- 1.84 lb/hr and 4.05 ton/yr of volatile organic compounds

- a. Applicable Compliance Method:

- Compliance with the hourly and annual emission limitation shall be determined through the record keeping requirements found in d)(2)d., above.

g) **Miscellaneous Requirements**

- (1) None.



3. Emissions Unit Group -1,000 gallon HSD: P117,P118,P138,P171,P174,

EU ID	Operations, Property and/or Equipment Description
P117	1,000 gallon high speed disperser HSD (414)
P118	1,000 gallon high speed disperser HSD (415)
P138	1,000 gallon high speed disperser HSD (416)
P171	1,000 gallon high speed disperser HSD (417)
P174	1,000 gallon high speed disperser HSD (502)

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. None.

(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)(2)a., c)(1), and e)(3)

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) (Synthetic minor to avoid Title V, MACT and non-attainment NSR)	<p>Volatile organic compound (VOC) emissions shall not exceed 4.9 pounds per batch and 4.9 tons per year.</p> <p>See b)(2)a. and c)(1)</p> <p>See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.</p>
b.	OAC rule 3745-31-05(A)(3) (PTI 01-6677 for P117 and P118, 6/25/1997; PTI 01-08498 for P138, 2/16/2006; PTI 01-08601 for P171 and P174, 1/10/2008)	<p>Particulate emissions (PE) shall not exceed 0.22 pound per hour and 0.97 ton per year.</p> <p>Visible emissions of PE shall not exceed 5% opacity as a 3-minute average from any stack or outside vent associated with</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		this emissions unit, during the addition of solids. See b)(2)c.
c.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The process tank particulate emissions (PE) shall be vented to a PE collection system that achieves and maintains a minimum 70% capture efficiency at all times. The PE collection system shall vent all PE emissions to a dust collector that achieves a minimum 95% control efficiency.
- c. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(D) for the control of VOC emissions and based upon the “worst case” coating. The “worst case coating” at a 4 hour batch period and an 800 gallon batch size has a maximum “worst case” emission rate of 8.84 lbs VOC/1,800 gallon batch. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.
- d. The material addition hatch shall be closed, except during addition of material through the hatch or product quality check.

c) Operational Restrictions

- (1) The permittee shall not grind more than 168 batches of coatings per month in this emission unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following



- a. the identification number of each formulation and batch production date; and
 - b. the summation of the number of paint batches ground per month.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.
- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
- a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (5) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 3.0 inches of water.
- (6) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business



Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
 - iv. each month during which more than 168 batches of solvent-based coatings were ground; and
 - v. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
 - b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office)..

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. Emission Limitation:
4.9 lbs/batch of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by Ohio EPA, Central District Office. 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

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

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

- b. Emission Limitation:
4.9 tons/yr of VOC

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.

- c. Emission Limitation:
0.22 lb/hr and 0.97 ton/yr of PE

Applicable Compliance Method:

If required, the following test method(s) shall be employed to demonstrate compliance with the allowable emission rate(s): 40 CFR Part 6, Appendix A, Methods 1 – 5. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The baghouse controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the baghouse stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.

Provided compliance with the hourly limitation is shown, compliance with the annual limitation shall also be demonstrated.



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d. Emission Limitation:

Visible emissions of PE shall not exceed 5% opacity as a 3-minute average from any stack or outside vent associated with this emissions unit, during the addition of solids.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance U.S. EPA Method 9.

g) Miscellaneous Requirements

(1) None.



2. Emissions Unit Group -1,000 gallon T&S solvent based: P058,P059,P060,P061,P062,P063,P064,P065,P160,P161,P162,P163,P164,P165,P173,

EU ID	Operations, Property and/or Equipment Description
P058	1,000 Gallon Thin and Shade Tank (332)
P059	1,000 gallon Thin and Shade Tank (333)
P060	1,000 gallon Thin and Shade Tank (334)
P061	1,000 gallon Thin and Shade Tank (335)
P062	1,000 gallon Thin and Shade Tank (336)
P063	1,000 gallon Thin and Shade Tank (337)
P064	1,000 gallon Thin and Shade Tank (338)
P065	1,000 gallon Thin and Shade Tank (339)
P160	1,000 gallon Thin and Shade Tank (389)
P161	1,000 gallon Thin and Shade Tank (390)
P162	1,000 gallon Thin and Shade Tank (391)
P163	1,000 gallon Thin and Shade Tank (392)
P164	1,000 gallon Thin and Shade Tank (393)
P165	1,000 gallon Thin and Shade Tank (394)
P173	1,000 gallon Thin and Shade Tank (505)

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. None.

(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)b., b)(2)a., c)(1), and e)(3).

b) Applicable Emissions Limitations and/or Control Requirements

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



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 01-2366 for P058-P065, 02/21/1991 PTI 01-08498 for P160-P165, 02/16/2006 PTI 01-08601 for P173, 01/10/2008)	<p>Volatile organic compound (VOC) emissions shall not exceed 0.34 pound per batch and 0.03 ton per year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).</p> <p>See b)(2)b.</p>
b.	OAC rule 3745-31-05(D) (Synthetic minor to avoid non-attainment NSR, Title V and MACT)	<p>See b)(2)a. and c)(1).</p> <p>See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.</p>

(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(A)(3) for the control of VOC emissions and based upon the “worst case” coating. The “worst case coating” at a 48 hour batch period and a 1,000 gallon batch size has a maximum “worst case” emission rate of 0.34 lbs VOC/1,000 gallon batch. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.

c) Operational Restrictions

- (1) The permittee shall not blend and pump to the fill line more than 15 batches of coating per month from this emission unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records for each batch of paint produced in the thin and shade tanks:
 - a. the identification of the formulation, date, and volume; and
 - b. the cumulative number of batches of coatings blended and pumped to the fill line from this emission unit.



- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.
- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each month during which more than 15 batches of solvent-based coatings were blended; and
 - iv. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
- b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:
0.34 lb/batch of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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



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- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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



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- b. Emission Limitation:
0.03 ton/yr of VOC

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.

- g) Miscellaneous Requirements

- (1) None.



**3. Emissions Unit Group -1,000 gallon water based:
P037,P038,P123,P124,P139,P140,P141,P142,P143,**

EU ID	Operations, Property and/or Equipment Description
P037	1,000 gallon Thin and Shade Tank #310
P038	1,000 gallon Thin and Shade Tank #311
P123	1,000 gallon Thin and Shade Tank (320)
P124	1,000 gallon Thin and Shade Tank (354)
P139	1,000 gallon Thin and Shade Tank (382)
P140	1,000 gallon Thin and Shade Tank (383)
P141	1,000 gallon Thin and Shade Tank (384)
P142	1,000 gallon Thin and Shade Tank (385)
P143	1,000 gallon Thin and Shade Tank (386)

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. None.

(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)b., c)(2), and e)(3)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 01-6677 for P037, P038, P123, and P124, 06/25/1997 PTI 01-08498 for P139 – P143, 02/16/2006)	<p>Volatile organic compound (VOC) emissions shall not exceed 0.11 pound per batch and 0.01 ton per year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).</p> <p>See b)(2)a and c)(1)</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D) (Synthetic minor to avoid non-attainment NSR, Title V and MACT)	See c)(2) See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.

(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(A)(3) for the control of VOC emissions and based upon the “worst case” coating. The “worst case coating” at a 48 hour batch period and a 1,000 gallon batch size has a maximum “worst case” emission rate of 0.11 lbs VOC/1,000 gallon batch. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.

c) Operational Restrictions

- (1) The weight percent of water in water-based coatings shall be greater than the combined weight percent of all VOCs; the combined VOC content shall not exceed 25% by weight and water shall be employed to clean and rinse the blending vessel to ensure a maximum batch emission rate of 0.11 lb VOC/1,000 gallon uncontrolled from the emission unit.
- (2) The permittee shall not blend and pump to the filling line more than 15 batches of coating per month from this emission unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain the following records on a monthly basis for each batch of water-based coating produced in this emission unit:
 - a. the identification number of the formulation and volume, in gallons; and
 - b. a summation of cumulative number of batches of water-based coating blended and pumped to the fill line during each month.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer



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.

- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA's e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each month during which more than 15 batches of coatings were blended; and
 - iv. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
- b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:
0.11 lb/batch of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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



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Effective Date: To be entered upon final issuance

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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



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- b. Emission Limitation:
0.01 ton/yr of VOC

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.

- g) Miscellaneous Requirements

- (1) None.



4. Emissions Unit Group -1,500 gallon HSD: P013,P014,P015,P016,P017,P018,

EU ID	Operations, Property and/or Equipment Description
P013	1,500 gallon high speed disperser HSD(401A)
P014	1,500 gallon high speed disperser HSD (401B)
P015	1,500 gallon high speed disperser HSD (402A)
P016	1,500 gallon high speed disperser HSD (402B)
P017	1,500 gallon high speed disperser HSD (403A)
P018	1,500 gallon high speed disperser HSD (403B)

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

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

a. b)(1)e., d)(8) – d)(11) and e)(4).

(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)(2)a., and e)(3).

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) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	<p>Volatile organic compound (VOC) emissions shall not exceed 13.6 pounds per batch and 3.0 tons per year.</p> <p>See b)(2)a.</p> <p>See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions</p>
b.	OAC rule 3745-31-05(A)(3) (PTI 01-6677, June 25, 1997)	<p>Particulate emissions (PE) shall not exceed 0.1 ton per year.</p> <p>Visible emissions of PE shall not exceed 5% opacity as a 3-minute average from any stack or outside vent associated with</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		this emissions unit, during the addition of solids. See b)(2)a.
c.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	ORC rule 3704.03(F)(4)(d)	See d)(8) – d)(11) and e)(4)

(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The process tank particulate emissions (PE) shall be vented to a PE collection system that achieves and maintains a minimum 70% capture efficiency at all times. The PE collection system shall vent all PE emissions to a dust collector that achieves a minimum 95% control efficiency
- c. The material addition hatch shall be closed, except during addition of material through the hatch or product quality check.

c) Operational Restrictions

- (1) The permittee shall not grind more than 168 batches of coating per month in this emission unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following
 - a. the identification number of each formulation and batch production date; and
 - b. the summation of the number of paint batches ground per month.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.

- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (5) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 3.0 inches of water.
- (6) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.
- (7) The federally enforceable permit-to-install and operate (FEPTIO) application for these emissions units, P013, P014, P015, P016, P017, and P018 was evaluated based on the actual materials and the design parameters of the emissions unit(s)' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw



materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "8" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: toluene

TLV (mg/m3): 75.36

Maximum Hourly Emission Rate (lbs/hr): 11.44

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 875.5

MAGLC (ug/m3): 7,536

The permittee, has demonstrated that emissions of toluene, from emissions units P013, P014, P015, P016, P017, and P018, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (8) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the



change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

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



- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (10) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via Ohio EPA's e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
 - iv. each month during which more than 168 batches of solvent-based coatings were ground; and



- v. each day during which a higher emitting coating is manufactured compared to the “worst case” coating.
- b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- c. 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, electronically through Ohio EPA’s Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

- (4) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], and Option A, Engineering Guide #70

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. Emission Limitation:
13.6 lbs/batch of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 “Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities” (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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



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- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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



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- b. Emission Limitation:
3.0 tons/yr of VOC

Applicable Compliance Method:

Compliance will be demonstrated through the record keeping requirements of d)(1).

- c. Emission Limitation:
0.1 ton/yr of particulate emissions

Applicable Compliance Method:

If required, the following test method shall be employed to demonstrate compliance with the allowable emission rate(s): 40 CFR Part 6, Appendix A, Methods 1 – 5. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The baghouse controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the baghouse stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.

- g) Miscellaneous Requirements

- (1) None.



5. Emissions Unit Group -1,500 gallon T&S solvent based: P111,P112,P113,P114,P116,

EU ID	Operations, Property and/or Equipment Description
P111	1,500 gallon thin and shade tank (368)
P112	1,500 gallon thin and shade tank (369)
P113	1,500 gallon thin and shade tank (370)
P114	1,500 gallon thin and shade tank (374)
P116	1,500 gallon thin and shade tank (373)

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. None.

(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)(2)a., c)(1), and e)(3)

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) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	<p>Volatile organic compound (VOC) emissions shall not exceed 1.2 pounds per batch and 0.2 ton per year.</p> <p>See b)(2)a. and c)(1)</p> <p>See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions</p>
b.	OAC rule 3745-31-05(A)(3) (PTI 01-6677, 06/25/1997)	See b)(2)b.



(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(D) for the control of VOC emissions and based upon the "worst case" coating. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.

c) Operational Restrictions

- (1) The permittee shall not blend and pump to the fill line more than 15 batches of coating per month from this emission unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall record the number of batches produced each day an emission unit is operated.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.
- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and



- b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.



e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission 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:

i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;

iii. each month during which more than 15 batches of solvent-based coatings were ground; and

iv. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.

b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

c. 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, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).



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. Emission Limitation
1.2 lb/batch of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.



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Sherwin-Williams Company

Permit Number: P0113887

Facility ID: 0125041181

Effective Date: To be entered upon final issuance

- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA, Central District Office.

- b. Emission Limitation:
0.1 ton/yr of VOC

Applicable Compliance Method:

Compliance shall be determined by multiplying the number of batches performed each month found in d)(1) by the batch emission limitation.

- g) Miscellaneous Requirements

- (1) None.



**6. Emissions Unit Group -2,000 gallon T&S solvent based:
P051,P052,P053,P054,P055,P056,P057,P146,P147,P148,P149,P150,**

EU ID	Operations, Property and/or Equipment Description
P051	2,000 gallon Thin and Shade Tank (325)
P052	2,000 gallon Thin and Shade Tank (326)
P053	2,000 gallon Thin and Shade Tank (327)
P054	2,000 gallon Thin and Shade Tank (328)
P055	2,000 gallon Thin and Shade Tank (329)
P056	2,000 gallon Thin and Shade Tank (330)
P057	2,000 gallon Thin and Shade Tank (331)
P146	2,000 gallon Thin and Shade Tank (375)
P147	2,000 gallon Thin and Shade Tank (376)
P148	2,000 gallon Thin and Shade Tank (377)
P149	2,000 gallon Thin and Shade Tank (378)
P150	2,000 gallon Thin and Shade Tank (379)

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. None.

(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)b., b)(2)a., c)(1), and e)(3)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 01-2366 for P051-P057, 02/21/1991 PTI 01-08498 for P146 – P150, 02/16/2006)	<p>Volatile organic compound (VOC) emissions shall not exceed 0.67 pound per batch and 0.06 ton per year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rule 3745-31-05(D). See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(D) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	See b)(2)a. and c)(1) See 1.b)(1) – (4) of Section B - Facility Wide Terms and Conditions.

(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(A)(3) for the control of VOC emissions and based upon the “worst case” coating. The “worst case coating” at a 48 hour batch period and a 1,000 gallon batch size has a maximum “worst case” emission rate of 0.34 lbs VOC/1,000 gallon batch. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.

c) Operational Restrictions

- (1) The permittee shall not blend and pump to the fill line more than 15 batches of coating per month from this emission unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records for each batch of paint produced in the thin and shade tanks:
 - a. the identification of the formulation, date and volume; and
 - b. the cumulative number of batches of coatings blended and pumped to the fill line from this emission unit.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.



- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
- a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via Ohio EPA's e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each month during which more than 15 batches of solvent-based coatings were ground; and



- iv. each day during which a higher emitting coating is manufactured compared to the “worst case” coating.
- b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- c. 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, electronically through Ohio EPA’s Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:

0.67 lb/batch of volatile organic compounds

- Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 “Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities” (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):



40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA, Central District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA, Central District Office.

b. Emission Limitation:

0.06 ton/yr of VOCs

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.



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g) Miscellaneous Requirements

(1) None.



**7. Emissions Unit Group -2,000 gallon T&S water based:
P034,P035,P036,P125,P126,P127,P151,P175,**

EU ID	Operations, Property and/or Equipment Description
P034	2,000 gallon thin and shade tank (307)
P035	2,000 gallon thin and shade tank (308)
P036	2,000 gallon thin and shade tank (309)
P125	2,000 gallon thin and shade tank (351)
P126	2,000 gallon thin and shade tank (352)
P127	2,000 gallon thin and shade tank (353)
P151	2,000 gallon thin and shade tank (381)
P175	2,000 gallon thin and shade tank (503)

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. None.

(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)b., c)(2), and e)(3)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 01-6677 for P034 –P036 and P125-P127, 06/25/1997 PTI 01-08498 for P151, 02/16/2006 PTI 01-08601 for P175, 01/10/2008)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D). See b)(2)a. and c)(1)
b.	OAC rule 3745-31-05(D) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	Volatile organic compound (VOC) emission shall not exceed 0.21 pound per batch or 0.02 ton per year. See c)(2)



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.

(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(A)(3) for the control of VOC emissions and based upon the “worst case” coating. The “worst case coating” at a 48 hour batch period and a 1,000 gallon batch size has a maximum “worst case” emission rate of 0.11 lbs VOC/1,000 gallon batch. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.

c) Operational Restrictions

- (1) The weight percent of water in water-based coatings shall be greater than the combined weight percent of all VOCs; the combined VOC content shall not exceed 25% by weight and water shall be employed to clean and rinse the blending vessel to ensure a maximum batch emission rate of 0.11 lb VOC/1,000 gallon uncontrolled from the emission unit.
- (2) The permittee shall not blend and pump to the filling line more than 15 batches of coating per month from this emission unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain the following records on a monthly basis for each batch of water-based coating produced in this emission unit:
 - a. the identification number of the formulation and volume, in gallons; and
 - b. a summation of cumulative number of batches of water-based coating blended and pumped to the fill line during each month.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.

- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via Ohio EPA's e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;



- iii. each month during which more than 15 batches of coatings were blended; and
- iv. each day during which a higher emitting coating is manufactured compared to the “worst case” coating.
- b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- c. 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, electronically through Ohio EPA’s Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:
0.21 lb/batch of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 “Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities” (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.



- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA Central District Office.

- b. Emission Limitation:
0.02 ton/yr of VOC



Draft Permit-to-Install and Operate

Sherwin-Williams Company

Permit Number: P0113887

Facility ID: 0125041181

Effective Date: To be entered upon final issuance

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.

g) Miscellaneous Requirements

(1) None.



8. Emissions Unit Group -2,250 gallon HSD: P021,P022,P023,P026,P027

EU ID	Operations, Property and/or Equipment Description
P021	2,250 gallon HSD (410)
P022	2,250 gallon HSD (411A)
P023	2,250 gallon HSD (411B)
P026	2,250 gallon HSD (413A)
P027	2,250 gallon HSD (413B)

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. None.

(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)(2)a., and e)(3)

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) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	<u>P021 – P023, P026, P027</u> Volatile organic compound (VOC) emissions shall not exceed 40 pounds per day and 7.3 tons per year. See b)(2)a. See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions
b.	OAC rule 3745-31-05(A)(3) (PTI 01-2366 for P021 – P023, P026, P027, 02/21/1991 PTI 01-08601 for P176, 01/10/2008)	Particulate emissions (PE) shall not exceed 1 pound per hour. Visible emissions of PE shall not exceed 5% opacity as a 3-minute average from any stack or outside vent associated with



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		this emissions unit, during the addition of solids See b)(2)b. – b)(2)c.
c.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

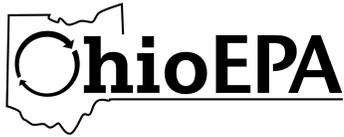
- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The process tank particulate emissions (PE) shall be vented to a PE collection system that achieves and maintains a minimum 70% capture efficiency at all times. The PE collection system shall vent all PE emissions to a dust collector that achieves a minimum 95% control efficiency.
- c. The material addition hatch shall be closed, except during addition of material through the hatch or product quality check.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following for solvent-based paint production:
 - a. the identification number of each formulation and batch production rate; and
 - b. summation of the number of paint batches ground per month.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.

- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (5) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 3.0 inches of water.
- (6) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]



- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
 - iv. each month during which more than 168 batches of solvent-based coatings were ground; and
 - v. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
 - b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation for P021 – P023, P026, P027:
40 lbs/day of VOC
- Applicable Compliance Method:
Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative



Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities” (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).



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

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

- b. Emission Limitation for P021 – P023, P026, P027:
7.3 ton/yr of VOC

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.

- c. Emission Limitation for P021 – P023, P026, P027:
1 lb/hr of PE

Applicable Compliance Method:

If required, the following test method(s) shall be employed to demonstrate compliance with the allowable emission rate(s): 40 CFR Part 6, Appendix A, Methods 1 – 5. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The baghouse controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the baghouse stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.

- g) Miscellaneous Requirements

- (1) None.



9. Emissions Unit Group -4,000 gallon T&S solvent based: P177,P178,

EU ID	Operations, Property and/or Equipment Description
P177	4,000 gallon Thin and Shade Tank (504)
P178	4,000 gallon thin and shade tank (501)

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. None.

(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)b., b)(2)b., c)(1), and e)(3)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 01-08601, 01/10/2008)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D). See b)(2)b. See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.
b.	OAC rule 3745-31-05(D) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	Volatile organic compound (VOC) emissions shall not exceed 1.34 pounds per batch and 0.12 ton per year. See b)(2)a. and c)(1)



(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(D) for the control of VOC emissions and based upon the "worst case" coating. The "worst case coating" at a 48 hour batch period and a 1,000 gallon batch size has a maximum "worst case" emission rate of 0.34 lbs VOC/1,000 gallon batch. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.

c) Operational Restrictions

- (1) The permittee shall not blend and pump to a fill line more than 15 batches of coatings per month from this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records for each batch of paint produced in the thin and shade tanks:
 - a. the identification of the formulation, date and volume; and
 - b. the cumulative number of batches of coatings blended and pumped to the fill line from this emission unit.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.
- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:

- a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.



The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA's e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each month during which more than 15 batches of solvent-based coatings were blended; and
 - iv. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
 - b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:

1.34 lb/batch of volatile organic compounds

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-



10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

b. Emission Limitation:

0.12 ton/yr of volatile organic compounds

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.

g) Miscellaneous Requirements

- (1) None.



**10. Emissions Unit Group -4,000 gallon T&S water based:
P031,P032,P033,P042,P043,P044,P045,P046,**

EU ID	Operations, Property and/or Equipment Description
P031	4,000 gallon thin and shade tank (304)
P032	4,000 gallon thin and shade tank (305)
P033	4,000 gallon thin and shade tank (306)
P042	4,000 gallon thin and shade tank (315)
P043	4,000 gallon thin and shade tank (316)
P044	4,000 gallon thin and shade tank (317)
P045	4,000 gallon thin and shade tank (318)
P046	4,000 gallon thin and shade tank (319)

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. None.

(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)(2)a., c)(2), and e)(3)

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) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	Volatile organic compound (VOC) emissions shall not exceed 0.5 pound per batch and 0.05 ton per year. See b)(2)a. and c)(2) See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.
b.	OAC rule 3745-31-05(A)(3) (PTI 01-6677, 06/25/1997)	The requirements of this rule also include compliance with the requirements of OAC



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rule 3745-31-05(D).

(2) Additional Terms and Conditions

a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.

c) Operational Restrictions

(1) The weight percent of water in water-based coatings shall be greater than the combined weight percent of all VOCs; the combined VOC content shall not exceed 25% by weight and water shall be employed to clean and rinse the blending vessel to ensure a maximum batch emission rate of 0.11 lb VOC/1,000 gallon uncontrolled from the emission unit.

(2) The permittee shall not blend and pump to the fill line more than 15 batches of coating per month from this emission unit.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain the following records on a monthly basis for each batch of water-based coating produced in this emission unit:

- a. the identification number of the formulation and volume, in gallons; and
- b. a summation of cumulative number of batches of water-based coating blended and pumped to the fill line during each month

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.

(3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:

- a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.



The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each month during which more than 15 batches of coatings were blended; and
 - iv. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
- b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:
0.5 lb/batch of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the



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Sherwin-Williams Company

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Facility ID: 0125041181

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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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

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

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

- b. Emission Limitation:
0.05 ton/yr of VOC

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.

- g) Miscellaneous Requirements

- (1) None.



11. Emissions Unit Group -5 gallon fill line: P077,P084,P129,P130,P133,

EU ID	Operations, Property and/or Equipment Description
P077	5 gallon filling line - Line 3 South Neupak, 2 Head
P084	5-gallon filling - Line 1 North Neupak, 2 Head
P129	5-gallon filling - West Neupak, 2 Head
P130	5-gallon filling - Line 4, 2 Head
P133	5 gallon filling - Small Batch, Single Head

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. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 01-3066 for P077 PTI 01-3569 for P084 PTI 01-6677 for P129, P130, and P133)	<u>P077, P084, P129, and P130</u> Volatile organic compound (VOC) emissions shall not exceed 2.7 pound per hour and 1.2 ton per year. <u>P133</u> Volatile organic compound (VOC) emissions shall not exceed 1.5 pound per hour and 0.3 ton per year. See b)(2)a. and b)(2)b.



(2) Additional Terms and Conditions

- a. While filling solvent based coatings, the filling line volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(A)(3) for the control of VOC emissions and based upon the "worst case" coating. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.



- (3) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.



e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer; and
 - iii. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
 - b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation for P077, P084, P129 and P130:
2.7 lb/hr of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

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

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

- b. Emission Limitation for P077, P084, P129, and P130
1.2 ton/yr of VOC

Applicable Compliance Method for P077, P084, P129, and P130:

Compliance shall be demonstrated by multiplying an average emission factor of 0.0000373 lb VOC/lb throughput by a maximum annual throughput of 64,343,163 lbs and a conversion factor of 1 ton/2,000 lbs.

- c. Emission Limitation for P133:
0.08 lb/hr of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.



- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

- d. Emission Limitation for P133:
0.3 ton/yr of VOC



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Facility ID: 0125041181

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Applicable Compliance Method:

Compliance shall be demonstrated by multiplying an average emission factor of 0.0000373 lb VOC/lb throughput by a maximum annual throughput of 64,343,163 lbs and a conversion factor of 1 ton/2,000 lbs.

g) Miscellaneous Requirements

(1) None.



**12. Emissions Unit Group -5,000 gallon T&S:
P047,P048,P049,P050,P066,P067,P068,P069,P070,P071,P072,P073,P074,P075,P076,**

EU ID	Operations, Property and/or Equipment Description
P047	5,000 gallon Thin and Shade Tank #321
P048	5,000 gallon Thin and Shade Tank #322
P049	5,000 gallon Thin and Shade Tank #323
P050	5,000 gallon Thin and Shade Tank #324
P066	5,000 gallon Thin and Shade Tank #340
P067	5,000 gallon Thin and Shade Tank #341
P068	5,000 gallon Thin and Shade Tank #342
P069	5,000 gallon Thin and Shade Tank #343
P070	5,000 gallon Thin and Shade Tank #344
P071	5,000 gallon Thin and Shade Tank #345
P072	5,000 gallon Thin and Shade Tank #346
P073	5,000 gallon Thin and Shade Tank #347
P074	5,000 gallon Thin and Shade Tank #348
P075	5,000 gallon Thin and Shade Tank #349
P076	5,000 gallon Thin and Shade Tank #350

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. None.

(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)(2)a., c)(1), and e)(3)

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) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	<u>P047 – P050, P066 –P076</u> Volatile organic compound (VOC) emissions shall not exceed 3.4pound per



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		batch. See b)(2)a. and c)(1) See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.
b.	OAC rule 3745-31-05(A)(3) (PTI 01-2366, 02/21/1991)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).

(2) Additional Terms and Conditions

a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.

c) Operational Restrictions

(1) The permittee shall not blend and pump to the fill line more than 15 batches of coating per month from this emission unit.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.

(2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion



temperature within the thermal oxidizer was 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; and

- b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (3) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate



compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each month during which more than 15 batches of coatings were blended; and
 - iv. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
- b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:
3.4 lb/batch of VOC



Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" ((U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005) assuming 90% capture and 95% control efficiency.

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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



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will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

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

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

g) **Miscellaneous Requirements**

- (1) None.



13. Emissions Unit Group -55 gallon fill line with hood: P080,P131,P132,

EU ID	Operations, Property and/or Equipment Description
P080	55-gallon filling drum - South Auto Drum Line
P131	55-gallon filling - West Drum Line
P132	55-gallon filling - East Auto Drum Line

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. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 01-3396 for P080, 11/27/1991 PTI 01-6677 for P131 and P132, 06/25/1997)	Volatile organic compound (VOC) emissions shall not exceed 0.8 pound per hour and 1.4 ton per year. See b)(2)a. See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.

(2) Additional Terms and Conditions

a. While filling solvent based coatings, the filling line volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.



- b. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(A)(3) for the control of VOC emissions and based upon the “worst case” coating. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.
- c) Operational Restrictions
 - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.
 - (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
 - (3) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via Ohio EPA e-Business



Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

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. Emission Limitation:
0.08 lb/hr of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005).

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by Ohio EPA. The test methods and procedures selected shall be based on a consideration of



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the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

- b. Emission Limitation:
1.4 ton/yr of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005).

- g) Miscellaneous Requirements
 - (1) None.



**14. Emissions Unit Group -700 gallon T&S solvent based:
P103,P104,P105,P106,P107,P108,P109,P110,P115,P120,**

EU ID	Operations, Property and/or Equipment Description
P103	700 gallon thin and shade tank (360)
P104	700 gallon thin and shade tank (361)
P105	700 gallon thin and shade tank (362)
P106	700 gallon thin and shade tank (363)
P107	700 gallon thin and shade tank(364)
P108	700 gallon thin and shade tank (365)
P109	700 gallon thin and shade tank (366)
P110	700 gallon thin and shade tank (367)
P115	700 gallon thin and shade tank (372)
P120	700 gallon thin and shade tank (371)

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

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

a. b)(1)c. and d)(4).

(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)(2)a., c)(1), and e)(3)

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) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	Volatile organic compound (VOC) emissions shall not exceed 0.48 pound per batch and 0.1 ton per year. See b)(2)a. and c)(1) See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3) (PTI 01-6677 issued 06/25/1997)	See b)(2)b.
c.	ORC 3704.03(F)(3)(c) and (F)(4) (Air Toxics)	See d)(4)

(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The 0.48 lb OC/batch and 0.1 ton/yr emission limitation was established to reflect the potential to emit of this emission unit taking into consideration the BAT requirements identified above. The monitoring and/or recordkeeping requirements established in the following terms and conditions are sufficient to ensure compliance with this limitation.

c) Operational Restrictions

- (1) The permittee shall not blend and pump to the fill line more than 15 batches of coating per month from this emission unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion



temperature within the thermal oxidizer was 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; and

- b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (3) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance



tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (4) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. 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 increase to above 1.0 ton per year may require the permittee to apply for and obtain a new FEPTIO.

[ORC 3704.03(F)(3)(c) and F(4)]

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;
 - iii. each month during which more than 15 batches of solvent-based coatings were blended; and
 - iv. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.



- b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:
0.48 lb/hr of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005).

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):



40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

b. Emission Limitation:

0.1 ton/yr of VOC

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.



Draft Permit-to-Install and Operate

Sherwin-Williams Company

Permit Number: P0113887

Facility ID: 0125041181

Effective Date: To be entered upon final issuance

g) Miscellaneous Requirements

(1) None.



15. Emissions Unit Group -750 gallon HSD: P019,P020,P024,P025,P172,

EU ID	Operations, Property and/or Equipment Description
P019	750 gallon high speed disperser HSD (404A)
P020	750 gallon high speed disperser HSD (404B)
P024	750 gallon high speed disperser HSD (412A)
P025	750 gallon high speed disperser HSD (412B)
P172	750 gallon high speed disperser HSD (418)

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. None.

(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)(2)a., c)(1), and e)(3)

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) (Synthetic minor to avoid Title V, MACT and non-attainment NSR)	<p>Volatile organic compound (VOC) emissions shall not exceed 3.68 pounds per batch and 4.0 tons per year.</p> <p>See b)(2)a., and c)(1)</p> <p>See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.</p>
b.	OAC rule 3745-31-05(A)(3) (PTI 01-6677 for P019 and P020, 06/25/1997 PTI 01- 2366 for P024, and P025, 02/21/1991 PTI 01-08601 for P172, 01/10/2008)	<p>Particulate emissions (PE) shall not exceed 0.22 pound per hour and 0.97 ton per year.</p> <p>Visible emissions of PE shall not exceed 5% opacity as a 3-minute average from any stack or outside vent associated with</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		this emissions unit, during the addition of solids. See b)(2)c.
c.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The process tank volatile organic compound (VOC) emissions shall be vented to a vapor collection system that achieves and maintains a minimum 90% capture efficiency at all times. The vapor collection system shall vent all VOC emissions to a thermal oxidizer that achieves a minimum 95% destruction efficiency, by weight.
- b. The process tank particulate emissions (PE) shall be vented to a PE collection system that achieves and maintains a minimum 70% capture efficiency at all times. The PE collection system shall vent all PE emissions to a dust collector that achieves a minimum 95% control efficiency.
- c. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the capture and control requirements established under OAC rule 3745-31-05(D) for the control of VOC emissions and based upon the “worst case” coating. The “worst case coating” at a 4 hour batch period and an 800 gallon batch size has a maximum “worst case” emission rate of 8.84 lbs VOC/1,800 gallon batch. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations.
- d. The material addition hatch shall be closed, except during addition of material through the hatch or product quality check.

c) Operational Restrictions

- (1) The permittee shall not grind more than 168 batches of coatings per month in this emission unit.



d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following
 - a. the identification number of each formulation and batch production date; and
 - b. the summation of the number of paint batches ground per month.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer 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.
- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) 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) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was 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; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, 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.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by Ohio EPA, Central District Office. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (5) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 3.0 inches of water.
- (6) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

e) Reporting Requirements



(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via Ohio EPA e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission 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:

i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 thermal oxidizer;

iii. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

iv. each month during which more than 168 batches of solvent-based coatings were ground; and

v. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.

b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

c. 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, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

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. Emission Limitation:
3.68 lbs/hr of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005).

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.



- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from Ohio EPA Central District Office.

- b. Emission Limitation:
4.0 tons/yr of VOC

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.

- c. Emission Limitation:
0.22 lb/hr and 0.97 ton/yr of PE

Applicable Compliance Method:

If required, the following test method(s) shall be employed to demonstrate compliance with the allowable emission rate(s): 40 CFR Part 6, Appendix A, Methods 1 – 5. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The baghouse controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the baghouse stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.



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Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.

Provided compliance with the hourly limitation is shown, compliance with the annual limitation shall also be demonstrated.

d. Emission Limitation:

Visible emissions of PE shall not exceed 5% opacity as a 3-minute average from any stack or outside vent associated with this emissions unit, during the addition of solids.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance U.S. EPA Method 9.

g) Miscellaneous Requirements

(1) None.



16. Emissions Unit Group -Small batch disperser stations: P085,P088,P090,P091,P157,

EU ID	Operations, Property and/or Equipment Description
P085	Hockmeyer disperser station D451
P088	Hockmeyer disperser station D452
P090	Hockmeyer disperser station D453
P091	Hockmeyer disperser station D454
P157	Hockmeyer disperser station D455

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

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

a. b)(1)e., d)(4) – d)(7), and e)(4)

(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., c)(1), and e)(3)

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) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	<p>Volatile organic compound (VOC) emission shall not exceed 3.75 pounds per batch and 4.1 tons per year.</p> <p>See c)(1).</p> <p>See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.</p>
b.	OAC rule 3745-31-05(A)(3) (PTI 01-3613, 12/30/1992 for P085, P088, P090, and P091 PTI 01-08498, 02/16/2006 for P157)	<p>Particulate emissions (PE) shall not exceed 0.64 pound per hour and 0.125 ton per year.</p> <p>Visible emissions shall not exceed 5% opacity as a 3-minute average from roof vents and stacks during solid addition to</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		this emission unit. See b)(2)a. – b)(2)c.
c.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	ORC rule 3704.03(F)(4)(d)	See d)(4) – d)(7)

(2) Additional Terms and Conditions

- a. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the maximum production rate established under OAC rule 3745-31-05(D) for the control of VOC emissions and based upon the “worst case” coating. The “worst case coating” for a 4 hour batch period is a maximum 3.75 lb VOC per batch. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations
- b. The process tank particulate emissions (PE) shall be vented to a PE collection system that achieves and maintains a minimum 70% capture efficiency at all times. The PE collection system shall vent all PE emissions to a dust collector that achieves a minimum 95% control efficiency while powder is being added.
- c. During pigment and other solids addition, the capture efficiency of the hooding shall be sufficient to minimize visible PE at the point of capture.

c) Operational Restrictions

- (1) The maximum production rate for each small batch dispersing station shall not exceed six (6) batches per day.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following
 - a. the identification number of each batch production date; and
 - b. the summation of the number batches produced per month.



- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.1 to 3.0 inches of water.
- (3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.
- (4) The federally enforceable permit-to-install and operate (FEPTIO) application for these emissions units, P085, P088, P090, P091, and P157, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
 - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting



calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants or "worst case" toxic contaminant(s):

Toxic Contaminant: toluene

TLV (mg/m³): 188.41

Maximum Hourly Emission Rate (lbs/hr): 7.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 3,852

MAGLC (ug/m³): 4,486

The permittee, having demonstrated that emissions of toluene, from emissions units P085, P088, P090, P091, and P157, is estimated to be equal or greater than eighty per cent, but less than 100 per cent of the maximum acceptable ground level concentration (MAGLC), shall not operate the emissions unit(s) at a rate that would exceed the daily emissions rate, process weight rate, and/or restricted hours of operations, as allowed in this permit; and 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).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

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

If the permittee determines that the "Toxic Air Contaminant Statute", ORC 3704.03(F), will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to



a parameter or process operation, where compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, 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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

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

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (7) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.



- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission 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:
 - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse 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 baghouse while powder was being added;
 - iii. each day during which more than 6 batches were produced; and
 - iv. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
 - b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - c. 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, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

- (4) The permittee shall include in the annual Permit Evaluation Report (PER) any changes made to a parameter or value used in the dispersion model, that was used to maintain compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70



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. Emission Limitation:
3.75 lbs/hr of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005).

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions



test shall be representative of the number of emissions units typically in operation.

- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

- b. Emission Limitation:
4.1 tons/yr of VOC

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.

- c. Emission Limitation:
0.64 lb/hr and 0.125 ton/yr of PE

Applicable Compliance Method:

If required, the following test method(s) shall be employed to demonstrate compliance with the allowable emission rate(s): 40 CFR Part 6, Appendix A, Methods 1 – 5. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The baghouse controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the baghouse stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.



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Sherwin-Williams Company

Permit Number: P0113887

Facility ID: 0125041181

Effective Date: To be entered upon final issuance

Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.

Provided compliance with the hourly limitation is shown, compliance with the annual limitation shall also be demonstrated.

d. Emission Limitation:

Visible emissions of PE shall not exceed 5% opacity as a 3-minute average from any stack or roof vent associated with this emissions unit, during the addition of solids.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance U.S. EPA Method 9.

g) Miscellaneous Requirements

(1) None.



**17. Emissions Unit Group -Small batch mixer stations:
P092,P093,P095,P096,P097,P098,P099,P100,P101,P102,**

EU ID	Operations, Property and/or Equipment Description
P092	Small batch mixer M701
P093	Small batch mixer M702
P095	Small batch mixer M731
P096	Small batch mixer M732
P097	Small batch mixer M733
P098	Small batch mixer M734
P099	Small batch mixer M735
P100	Small batch mixer M736
P101	Small batch mixer M737
P102	Small batch mixer M738

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

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

a. b)(1)e., d)(4) through d)(7), and e)(4)

(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., c)(1), and e)(3)

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) (Synthetic minor to avoid non-attainment NSR, Title V, and MACT)	See c)(1) See 1.b)(1) – (4) of Section B – Facility Wide Terms and Conditions.
b.	OAC rule 3745-31-05(A)(3) (PTI 01-3613, 12/30/1992)	<u>P092, P093, P095-P102</u> Volatile organic compound (VOC) emission shall not exceed 3.75 pounds per batch and 4.1 tons per year.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a.
c.	ORC rule 3704.03(F)(4)(d) (Air Toxics)	See d)(4) through d)(7).

(2) Additional Terms and Conditions

a. The hourly and annual VOC emissions limitations were established to reflect the potential to emit for this emissions unit taking into consideration the maximum production rate established under OAC rule 3745-31-05(D) for the control of VOC emissions and based upon the “worst case” coating. The “worst case coating” for a 4 hour batch period is a maximum 3.75 lb VOC per batch. The monitoring, recordkeeping, reporting, and testing requirements for the VOC capture and control system as established in the following terms and conditions are sufficient to demonstrate compliance with these limitations

c) Operational Restrictions

(1) The maximum production rate for each small batch dispersing station shall not exceed six (6) batches per day.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following

- a. the identification number of each batch production date; and
- b. the summation of the number batches produced per day.

(2) The federally enforceable permit-to-install and operate (FEPTIO) application for these emissions units, P092, P093, P094, P095, P096, P097, P099, P100, P101, and P102, was evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The “Toxic Air Contaminant Statute”, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled “Review of New Sources of Air Toxic Emissions, Option A”, as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been



documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants or "worst case" toxic contaminant(s):

Toxic Contaminant: toluene

TLV (mg/m³): 188.41

Maximum Hourly Emission Rate (lbs/hr): 7.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 3,852

MAGLC (ug/m³): 4,486

The permittee, having demonstrated that emissions of toluene, from emissions units P092, P093, P094, P095, P096, P097, P099, P100, P101, and P102, is estimated to be equal or greater than eighty per cent, but less than 100 per cent of the maximum acceptable ground level concentration (MAGLC), shall not operate the emissions unit(s) at a rate that would exceed the daily emissions rate, process weight rate, and/or restricted hours of operations, as allowed in this permit; and 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).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70



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

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

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

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



- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA's e-Business Center: Air Services 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.

[OAC rule 3745-15-03(B)(2)] and [OAC rule 3745-15-03(D)]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission 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:
 - i. each day during which more than 6 batches were produced; and
 - ii. each day during which a higher emitting coating is manufactured compared to the "worst case" coating.
 - b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - c. 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, electronically through Ohio EPA's Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

- (4) The permittee shall include in the annual Permit Evaluation Report (PER) any changes made to a parameter or value used in the dispersion model, that was used to maintain compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

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. Emission Limitation:
3.75 lbs/hr of VOC

Applicable Compliance Method:

Compliance shall be determined by the Air Pollutant Emissions Module (APEM) (Sherwin-Williams, April 2013) using the method described in the Emission Inventory Improvement Program (EIIP), Chapter 8 "Preferred and Alternative Methods for Estimating Air Emissions from Paint and Ink Manufacturing Facilities" (U.S. EPA Technical Report Series Volume 2: Point Sources, February 2005).

The RTO controlling this emissions unit is shared by multiple emission units. Therefore, for the purposes of emissions testing, the emissions from the RTO stack serving this emissions unit shall not exceed the sum of the emission limitations for the emission units that are in operation during the emissions test.

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

- i. The emission testing shall be conducted within 6 months prior to the permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOCs.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 6, Appendix A, Methods 1 – 4, 25A.



Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by 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

- iv. Unless the emissions test is conducted with all emission units in operation, the number of emission units in operation during any emissions test shall be representative of the number of emissions units typically in operation.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to Ohio EPA, Central District Office. 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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).
- vi. Personnel from Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

- b. Emission Limitation:
4.1 tons/yr of VOC

Applicable Compliance Method:

Provided the permittee does not exceed the monthly batch emission restriction and the batch emission limitation in f)(1)a., compliance with the annual limitation shall also be demonstrated.



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g) Miscellaneous Requirements

(1) None.