

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

4/23/2014

Certified Mail

Gary Avalon
Chemsultants Plant 2
9079 Tyler Blvd.
Mentor, OH 44060

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0243081428
Permit Number: P0116258
Permit Type: Renewal
County: Lake

Dear Permit Holder:

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

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

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-NEDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Chemsultants Plant 2**

Facility ID:	0243081428
Permit Number:	P0116258
Permit Type:	Renewal
Issued:	4/23/2014
Effective:	4/23/2014
Expiration:	4/23/2019



Division of Air Pollution Control
Permit-to-Install and Operate
for
Chemsultants Plant 2

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. What does this permit-to-install and operate ("PTIO") allow me to do?.....	4
2. Who is responsible for complying with this permit?	4
3. What records must I keep under this permit?	4
4. What are my permit fees and when do I pay them?.....	4
5. When does my PTIO expire, and when do I need to submit my renewal application?	4
6. What happens to this permit if my project is delayed or I do not install or modify my source?	5
7. What reports must I submit under this permit?	5
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?	5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ...	5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?	6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?	6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently?	6
13. Can I transfer this permit to a new owner or operator?.....	7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?	7
15. What happens if a portion of this permit is determined to be invalid?	7
B. Facility-Wide Terms and Conditions.....	8
C. Emissions Unit Terms and Conditions	10
1. Emissions Unit Group -Paper, Vinyl and Fabric Coaters: K004,K005,.....	11



Final Permit-to-Install and Operate
Chemsultants Plant 2
Permit Number: P0116258
Facility ID: 0243081428
Effective Date: 4/23/2014

Authorization

Facility ID: 0243081428
Application Number(s): A0049290
Permit Number: P0116258
Permit Description: Renewal FEPTIO for emissions units K004 and K005 (Pilot coaters for paper and other web coating).
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 4/23/2014
Effective Date: 4/23/2014
Expiration Date: 4/23/2019
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Chemsultants Plant 2
9079 Tyler Blvd.
Mentor, OH 44060

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

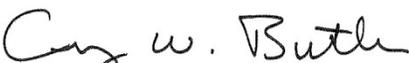
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330)425-9171

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: P0116258

Permit Description: Renewal FEPTIO for emissions units K004 and K005 (Pilot coaters for paper and other web coating).

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

Group Name: Paper, Vinyl and Fabric Coaters

Emissions Unit ID:	K004
Company Equipment ID:	Coater PC-4 K004
Superseded Permit Number:	P0105407
General Permit Category andType:	Not Applicable
Emissions Unit ID:	K005
Company Equipment ID:	Coater TPC-2
Superseded Permit Number:	P0105407
General Permit Category andType:	Not Applicable



Final Permit-to-Install and Operate
Chemsultants Plant 2
Permit Number: P0116258
Facility ID: 0243081428
Effective Date: 4/23/2014

A. Standard Terms and Conditions



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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

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

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

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



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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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



Final Permit-to-Install and Operate
Chemsultants Plant 2
Permit Number: P0116258
Facility ID: 0243081428
Effective Date: 4/23/2014

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

Chemsultants Plant 2

Permit Number: P0116258

Facility ID: 0243081428

Effective Date: 4/23/2014

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) None.



Final Permit-to-Install and Operate
Chemsultants Plant 2
Permit Number: P0116258
Facility ID: 0243081428
Effective Date: 4/23/2014

C. Emissions Unit Terms and Conditions



1. Emissions Unit Group -Paper, Vinyl and Fabric Coaters: K004,K005,

EU ID	Operations, Property and/or Equipment Description
K004	Pilot Coater with 1 mmBTU/hr drying oven Application Number 02-22020
K005	TPC-2 pilot coater for paper and other web coating at Plant 2

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

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

a. d)(12), d)(13), d)(14), d)(15) and e)(6)

(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)(1)

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)	Coating usage for each of these emissions units shall not exceed three (3) gallons per day, unless: The thermal oxidizer (TOx) is operated with a minimum overall reduction efficiency of 90% for volatile organic compound (VOC) emissions. See b)(2)(e). On the days when the TOx is not employed:



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Coating usage for each of these emissions units shall not exceed three (3) gallons per day.</p> <p>VOC emissions from emissions units K004 and K005, combined, including cleanup, shall not exceed 52.0 pounds per day and 9.5 tons per year.</p> <p>Maximum annual total hazardous air pollutant (HAP) emissions from emissions units K004 and K005, combined, shall not exceed 24.9 tons per year.</p> <p>On the days when the TOx is employed:</p> <p>VOC emissions from emissions units K004 and K005, combined, including cleanup, shall not exceed 160 pounds per day and 29 tons per year.</p> <p>Maximum annual total combined HAP emissions from emissions units K004 and K005, combined, shall not exceed 24.9 tons per year.</p> <p>See b)(2)b.</p>
b.	OAC rule 3745-31-05(D)	<p>Based on facility-wide rolling, 12-month summations of emissions for these emissions units (K004 and K005) the following limits apply:</p> <p>Maximum annual individual HAP emissions shall not exceed 9.9 tons per year.</p> <p>Maximum annual total combined HAP emissions shall not exceed 24.9 tons per year.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Maximum annual VOC emissions shall not exceed 99.0 tons per year.</p> <p>See d)(2).</p>
c.	OAC rule 3745-21-09(G)	The emission limitation specified in this rule is less stringent than the emission limitation pursuant to OAC rule 3745-31-05(A).
d.	OAC rule 3745-21-09(F)(2)(b)	See b)(2)c.
e.	40 CFR Part 60, Subpart RR	<p>For all coatings employed in this emissions unit that are not vented to the TOx, the permittee shall not discharge VOC emissions into the atmosphere of more than 0.2 kg of VOC per kg of coating solids applied, calculated as a mass-weighted average for each month.</p> <p>If all coatings are less than 0.2 kg of VOC per kg of coating solids, no mass weighted average for each month needs to be calculated.</p> <p>For all coatings vented to the TOx, the overall VOC reduction efficiency specified by this rule is equivalent to the overall reduction efficiency pursuant to OAC rule 3745-31-05(A) and in OAC rule 3745-21-09(F)(2)(a).</p>

(2) Additional Terms and Conditions

- a. This is a federally enforceable permit to install and operate (FEPTIO) (P0116258) to restrict an increased potential to emit of VOCs and HAPs, resulting from increased coating usage on certain days in these two emissions units.

Through the installation and use of a TOx on some days of operation and limited coating usage of three (3) gallons on all other days of operation, the facility-wide potential to emit will be restricted such that the requirements of Title V and nonattainment new source review (Emission Offset) are not applicable.



Through synthetic minor emission limitations of individual HAPs, total combined HAPs and VOC listed in b)(1) of the terms and conditions for these emissions units, and the fact that this facility coats paper and fabric exclusively for the purpose of research and development, and the requirement of the use of a TOX with at least an overall VOC reduction efficiency of 90%, this facility is no longer or not at all subject to the following MACT standards:

40 CFR Part 63, Subpart JJJJ (Paper and Other Web Coating);

40 CFR Part 63, Subpart OOOO (Fabric Coating); and

40 CFR Part 63, Subpart DDDDD [Boilers and Process Heaters (vacated)].

To ensure these emission limitations are met, the permittee shall keep records as specified in section d) below.

- b. No cleanup materials that contain hazardous air pollutants (HAPS) shall be used in these emissions units.
- c. For emissions from the use of organic solvents for clean up, which are not vented to the TOX, the permittee shall:
 - i. store all VOC-containing cleaning materials and used shop towels in closed containers;
 - ii. ensure that mixing and storage containers used for VOC-containing cleaning materials are kept closed at all times except when depositing or removing these materials;
 - iii. minimize spills of VOC-containing cleaning materials;
 - iv. convey VOC-containing cleaning materials from one location to another in closed containers or pipes; and
 - v. minimize VOC emissions from cleaning of storage, mixing, and conveying equipment.
- d. Except on the days when daily coating usage is less than 3 gallons, all of the VOC emissions from the emissions units listed above, shall be vented to a TOX that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.
- e. A temporary total enclosure shall be constructed for testing purposes to determine the uncaptured/uncontrolled VOC emissions from this emissions unit. The temporary total enclosure shall be constructed to enclose the application stations, coating reservoirs, and all areas from the application station to the oven and TOX, such that all VOC emissions are contained and can be measured at any exhaust point to the enclosure.



c) Operational Restrictions

- (1) Based on rolling, 12 month summations, the maximum annual facility-wide individual and total combined HAP emissions, for emissions units K004 and K005 after control shall not exceed 9.9 tons per year and 24.9 tons per year, respectively.

Also, based on rolling, 12 month summations, the maximum annual facility-wide VOC emissions, for emissions units K004 and K005 after control shall not exceed 99.0 tons per year.

- (2) The weight of VOCs applied/used at this facility shall not exceed 99.0 tons per rolling, 12-months, calculated using the following formula:

$$99.0 \text{ tons VOC} \geq \sum_{i=1}^n [(P_i)(VOC_i)] / 2000 \text{ lbs/ton}$$

where:

P_i = usage of the coating and cleanup material i , in gallons during the last 12 months; and

VOC_i = VOC content of all coating i , cleanup material i , in pounds per gallon.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable average combustion temperature within the TOx, for any 3-hour block of time when the emissions unit(s) controlled by the TOx 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. Until compliance testing has been conducted, the TOx shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the TOx 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 acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance. Following compliance



testing, the permittee shall collect and record the following information each day the TOx is required to demonstrate compliance with the VOC limitation contained in this permit:

- a. all 3-hour blocks of time, when the emissions unit(s) controlled by the TOx was/were in operation, during which the average combustion temperature within the TOx 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 or record of the operating time for the capture (collection) system, TOx, monitoring equipment, and the associated emissions unit(s).

These records shall be maintained at the facility for a period of three years.

- (3) Whenever the monitored average combustion temperature within the TOx deviates from the range 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.
- (4) 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 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:
 - a. a description of the corrective action;
 - b. the date the corrective action was completed;
 - c. the date and time the deviation ended;
 - d. the total period of time (in minutes) during which there was a deviation;
 - e. the temperature readings immediately after the corrective action was implemented; and
 - f. the name(s) of the personnel who performed the work.



- (5) Investigation and records required by d)(4) do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.
- (6) The temperature range is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted temperature range 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 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 or renewal.
- (7) The permittee shall collect and record the following information each month for coating lines PC-4 and TPC-2 (emissions units K004 and K005):
 - a. the name and identification number of each coating and cleanup material employed;
 - b. the VOC content of each coating and cleanup material employed, in pounds per gallon;
 - c. the individual HAP* content for each HAP of each coating and cleanup material, in pounds of individual HAP per gallon of coating/cleanup material, as applied;
 - d. the total combined HAP content of each coating and cleanup material, in pounds of combined HAPs per gallon of coating/cleanup material, as applied [sum all the individual HAP contents per gallon of coating from (c)];
 - e. the number of gallons of each coating and cleanup material employed;
 - f. the total VOC emissions from all coatings and cleanup materials, in pounds and tons per month;
 - g. the total individual HAP emissions for each HAP from all coatings and cleanup materials employed, in pounds per month [for each HAP (c) times (e) for each coating and cleanup material];
 - h. the total combined HAP emissions from all coatings and cleanup materials employed, in pounds per month [(d) times (e) for each coating and cleanup material];
 - i. the calculated controlled and uncontrolled (for K004 and K005) updated rolling, 12-month summation of the emissions for each individual HAP, in pounds and tons (this shall include the information for the current month and the preceding eleven calendar months);
 - j. the calculated controlled and uncontrolled (for K004 and K005) updated rolling, 12-month summation of the emissions for total combined HAPs, in pounds and tons (this shall include the information for the current month and the preceding eleven calendar months); and



- k. the calculated controlled and uncontrolled (for K004 and K005) updated rolling, 12-month summation of the emissions of VOCs, in pounds and tons (this shall include the information for the current month and the preceding eleven calendar months).

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act, on the Ohio EPA website or can be obtained by contacting your Northeast District Office contact. This information does not have to be kept on a line-by-line basis.

- (8) The permittee shall collect and record the following information each day for all coatings employed in these emissions units [PC-4 and TPC-2 (emissions units K004 and K005, respectively)] that are vented to the TOx and the cleanup materials associated with these coatings:

- a. the name and identification number of each coating and cleanup material employed;
- b. the VOC content of each coating and cleanup material employed, in pounds per gallon;
- c. the number of gallons of each coating and cleanup material employed, excluding water and exempt solvents;
- d. the total uncontrolled VOC emissions from all coatings and cleanup materials, in pounds per day;
- e. the calculated, controlled VOC emission rate for all coatings, in pounds per day (the controlled VOC emission rate for the coatings shall be calculated using the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated compliance (or the manufacturer's recommendation, if testing has not been completed); and
- f. the total VOC emission rate, i.e., controlled VOC emissions from all coatings plus uncontrolled emissions from all cleanup material, in pounds per day.

- (9) The permittee shall collect and record the following information each day when the TOx is not in use [coating usage shall be less than three (3) gallons per day per coating line] for these emissions unit PC-4 and TPC-2 (emissions units K004 and K005, respectively):

- a. the name and identification number of each coating and cleanup material employed;
- b. the VOC content of each coating and cleanup material employed, in pounds per gallon;
- c. the number of gallons of each coating and cleanup material employed; and
- d. the total VOC emissions from all coatings and cleanup materials, in pounds per day.



- (10) The permittee shall collect and record monthly the following information for all coatings and all cleanup employed in these emissions units:
- a. the monthly total of the sums of the daily values from d)(8)f and d)(9)d, in tons; and
 - b. the cumulative, year-to-date, VOC emissions for the calendar year, in tons.
- (11) The permittee shall collect and record the following information each month for these emissions units:
- a. The name and identification number of each coating employed;
 - b. The weighted average of the mass of solvent (VOC) used per mass of coating solids applied, in kg VOC/kg coating solids applied, calculated in accordance with the equation in section 60.443(a)(2) of 40 CFR 60, Subpart RR, and as follows:

- i. The weight fraction of volatile organic compounds and the weight fraction coating solids of each coating applied shall be determined by 40 CFR Part 60, Appendix A, Reference Method 24, or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data, strictly based on Method 25, if approved by U.S. EPA. In accordance with the USEPA's written approval of February 11, 1998, GCMS, Capillary Column Technique Method 8260A may be used to determine the VOC content of the water-based coatings, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A.

- ii. The weighted average (G) shall be calculated using the following equation:

$$G = (TWM_O) / (TWM_S)$$

where:

$$TWM_O = \sum_{i=1}^n (W_{oi} \times M_{ci})_i$$

(TWM_O = the sum, from i = 1 to i = n, of (W_{oi} x M_{ci})); and

$$TWM_S = \sum_{i=1}^n (W_{si} \times M_{ci})_i$$

(TWM_S = the sum, from i = 1 to i = n, of (W_{si} x M_{ci}))

where:



i = subscript denoting an individual coating;

n = the number of different coatings employed;

M_{ci} = the total mass (kg) of each coating (i) applied during the calendar month as determined from facility records;

W_{oi} = the weight fraction of volatile organic compounds of each coating (i) applied during the calendar month as determined by Reference Method 24 or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data; and

W_{si} = the weight fraction of coating solids of each coating (i) applied during the calendar month as determined by Reference Method 24 or other test method approved by U.S. EPA, or by the coating manufacturer's formulation data.

- (12) The federally enforceable permit-to-install and operate (FEPTIO) application for this/these emissions units, K004 and K005, was evaluated based on the actual materials and the design parameters of the emissions units' 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 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 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- 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 (worst case)

TLV (mg/m³): 75 mg/m³

Maximum Hourly Emission Rate (lbs/hr): 0.36 lbs per hour

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 2.086 ug/m³

MAGLC (ug/m³): 1790 ug/m³

The permittee, has demonstrated that emissions of toluene, from emissions units K004 and K005, 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).

- (13) 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, 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 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.

(14) 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); and
- 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 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.

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

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports to the Director (the Northeast District of the Ohio EPA) that include the following information for these emissions units:

- a. for all coatings that are vented to the TOx, an identification of each day during which the daily VOC emissions exceeded 160 lbs from K004 and K005;



- b. for all coatings that are not vented to the TOx, an identification of each day during which the daily VOC emissions exceeded 52.0 lbs from K004 and K005;
 - c. an identification of any record indicating that the facility-wide rolling, 12-month summation of VOC emissions exceeded 99.0 tons year and/or an identification of any record indicating that the facility-wide VOC emissions from the first 12 calendar months of operation following the issuance of this permit exceeded the monthly limits from the table in c)(3), and the actual rolling, 12-month summation and/or the actual first calendar year of VOC emissions, facility-wide;
 - d. an identification of any record indicating that the facility-wide rolling, 12-month summation of any individual HAP exceeded 9.9 tons year and/or an identification of any record indicating that the facility-wide individual HAP emissions from the first 12 calendar months of operation following the issuance of this permit exceeded the monthly limits from the table in c)(3), and the actual rolling, 12-month summation and/or the actual first calendar year of individual HAP emissions, facility-wide;
 - e. an identification of any record indicating that the facility-wide rolling, 12-month summation of total combined HAP exceeded 24.9 tons year and/or an identification of any record indicating that the facility-wide total combined HAP emissions from the first 12 calendar months of operation following the issuance of this permit exceeded the monthly limits from the table in c)(3), and the actual rolling, 12-month summation and/or the actual first calendar year of total combined HAP emissions, facility-wide; and
 - f. an identification of each month during which the mass-weighted average VOC emissions from coatings in this emissions unit exceeded 0.20 kg VOC/kg of coating solids applied, and the actual mass-weighted average VOC emissions from coatings in kg VOC per kg of coating solids applied, for each such month.
- (2) The permittee shall submit quarterly summaries of the following records:
- a. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the TOx was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;
 - b. any records of downtime (date and length of time) for the capture (collection) system, the TOx, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and
 - c. a log of the operating time for the capture system, TOx, monitoring equipment, and the emissions unit(s).

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



- (3) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
 - (4) The permittee shall identify in the annual PER the following information concerning the operations of the TOx during the 12-month reporting period for this/these emissions unit(s):
 - a. each period of time (start time and date, and end time and date) when the average combustion temperature within the TOx was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;
 - b. 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 TOx;
 - c. each incident of deviation described in "a" or "b" where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the TOx into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s).
 - (5) The permittee shall submit annual reports that specify the total VOC emissions from these emissions units. These reports shall be submitted by January 31st of each year.
 - (6) 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 quarterly deviation (excursion) reports. 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.
- f) **Testing Requirements**
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

For the control system, the VOC overall reduction efficiency shall be at least 90%.



Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in f)(3).

Performance testing shall be conducted in accordance with OAC rule 3745-21-10(C).

b. Emission Limitation:

On the days when the TOx is used, VOC emissions from emissions units K004 and K005, combined, including cleanup, shall not exceed 160 lbs per day and 29 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(8)f and d)(10)a.

c. Emission Limitations:

On the days when the TOx is not used, VOC emissions from emissions units K004 and K005, combined, including cleanup, shall not exceed 52.0 pounds per day and 9.5 tons per year.

Maximum annual total combined HAP emissions from emissions units K004 and K005, combined, shall not exceed 24.9 tons per year.

The maximum, annual facility-wide VOC emissions shall not exceed 99.0 tons per year based on a rolling, 12-month summation.

Applicable Compliance Methods:

Compliance with the short-term VOC emission limitation of 52.0 lbs/day shall be demonstrated based upon the record keeping requirements specified in d)(9)d and d)(10)a of these terms and conditions.

The VOC emission limitation of 9.5 tpy was developed by multiplying the short-term allowable VOC emission limitation (52.0 lbs/day) by the maximum annual days of operation (365 days), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

Compliance with the VOC emission limitation of 99.0 tons per year based on a rolling, 12-month summation and 24.9 tons per year of total HAPs, based on a rolling, 12-month summation, shall be demonstrated based upon the record keeping requirements specified in d)(7) of these terms and conditions.



d. Emission Limitation:

The maximum, annual facility-wide individual HAP emissions shall not exceed 9.9 tons per year based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(7) of these terms and conditions.

e. Emission Limitation:

The maximum, annual facility-wide total combined HAP emissions shall not exceed 24.9 tons per year based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(7) of these terms and conditions.

f. Emission Limitation:

The permittee shall not discharge VOC emissions into the atmosphere of more than 0.20 kg VOC/kg coating solids applied, calculated as a mass-weighted average for each calendar month for all coatings employed in these emissions units, without control and where there is a daily usage above 3 gallons.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(11) of these terms and conditions.

(2) USEPA Methods 24 and 24A shall be used to determine the VOC contents for all coatings. If, pursuant to Method 24 as outlined in 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

(3) Emission testing requirements

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

- a. The emission testing shall be conducted within 6 months of start-up of the use of the TOx, and within 6 months prior to permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the overall VOC reduction efficiency of 90%.



- c. The following test method(s) shall be employed to demonstrate compliance with the overall control efficiency for VOC:
 - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm; or
 - ii. Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
 - iii. Method 204 of 40 CFR Part 51, Appendix M.

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

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

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

- e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).
- g. Personnel from the Ohio EPA Northeast 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.



Final Permit-to-Install and Operate

Chemsultants Plant 2

Permit Number: P0116258

Facility ID: 0243081428

Effective Date: 4/23/2014

h. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northeast 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 the Ohio EPA Northeast District Office.

g) Miscellaneous Requirements

(1) None.