



Environmental  
Protection Agency

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

10/3/2012

Willard Vaughan  
Rohm and Haas Chemicals LLC  
2000 West Street  
Reading, OH 45215

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

Facility ID: 1431380075  
Permit Number: P0110519  
Permit Type: Renewal  
County: Hamilton

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
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:

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

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

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

If you have any questions, please contact Southwest Ohio Air Quality Agency at (513)946-7777 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPCWeb page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc), by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: SWOAQA





**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Rohm and Haas Chemicals LLC**

Facility ID:	1431380075
Permit Number:	P0110519
Permit Type:	Renewal
Issued:	10/3/2012
Effective:	10/3/2012
Expiration:	10/3/2017





Division of Air Pollution Control
Permit-to-Install and Operate
for
Rohm and Haas Chemicals LLC

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## Authorization

Facility ID: 1431380075  
Application Number(s): A0045101, A0045237  
Permit Number: P0110519  
Permit Description: Renewal permit for emissions units P017 and P019.  
Permit Type: Renewal  
Permit Fee: \$0.00  
Issue Date: 10/3/2012  
Effective Date: 10/3/2012  
Expiration Date: 10/3/2017  
Permit Evaluation Report (PER) Annual Date: July 1 - June 30, Due Aug 15

This document constitutes issuance to:

Rohm and Haas Chemicals LLC  
2000 West Street  
Reading, OH 45215

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

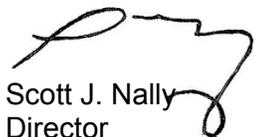
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Southwest Ohio Air Quality Agency  
250 William Howard Taft Rd.  
Cincinnati, OH 45219  
(513)946-7777

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Scott J. Nally  
Director

## Authorization (continued)

Permit Number: P0110519  
Permit Description: Renewal permit for emissions units P017 and P019.

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

<b>Emissions Unit ID:</b>	<b>P017</b>
Company Equipment ID:	B-12 organotins
Superseded Permit Number:	14-05744
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P019</b>
Company Equipment ID:	B-11 organotins
Superseded Permit Number:	14-05744
General Permit Category and Type:	Not Applicable

## **A. Standard Terms and Conditions**

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

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

**2. Who is responsible for complying with this permit?**

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

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

**3. What records must I keep under this permit?**

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

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

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

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

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

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

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

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a

renewal notice to you approximately six months prior to the expiration date of this permit. However, it is very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

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

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

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

**7. What reports must I submit under this permit?**

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

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

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

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

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

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

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

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Southwest Ohio Air Quality Agency 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<sup>1</sup> a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

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

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

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

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

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

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

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

## **B. Facility-Wide Terms and Conditions**

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) 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) 2., 3., 4., and 5.
2. The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units B008 (Atlasboiler), B009 (Ames boiler), B010 (Cleaves Brook boiler), P004 (chemical pilotplant), P012 (B3 Lubricating Stabilizer), P017 (organotin production), P019(organotinproduction), P022 (asphalt additive production), P024 (Thin Film Evaporator), P025 (Stannic Chloride Plant B11), P026 (Stannic Chloride Plant B12), any de minimis emissions units as defined in OAC rule 3745-15-05, any registration status and/or permit exempt emissions units, or future constructed emissions units, shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
3. The permittee shall collect and record the following information each month for the emissions units identified in 2.:
  - a) For the boilers, the total individual HAP emission factor of each fuel burned in pounds of individual HAP per gallon or cubic foot of fuel burned;
  - b) For the boilers, the number of gallons or cubic feet of each fuel burned;
  - c) For the boilers, the total individual HAP emissions from each fuel burned, in pounds or tons per month [the sum of a) times b) times the emissions factor (if applicable) for each fuel burned];
  - d) For the boilers, the total combined HAP emissions from all fuels burned, in pounds or tons per month [the sum of all individual HAP emissions from c)];
  - e) For non-boiler operations, the total individual HAP emissions for each HAP, in pounds or tons per month plus individual HAP emissions from any de minimis, registration status, and/or permit exempt emissions units at the facility;
  - f) For non-boiler operations, the total combined HAP emissions, in pounds or tons per month plus combined HAP emissions from any de minimis, registration status, and/or permit exempt emissions unit at the facility;
  - g) The total individual HAP emissions for each HAP from all sources, in pounds or tons per month [the sum of c) and e) for each HAP];

- h) The total combined HAP emissions from all sources, in pounds or tons per month [the sum of d) and f)];
- i) The updated rolling, 12-month summation of the individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
- j) The updated rolling, 12-month summation of the combined HAP emissions, in pounds or 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 or can be obtained by contacting Southwest Ohio Air Quality Agency. This information does not have to be kept on an individual emissions unit basis.

4. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations outlined in 2. If no exceedances occurred, the permittee shall state so in the report. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June, and July through September, respectively).

5. Emission Limitation:

HAP emissions shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for combined HAPs, based on a rolling, 12-month summation for the emissions units listed in 2.

Applicable Compliance Method:

Compliance with the HAP emission limitations in 2. shall be demonstrated by the record keeping requirements specified in 3.

## **C. Emissions Unit Terms and Conditions**



1. P017, B-12 organotins

Operations, Property and/or Equipment Description:

B-12 organotins production with two stage compression system to condense out volatile organic compounds

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) – c)(3), d)(1) – d(6), e)(1), f)(1)a. – f)(1)c., and f)(2).

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(F) (Synthetic minor to avoid Title V applicability)	Volatile organic compound (VOC) emissions shall not exceed 306 pounds per day of VOC based upon a weekly average from Monday through Sunday; and 9.9 tons per year (TPY) of VOC based on a rolling, 12-month summation for emissions units P017 and P019, combined.  See Section B.2., and b)(2)a., c)(1), c)(2), and c)(3).
b.	OAC rule 3745-21-09(KK)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(F).

- (2) Additional Terms and Conditions
- a. Emissions units P017 and P019, which produce methyltin intermediates, shall be equipped with a VOC recovery system which is designed and operated to achieve a control efficiency of at least 85%, by weight, as a weekly average for each 7-day period, extending from Monday through Sunday, inclusive, for the VOC emissions in the process vent gas, as determined under paragraph (C) of rule 3745-21-10 of the Ohio Administrative Code.
- c) Operational Restrictions
- (1) The maximum amount of VOC and HAP (methyl chloride) charged to emissions units P017 and P019, combined, shall not exceed 5000 tons per year (TPY) based on a rolling, 12-month summation. Under normal conditions, as provided in permit to install application 14-05744 received on July 5, 2005, a throughput of 440 TPY of methyl chloride would equate to a methyl chloride emission rate of 9.9 TPY. A greater throughput is permitted with a corresponding increase in condenser recovery efficiency and/or decrease in excess input of methyl chloride such that the combination of throughput and condenser efficiency result in facility-wide emissions that do not exceed 9.9 tons per year of VOC and HAP (methyl chloride) emissions.
- (2) The permittee shall operate and maintain monitoring equipment at the inlet and outlet of the VOC control equipment which is capable of measuring the gas mass flow with a minimum accuracy of one percent and the gas density with a minimum accuracy of ten percent, in accordance with the manufacturer's recommendations, instructions and operating manual(s).
- (3) The permittee shall operate and maintain equipment capable of detecting compressor shutdowns. The low-pressure set point shall be recorded weekly.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall, on a daily basis for emissions units P017 and P019, determine the amount of VOC vented to, and emitted from, the VOC vapor recovery system. The overall VOC control efficiency shall be calculated each week as one minus the ratio of the total emitted VOC for the 7-day period from Monday through Sunday to the total VOC vented to the VOC recovery system for the same 7-day period. The efficiency shall be expressed as a percentage. The efficiency shall be calculated not later than the Monday following each 7-day period. The amount of nitrogen and methane emitted shall be subtracted from the total emissions to determine the amount of VOC (methyl chloride) emitted.
- (2) The permittee shall record the number of shutdowns of the emissions unit(s) each week.
- (3) The permittee shall calculate and record the daily VOC emissions based upon a weekly average of the VOC emissions from P017 and P019, combined from Monday through Sunday.

- (4) The permittee shall maintain monthly records of the following information:
- a. The amount of methyl chloride charged to emissions units P017 and P019 combined, in pounds or tons;
  - b. The amount of methyl chloride vented from emissions units P017 and P019 combined to the control equipment, in pounds or tons;
  - c. The amount of methyl chloride emitted from the control equipment to the ambient air from emissions units P017 and P019 combined;
  - d. The updated rolling, 12-month summation in tons of methyl chloride charged to emissions units P017 and P019 combined; and
  - e. The updated rolling, 12-month summation of VOC\* emissions from emissions units P017 and P019 combined, in pounds or tons.

\*All VOC emissions are methyl chloride

- (5) The permittee shall maintain daily records of the amount of excess methyl chloride from processes P017 and P019 and record this amount and when the excess methyl chloride exceeds 15 percent, by weight.
- (6) To ensure compliance with the emissions limitations in section b) of these terms and conditions, the permittee shall utilize indirect monitoring systems for gas temperature, mass flow, and density while the direct monitoring systems are being maintained in accordance with the manufacturer's recommendations, instructions and operating manual(s).

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. HAP emission limitations outlined in Section B.2.;
    - ii. VOC emission limitations outlined in b)(1)a.;
    - iii. VOC control efficiency outlined in b)(2)a.; and
    - iv. methyl chloride usage restriction outlined in c)(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 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 (the appropriate District Office or local air agency).

- (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 eBusiness 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.
  - (3) The permittee shall notify the Southwest Ohio Air Quality Agency of any weekly average control efficiency that is less than 85 percent, by weight. A copy of the record showing the noncomplying weekly average control efficiency shall be submitted to the Southwest Ohio Air Quality Agency within 30 days of the occurrence.
  - (4) 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.
- 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:

Control efficiency of at least 85 percent, by weight, as a weekly average for the 7-day period from Monday through Sunday, for the VOC emissions in the process vent gas.

Applicable Compliance Method:

Compliance with the requirements of b)(2)a. shall be determined based upon the record keeping in d)(1).

If required, the permittee shall demonstrate compliance with the VOC recovery system control efficiency requirement through emission tests performed in accordance with the procedures specified in OAC rule 3745-21-10(C). Alternative testing protocols that may be necessary shall receive prior approval from Ohio EPA and U.S. EPA.
    - b. Emission Limitation:

VOC emissions shall not exceed 306 pounds per day based upon a weekly average from Monday through Sunday for emissions units P017 and P019, combined.

## Applicable Compliance Method:

Compliance with the daily VOC emissions limitation shall be determined by the record keeping in d)(2) and d)(3). The permittee shall continuously monitor and record the total exit gas mass flow, in pounds per hour, and the total exit gas mass density, in pounds per cubic foot, from the condenser(s) outlet. The permittee may use lookup tables to determine the pounds of methyl chloride per hour emitted (reference lookup table formulas and graphs submitted to Southwest Ohio Air Quality Agency on April 19, 2005). Startup and normal operation emissions shall be determined using the mass density and mass flow monitors. Shutdown and fugitive emissions shall be calculated from actual records and added to the continuous monitoring emissions for startup and normal operation.

The weekly average VOC emissions limitation was based on four startup and shutdown periods per week, three days of steady state conditions, stack test result from July 2005, and application information in PTI 14-05744 submitted on July 5, 2005.

$[(3 \text{ days/week at } 2.84 \text{ pounds methyl chloride emitted per hour of normal operation} * 24 \text{ hrs/day}) + (4 \text{ days/week with one startup \& shutdown per day at } 479.48 \text{ lbs/day}) + (7 \text{ days/wk} * 3.13 \text{ lbs/day fugitive emissions from material handling and storage})] / 7 \text{ days per week} = 306 \text{ pounds VOC per day as a weekly average.}$

## c. Emission Limitation:

VOC emissions shall not exceed 9.9 TPY based upon a rolling, 12-month summation for emissions units P017 and P019, combined.

## Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emissions limitation in b)(1)a. shall be determined by the record keeping in d)(4).

Actual VOC (methyl chloride) emissions for P017 and P019 shall be determined based on the following equation from the information in PTI application 14-05744 submitted on July 5, 2005:

$E = W + X + (EF * Y)$ , where:

W represents the methyl chloride emissions from the condensers including startup emissions, in tons.

X represents the emissions from shutdown operation.

EF is the emissions factor for fugitive emissions and is  $1.42 \times 10^{-4}$  tons of methyl chloride emitted /ton of methyl chloride employed (or 0.284 lbs. Methyl chloride/ ton methyl chloride employed); this emissions factor covers fugitive emissions from compressor dryer cycles, equipment connections, storage tanks, and maintenance and material handling of methyl chloride.



Y represents the tons of methyl chloride input to P017 and P019.

- (2) Compliance with the rolling, 12-month methyl chloride usage limitation in c)(1) shall be determined by the record keeping in d)(4).
- g) Miscellaneous Requirements
  - (1) None.

**2. P019, B-11 organotins**

**Operations, Property and/or Equipment Description:**

B-11 organotins production with two stage compression system to condense out volatile organic compounds (VOC)

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)(1)b., b)(2)a., c)(1), d)(1) – d)(6), e)(1), f)(1)a. – f)(1)c., and f)(2).

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)	<p>Volatile organic compound (VOC) emissions shall not exceed 306 pounds per day of VOC based upon a weekly average from Monday through Sunday for emissions units P017 and P019, combined.</p> <p>See c)(2) and c)(3).</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).</p>
b.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Title V applicability)	<p>VOC emissions shall not exceed 9.9 TPY of VOC based upon a rolling, 12-month summation for emissions units P017 and P019, combined.</p> <p>See Section B.2., b)(2)a., and c)(1).</p>
c.	OAC rule 3745-21-09(KK)	The emissions limitation specified by this



Table with 2 columns: Applicable Rules/Requirements, Applicable Emissions Limitations/Control Measures. Row 1: rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. Emissions units P017 and P019, which produce methyltin intermediates, shall be equipped with a VOC recovery system...
b. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the mass emission limitations, usage restriction, overall control efficiency limitation, and the use of a VOC recovery system with condenser.

c) Operational Restrictions

- (1) The maximum amount of VOC and HAP (methyl chloride) charged to emissions units P017 and P019, combined, shall not exceed 5000 tons per year (TPY) based on a rolling, 12-month summation...
(2) The permittee shall operate and maintain monitoring equipment at the inlet and outlet of the VOC control equipment...
(3) The permittee shall operate and maintain equipment capable of detecting compressor shutdowns. The low-pressure set point shall be recorded weekly.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall, on a daily basis for emissions units P017 and P019, determine the amount of VOC vented to, and emitted from, the VOC vapor recovery system. The overall VOC control efficiency shall be calculated each week as one minus the ratio of the total emitted VOC for the 7-day period from Monday through Sunday to the total VOC vented to the VOC recovery system for the same 7-day period.

be subtracted from the total emissions to determine the amount of VOC (methyl chloride) emitted.

- (2) The permittee shall record the number of shutdowns of the emissions unit(s) each week.
- (3) The permittee shall calculate and record the daily VOC emissions based upon a weekly average of the VOC emissions from P017 and P019, combined from Monday through Sunday.
- (4) The permittee shall maintain monthly records of the following information:
  - a. The amount of methyl chloride charged to emissions units P017 and P019 combined, in pounds or tons.
  - b. The amount of methyl chloride vented from emissions units P017 and P019 combined to the control equipment, in pounds or tons.
  - c. The amount of methyl chloride emitted from the control equipment to the ambient air from emissions units P017 and P019 combined.
  - d. The rolling, 12-month summation in tons of methyl chloride charged to emissions units P017 and P019 combined.
  - e. The rolling, 12-month summation of VOC\* emissions from emissions units P017 and P019 combined, in pounds or tons.

\*All VOC emissions are methyl chloride.

- (5) The permittee shall maintain daily records of the amount of excess methyl chloride from processes P017 and P019 and record this amount and when the excess methyl chloride exceeds 15 percent, by weight.
  - (6) To ensure compliance with the emissions limitations in b)(1) of this permit, the permittee shall utilize indirect monitoring systems for gas temperature, mass flow and density while the direct monitoring systems are being maintained in accordance with the manufacturer's recommendations, instructions and operating manual(s).
- 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. HAP emission limitations outlined in Section B.2.;
    - ii. VOC emission limitations outlined in b)(1)a. and b)(1)b.;
    - iii. VOC control efficiency outlined in b)(2)a.; and

- iv. methyl chloride usage restriction outlined in c)(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 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 (the appropriate District Office or local air agency).

- (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 eBusiness 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.
  - (3) The permittee shall notify the Southwest Ohio Air Quality Agency of any weekly average control efficiency that is less than 85 percent, by weight. A copy of the record showing the noncomplying weekly average control efficiency shall be submitted to the Southwest Ohio Air Quality Agency within 30 days of the occurrence.
  - (4) 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.
- 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:  
  
Control efficiency of at least 85 percent, by weight, as a weekly average for the 7-day period from Monday through Sunday, for the VOC emissions in the process vent gas.  
  
Applicable Compliance Method:  
  
Compliance with the requirements of b)(2)a. shall be determined based upon the recordkeeping in d)(1). If required, the permittee shall demonstrate compliance with the VOC recovery system control efficiency through emission tests performed in accordance with the procedures specified in OAC rule 3745-21-10(C).

Alternative testing protocols that may be necessary shall receive prior approval from Ohio EPA and U.S. EPA.

b. Emission Limitation:

Volatile organic compound (VOC) emissions shall not exceed 306 pounds per day of VOC based upon a weekly average from Monday through Sunday for emissions units P017 and P019, combined.

Applicable Compliance Method:

Compliance with the daily VOC emissions limitation shall be determined by the record keeping in d)(2) and d)(3). The permittee shall continuously monitor and record the total exit gas mass flow, in pounds per hour, and the total exit gas mass density, in pounds per cubic foot, from the condenser(s) outlet. The permittee may use lookup tables to determine the pounds methyl chloride per hour emitted (reference lookup table formulas and graphs submitted to Southwest Ohio Air Quality Agency on April 19, 2005). Startup and normal operation emissions shall be determined using the mass density and mass flow monitors. Shutdown and fugitive emissions shall be calculated from actual records and added to the continuous monitoring emissions for startup and normal operation.

The weekly average VOC emissions limitation was based on four startup and shutdown periods per week, three days of steady state conditions, stack test result from July 2005, and application information in PTI 14-05744 submitted on July 5, 2005.

$[(3 \text{ days/week at } 2.84 \text{ lbs. methyl chloride emitted /hour of normal operation } * 24 \text{ hrs/day)} + (4 \text{ days/week with one startup \& shutdown per day at } 479.48 \text{ lbs/day)} + (7 \text{ days/wk } * 3.13 \text{ lbs. /day fugitive emissions from material handling and storage})] / 7 \text{ days per week} = 306 \text{ lbs VOC/day as a weekly average.}$

c. Emission Limitation:

VOC emissions shall not exceed 9.9 TPY based upon a rolling, 12-month summation for emissions units P017 and P019, combined.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emissions limitation in b)(1)b. shall be determined by the record keeping in d)(4).

Actual VOC (methyl chloride) emissions for P017 and P019 shall be determined based on the following equation from the information in PTI application 14-05744 submitted on July 5, 2005:

$E = W + X + (EF * Y)$ , where:

W represents the methyl chloride emissions from the condensers including startup emissions, in tons.

X represents the emissions from shutdown operation.

EF is the emissions factor for fugitive emissions and is  $1.42 \times 10^{-4}$  tons of methyl chloride emitted /ton of methyl chloride employed (or 0.284 lbs. Methyl chloride/ ton methyl chloride employed); this emissions factor covers fugitive emissions from compressor dryer cycles, equipment connections, storage tanks, and maintenance and material handling of methyl chloride.

Y represents the tons of methyl chloride input to P017 and P019.

- (2) Compliance with the rolling, 12-month methyl chloride usage limitation in c)(1) shall be determined by the record keeping in d)(4).
- g) Miscellaneous Requirements
- (1) None.