



Environmental
Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

11/29/2010

Mr. Willard Vaughan
ROHM & HAAS CHEMICALS LLC
10 S Electric Street
West Alexandria, OH 45381

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

Facility ID: 0868090072
Permit Number: P0107019
Permit Type: Renewal
County: Preble

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)

Dear Permit Holder:

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

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Kevin Boyce," 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 Regional Air Pollution Control Agency at (937)225-4435 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: RAPCA



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
ROHM & HAAS CHEMICALS LLC**

Facility ID: 0868090072
Permit Number: P0107019
Permit Type: Renewal
Issued: 11/29/2010
Effective: 11/29/2010
Expiration: 11/29/2015



Division of Air Pollution Control
Permit-to-Install and Operate
for
ROHM & HAAS CHEMICALS LLC

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Authorization

Facility ID: 0868090072
Application Number(s): M0000998
Permit Number: P0107019
Permit Description: Administrative Modification to allow for clear adhesive manufacturing in emissions unit
P051
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 11/29/2010
Effective Date: 11/29/2010
Expiration Date: 11/29/2015
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

ROHM & HAAS CHEMICALS LLC
10 S ELECTRIC ST
WEST ALEXANDRIA, OH 45381

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:

Regional Air Pollution Control Agency
117 South Main Street
Dayton, OH 45422-1280
(937)225-4435

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


Chris Korleski
Director



Authorization (continued)

Permit Number: P0107019
Permit Description: Administrative Modification to allow for clear adhesive manufacturing in emissions unit P051

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

Emissions Unit ID:	P051
Company Equipment ID:	TK-1001, R-1002, TK-1003
Superseded Permit Number:	08-04205
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 Regional Air Pollution Control 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 submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

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

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

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) None.

C. Emissions Unit Terms and Conditions



1. P051, Water based and clear adhesive manufacturing in TK-1001, R-1002, TK-1003

Operations, Property and/or Equipment Description:

500 gal. mixing vessel, TK1001 with condenser; 150 gal. emulsifier feed tank, TK1001-2; 1000 gal. stripping vessel R-1002, with condenser; 400 gal. receiver tank, TK1002-1; 750 gal. final mixing tank TK1003

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The organic compound (OC) emissions from this emissions unit shall not exceed 0.17 lb/hour and 4.08 lbs/day. See b)(2)a., b)(2)b., b)(2)c.
b.	OAC rule 3745-31-05(D) Synthetic minor to avoid Title V	The OC emissions from this emissions unit shall not exceed 0.74 tons on a rolling 12-month basis. See b)(2)c., b)(2)d. and b)(2)e.
c.	OAC rule 3745-21-07(G)(2)	The emission limitations specified by this rule are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05 (A)(3). See b)(2)f.

(2) Additional Terms and Conditions

- a. The 0.17 lb/hour and 4.08 lbs/day VOC emission limitations were established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.
- b. The regenerative thermal oxidizer shall achieve at least 97% OC destruction efficiency. The allowable OC emission rate, as a 12-month rolling limit from the common regenerative thermal oxidizer stack including the emissions units permitted under PTI 08-03851, PTI 08-04205, PTI 08-04432 and PTI 08-04710 shall not exceed 7.46 TPY OC.
- c. The condensers installed for this reactor and mixing vessel are not operated primarily to control OC emissions. The condensers are used as reflux condensers with the primary purpose of capturing and recovering any solvent (OC) that is evolved during crucial batch periods and returning it to the reaction. The solvent reflux serves a vital role by controlling such parameters as reaction time and temperature. The reflux condensers predominantly function to regulate and control the physical and chemical reaction that takes place in the affected equipment. In order to ensure that the condensers are operating properly to reflux solvent, the water shall be flowing to each condenser during the full duration of a batch.
- d. The RTO is a common control device used to control OC emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012.
- e. All of the HAP emissions from emissions units P051, P052, P053, P505, P506, P507, P508, P509, P510, P511, P512, P513, P514, P518, P519, P520, P521, P524, P529, P530, P532, P535, P537, P538, P539, T008, T009, T010, T011, and T012 are OC. Therefore, provided compliance is shown with the rolling 12-month OC emissions limitation, compliance will also be shown with the rolling 12-month individual and combined HAPs emissions limitations and it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with the rolling 12-month individual and combined HAPs emissions limitations.
- f. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. Term b)(1)c. shall become void after U.S. EPA approves the rule revision:

c) Operational Restrictions

- (1) The weight of water based adhesives manufactured in this emissions unit shall not exceed 750 tons per year (1,500,000 lbs/yr), on a rolling 12-month basis.

The permittee shall comply with the rolling 12-month production rate and OC emission limitations, and monitoring and record keeping requirements upon startup under this permit, by use of data from the previous 12 months of operation.

- (2) The weight of clear adhesive manufactured in emissions units P051 and P052 shall not exceed 1,750,000 pounds based upon a rolling 12-month summation.

The permittee has existing clear adhesives manufacturing records and therefore does not need to be limited in the first year on a monthly basis.

- (3) The average combustion temperature within the regenerative thermal oxidizer, for any 3-consecutive hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the regenerative thermal oxidizer when the emissions units are in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

- (2) The permittee shall collect and record the following information for each day:

- a. All 3-consecutive hour blocks of time during which the average combustion temperature within the regenerative thermal oxidizer, when the emissions units were in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions units were in operation.

- (3) The permittee shall monitor and record that water is flowing to each condenser at the beginning and at the end of each batch operation.

- (4) The permittee shall maintain monthly records of the following information for the production of water based and clear adhesives.

- a. The production rate for each month, in tons.
- b. The rolling, 12-month summation of the production rates, in tons.

- (5) The permittee shall collect and record the following information each month for this operation.
- a. The company identified category for material produced.
 - b. The number of pounds of each organic material employed.
 - c. The hazardous air pollutant (HAP) content of each organic material, in pounds per batch.
 - d. The total controlled HAP emission rate for all organic materials, in pounds per month (i.e., calculated using the overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance).
 - e. The total individual HAP emissions for each HAP from all material produced, in tons, as a 12-month rolling limit.
 - f. The total combined HAP emissions from all material produced, in tons, as a 12-month rolling limit.
- e) Reporting Requirements
- (1) The permittee shall submit semi-annual reports which specify the following information. The reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six months.
- a. The total organic compound emission rates from this emissions unit, in tons per year, as a 12-month rolling limit.
 - b. The production limit for this emissions unit in tons per year, as a 12-month rolling limit.
 - c. The individual HAP emission limits, in tons per year, as a rolling 12-month limit.
 - d. The total combined HAP emission limit, in tons per year, as a rolling 12-month limit.
- (2) The permittee shall submit quarterly deviation reports which identify all 3-consecutive hour
- a. blocks of time during which the average combustion temperature within the regenerative thermal oxidizer does not comply with the temperature limitation specified above.
 - b. the instances of any batch where verification that water was flowing to the condenser was not made;
 - c. the cause of the condition and the corrective action taken to prevent its reoccurrence.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (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 permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- f) Testing Requirements
- (1) Compliance with the emission limitations in this permit shall be determined in accordance with the following methods:
- a. Emission Limitation -
0.17 lb/hour OC
Applicable Compliance Method -
This emission limitation was established by dividing the annual water based adhesives production rate of 750 TPY by 8760 hours/yr and multiplying by the emission factor provided by the permittee of 1.98 lbs OC/ton of product manufactured. The emission factor assumes 97% destruction efficiency from the regenerative thermal oxidizer.
- b. Emission Limitation -
4.08 lbs/day OC
Applicable Compliance Method -
This emission limitation was established by multiplying the maximum hourly rate of 0.17 lb/hour by 24 hours per day.
- c. Emission Limitation-
0.74 TPY OC, on a rolling 12-month basis
Applicable Compliance Method -
This emission limitation was established by multiplying the water based adhesives production rate, of 750 TPY by the emission factor provided by the permittee of 1.98 lbs OC/ton of product manufactured and dividing by 2000 lbs/ton. Compliance with this emission limitation shall be determined by multiplying the monthly production rate, in tons as determined in d)(4), by the emission factor provided by the permittee of 1.98 lbs OC/ton of product manufactured, summing the monthly emission rates for the year and dividing by 2000 lbs/ton. The emission factor assumes 97% destruction efficiency from the regenerative thermal oxidizer.
- g) Miscellaneous Requirements
- (1) None.