



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

8/17/2016

Certified Mail

Mr. Brian Purdy
ROHM & HAAS CHEMICALS LLC
10 S ELECTRIC ST
West Alexandria, OH 45381

Facility ID: 0868090072
Permit Number: P0119932
County: Preble

RE: DRAFT AIR POLLUTION TITLE V PERMIT
Permit Type: Initial

Dear Permit Holder:

A draft of the OAC Chapter 3745-77 Title V permit for the referenced facility has been issued. The purpose of this draft is to solicit public comments. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Register Herald. A copy of the public notice, the Statement of Basis, and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

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

and Regional Air Pollution Control Agency
117 South Main Street
Dayton, OH 45422-1280

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on processing the Title V permit will be made after consideration of comments received and oral testimony if a public hearing is conducted. You will then be provided with a Preliminary Proposed Title V permit and another opportunity to comment prior to the 45-day Proposed Title V permit submittal to U.S. EPA Region 5. The permit will be issued final after U.S. EPA review is completed and no objections to the final issuance have been received. If you have any questions, please contact Regional Air Pollution Control Agency at (937)225-4435.

Sincerely,

A handwritten signature in cursive script that reads "Michael E. Hopkins".

Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*
RAPCA; Indiana; Kentucky

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at: <http://epa.ohio.gov/actions.aspx> or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-2129 email: HClerk@epa.ohio.gov

Draft Title V Permit Initial

ROHM & HAAS CHEMICALS LLC

10 S ELECTRIC ST, , WEST ALEXANDRIA, OH 45381

ID#: P0119932

Date of Action: 8/17/2016

PermitDesc: Initial Title V Permit To Operate for adhesives and sealants manufacturing facility.

Title V permit required based on the requirements in 40 CFR 63.11494(e) for a new CMPU covered by the rule. The facility will continue to operate as a synthetic minor source emitting less than 10 tons for each individual Hazardous Air Pollutant (HAP) and 25 tons combined HAPs..

The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitonline.aspx> by entering the ID # or: Dale Davidson, Regional Air Pollution Control Agency, 117 South Main Street, Dayton, OH 45422-1280. Ph: (937)225-4435



Statement of Basis For Air Pollution Title V Permit

Facility ID:	0868090072
Facility Name:	ROHM & HAAS CHEMICALS LLC
Facility Description:	Adhesives and Sealants
Facility Address:	10 S ELECTRIC ST, WEST ALEXANDRIA, OH 45381
Permit #:	P0119932, Initial
This facility is subject to Title V because it is major for: <input type="checkbox"/> Lead <input type="checkbox"/> Sulfur Dioxide <input type="checkbox"/> Carbon Monoxide <input type="checkbox"/> Volatile Organic Compounds <input type="checkbox"/> Nitrogen Oxides <input type="checkbox"/> Particulate Matter ≤ 10 microns <input type="checkbox"/> Single Hazardous Air Pollutant <input type="checkbox"/> Combined Hazardous Air Pollutants <input checked="" type="checkbox"/> Maximum Available Control Technology Standard(s) <input type="checkbox"/> GHG <input type="checkbox"/> Title IV	

A. Standard Terms and Conditions

Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01(U)?	Yes
Were there any "common control" issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them.	No
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a minor permit modification per OAC rule 3745-77-08(C)(1)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a significant permit modification per OAC rule 3745-77-08(C)(3)	N/A



Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)	N/A
Please identify the affected unit(s) and pollutant(s) for which a Compliance Assurance Monitoring (CAM) Plan is required per 40 CFR 64. Provide more emissions unit specific detail in Section C.	N/A

B. Facility-Wide Terms and Conditions

Term and Condition (paragraph)	Basis		Comments
	SIP (3745-)	Other	
B.1.			Identification of terms and conditions enforceable under state law only.
B.2.	N	Y	Synthetic Minor facility-wide VOC limitation, monitoring and recordkeeping. PTI P0109847 and OAC rule 3745-31-05(D).
B.3.	N	Y	Synthetic Minor facility-wide HAP limitations, monitoring and recordkeeping. PTI P0109847 and OAC rule 3745-31-05(D).
B.4.	N	Y	Regenerative Thermal Oxidizer (RTO) requirements. PTI P0109847 and OAC rule 3745-31-05(D).
B.5.	Y	N	Air Toxics Requirements. OAC rule 3745-114 and ORC 3704.03(F).
B.6.	N	N	Listing of insignificant emissions units.
B.7.	N	Y	Area source MACT rule 40 CFR part 63 Subpart VVVVVV incorporation-by-reference.
B.8.	N	Y	General requirements specified in 40 CFR Part 63, Subpart A.



C. Emissions Unit Terms and Conditions

Key:		
EU = emissions unit ID		R = record keeping requirements
ND = negative declaration (i.e., term that indicates that a particular rule(s) is (are) not applicable to a specific emissions unit)		Rp = reporting requirements
OR = operational restriction		ET = emission testing requirements (not including compliance method terms)
M = monitoring requirements		St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement
ENF = did noncompliance issues drive the monitoring requirements?		Misc = miscellaneous requirements



Statement of Basis
 ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P520 P521	VOC emissions from each emissions unit shall not exceed 89.8 pounds per ton of brominated y-polymer product manufactured.	N	ORC 3704.03(T)	N	N	<u>N</u>	N	<u>N</u>	<u>N</u>	<u>N</u>	N	N	M, R, Rp, ET - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required.
P520 P521	water shall be flowing to reflux condenser and exhausted to chilled water/glycol condensers during the full duration of a batch	N	ORC 3704.03(T)	N	<u>Y</u>	Y	N	Y	Y	<u>N</u>	N	N	OR – reflux condenser: Water must be flow through reflux condense during each batch. chilled water/glycol condenser: Temperature of the exhaust gases shall not exceed 106 degrees Fahrenheit. ET - reflux condenser: Testing not required. Integral to process controlling physical and chemical reactions. chilled water/glycol condenser: compliance demonstrated by monitoring and recordkeeping the temperature of the exhaust gas of condenser.
P520 P521	combined VOC shall not exceed 19.5 tons on a rolling 12-month basis	N	OAC 3745-31-05(D)	N	N	Y	N	Y	Y	<u>N</u>	N	N	See term B.2. in Facility- Wide Terms and Conditions. ET - Compliance based on record keeping and reporting.
P520 P521	air toxics requirements	114	ORC 3704.03(F)	N	N	Y	N	Y	Y	<u>N</u>	N	N	See term B.5. in Facility- Wide Terms and Conditions. Air Toxic requirements. ET – Emissions testing not applicable.
P521	Hydrogen Bromide (HBr) emissions from emissions unit P521 shall be vented to a wet scrubber during the bromination process	N	PTI P010984	N	<u>Y</u>	Y	N	Y	Y	<u>N</u>	N	N	OR – shall be vented to a wet scrubber during the bromination process. pH of scrubber shall be above and temperature of the scrubber liquor below 150 degrees Fahrenheit during the bromination process. ET – Compliance demonstrated when pH and temperature of scrubber liquor are monitored and maintained to not exceed specified values.
P512 P513 P514	VOC emissions from each emissions unit shall not exceed 2.30 pounds per ton of	N	ORC 3704.03(T)	N	N	<u>N</u>	N	<u>N</u>	<u>N</u>	<u>N</u>	N	N	M, R, Rp - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required. ET – Testing not applicable.



Statement of Basis
 ROHM & HAAS CHEMICALS LLC
 Permit Number: P0119932
 Facility ID: 0868090072

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	polyester solution product manufactured												
P512 P513 P514	fugitive particulate emissions from each emissions unit shall not exceed 5.30 tons per year.	31-05(A)(3)	N	N	N	<u>N</u>	N	<u>N</u>	<u>N</u>	<u>N</u>	N	N	M, R, Rp - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required. ET – Testing not applicable.
P512 P513 P514	Visible emissions of fugitive dust from each emissions unit shall not exceed twenty percent opacity as a three-minute average.	31-05(A)(3)	N	N	N	Y	N	Y	Y	<u>N</u>	N	N	ET - when requested in accordance with U.S. EPA Method 9.
P512 P513 P514	combined VOC emissions shall not exceed 9.25 tons on a rolling 12-month basis	N	OAC 3745-31-05(D)	N	N	Y	N	Y	Y	<u>N</u>	N	N	See term B.2. in Facility- Wide Terms and Conditions. ET - Compliance based on record keeping and reporting.
P512 P513 P514	air toxics requirements	114 and ORC 3704.03(F)	N	N	N	Y	N	Y	Y	<u>N</u>	N	N	See term B.5. in Facility- Wide Terms and Conditions. Air Toxic requirements. ET – Emissions testing not applicable.
P505 P506 P507 P509 P510 P511 P515 P535	VOC emissions from each emissions unit shall not exceed 0.60 pound per ton of prepolymer product manufactured.	N	ORC 3704.03(T)	N	N	<u>N</u>	N	<u>N</u>	<u>N</u>	<u>N</u>	N	N	M, R, Rp, ET - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required.
P505 P506 P507 P509 P510	Combined VOC emissions shall not exceed 1.40 tons on a rolling 12-month basis	N	OAC 3745-31-05(D)	N	N	Y	N	Y	Y	<u>N</u>	N	N	See term B.2. in Facility- Wide Terms and Conditions. ET - Compliance based on record keeping and reporting.



Statement of Basis
 ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P511 P515 P535													
P505 P506 P507 P509 P510 P511 P515 P535	water shall be flowing to each during the full duration of a batch	N	ORC 3704.03(T)	N	<u>Y</u>	Y	N	Y	Y	<u>N</u>	N	N	OR – condenser: Water must be flow through reflux condense during each batch. ET - condenser: Testing not required. Integral to process controlling physical and chemical reactions.
P505 P506 P507 P509 P510 P511 P515 P535	air toxics requirements	114 and ORC 3704.03(F)	N	N	N	Y	N	Y	Y	<u>N</u>	N	N	See term B.5. in Facility- Wide Terms and Conditions. Air Toxic requirements. ET – Emissions testing not applicable.
P505 P506 and P507	The particulate emissions from each emissions unit shall not exceed 1.39 pounds per hour and 2.03 tons per year.	31-05(A)(3)	N	N	N	<u>N</u>	N	<u>N</u>	<u>N</u>	<u>N</u>	N	N	M, R, Rp, ET - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required.
P505 P506 P507 P515	Visible particulate emissions from the stacks serving these emissions units shall not exceed 20 percent opacity as a six-minute average.	17-07(A)	N	N	N	Y	N	Y	Y	<u>N</u>	N	N	ET - when requested in accordance with U.S. EPA Method 9.
P505 P506 and	The particulate emissions from each emissions unit shall not	17-11(B)	N	N	N	<u>N</u>	N	<u>N</u>	<u>Rp</u>	<u>Y</u>	N	N	M, R, Rp, ET - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required.



EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P507	exceed 2.78 pounds per hour.												
P515	particulate emissions from each emissions unit shall not exceed 1.39 pounds per hour and 2.03 tons per year	31-05(A)(3)	N	N	N	<u>N</u>	N	<u>N</u>	<u>N</u>	<u>N</u>	N	N	M, R, Rp, ET - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required.
P515	The particulate emissions from each emissions unit shall not exceed 6.52 pounds per hour.	17-11(B)	N	N	N	<u>N</u>	N	<u>N</u>	<u>Rp</u>	<u>Y</u>	N	N	M, R, Rp, ET - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required.
P051 P052 P053 P524 P529 P532 P537 P538 P539	VOC emissions from each emissions unit shall not exceed 8.00 pounds per ton of Thixon product manufactured.	N	ORC 3704.03(T)	N	N	<u>N</u>	N	<u>N</u>	<u>N</u>	<u>N</u>	N	N	M, R, Rp, ET - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required.
P051 P052 P053 P524 P529 P532 P537 P538 P539	water shall be flowing to each during the full duration of a batch	N	ORC 3704.03(T)	N	<u>Y</u>	Y	N	Y	Y	<u>N</u>	N	N	OR – condenser: Water must be flow through reflux condense during each batch. ET - condenser: Testing not required. Integral to process controlling physical and chemical reactions.
P051 P052 P053 P524 P529	fugitive particulate emissions from each emissions unit shall not exceed 4.56 tons per year	31-05(A)(3)	N	N	N	<u>N</u>	N	<u>N</u>	<u>N</u>	<u>N</u>	N	N	M, R, Rp - The emissions limitation reflects the potential to emit for this emissions unit, therefore, record keeping and reporting requirements for these limits are not required. ET – Testing not applicable.



Statement of Basis
 ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P532 P537 P538 P539													
P051 P052 P053 P524 P529 P532 P537 P538 P539	Visible emissions of fugitive dust from each emissions unit shall not exceed twenty percent opacity as a three-minute average.	31-05(A)(3)	N	N	N	Y	N	Y	Y	<u>N</u>	N	N	ET - when requested in accordance with U.S. EPA Method 9.
P051 P052 P053 P524 P529 P532 P537 P538 P539	combined VOC emissions shall not exceed 13.5 tons on a rolling 12-month basis	N	OAC 3745-31-05(D)	N	N	Y	N	Y	Y	<u>N</u>	N	N	See term B.2. in Facility- Wide Terms and Conditions. ET - Compliance based on record keeping and reporting.
P051 P052 P053 P524 P529 P532 P537 P538 P539	air toxics requirements	114 and ORC 3704.03(F)	N	N	N	Y	N	Y	Y	<u>N</u>	N	N	See term B.5. in Facility- Wide Terms and Conditions. Air Toxic requirements. ET – Emissions testing not applicable.
P505 P506 P507 P509 P510	Minimum of 85% overall OC control efficiency, and minimum 90% destruction by weight	21-07(M)(1) and (M)(2)	N	N	<u>Y</u>	Y	N	Y	Y	Y	N	N	OR - emissions units shall be vented to the regenerative thermal oxidizer (RTO) when one or more of the emissions units are in operation.



Statement of Basis
 ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P511 P051 P052 P053 P524 P529 P532 P537 P538 P539	RTO.												
P512 P513 P514 P505 P506 P507 P509 P510 P511 P515 P035 P051 P052 P053 P524 P529 P532 P537 P538 P539	controlled through the application of a RTO system, operating at a minimum of 97% overall OC destruction/removal efficiency.	N	OAC 31-05(D) and ORC 3704.03(T)	N	<u>Y</u>	Y	N	Y	Y	Y	N	N	OR - emissions units shall be vented to the regenerative thermal oxidizer (RTO) when one or more of the emissions units are in operation.
P506 P507	NESHAP for Chemical Manufacturing Area Sources	N	40 CFR Part 63, Subpart VVVVV	N	N	Y	N	Y	Y	Y	N	N	See term B.7. in Facility- Wide Terms and Conditions.



Statement of Basis
 ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P506 P507	NESHAP - General Provisions	N	40 CFR Part 63, Subpart A	N	N	Y	N	Y	Y	Y	N	N	See term B.8. in Facility- Wide Terms and Conditions.



DRAFT

**Division of Air Pollution Control
Title V Permit
for
ROHM & HAAS CHEMICALS LLC**

Facility ID:	0868090072
Permit Number:	P0119932
Permit Type:	Initial
Issued:	8/17/2016
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Title V Permit
for
ROHM & HAAS CHEMICALS LLC

Table of Contents

Authorization	1
A. Standard Terms and Conditions	2
1. Federally Enforceable Standard Terms and Conditions	3
2. Monitoring and Related Record Keeping and Reporting Requirements.....	3
3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance.....	6
4. Risk Management Plans	8
5. Title IV Provisions	8
6. Severability Clause	8
7. General Requirements	8
8. Fees.....	9
9. Marketable Permit Programs.....	9
10. Reasonably Anticipated Operating Scenarios	9
11. Reopening for Cause	10
12. Federal and State Enforceability	10
13. Compliance Requirements	10
14. Permit Shield	12
15. Operational Flexibility.....	12
16. Emergencies.....	12
17. Off-Permit Changes	14
18. Compliance Method Requirements	14
19. Insignificant Activities or Emissions Levels.....	14
20. Permit to Install Requirement.....	15
21. Air Pollution Nuisance	15
22. Permanent Shutdown of an Emissions Unit	15
23. Title VI Provisions	15
24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only	16
25. Records Retention Requirements Under State Law Only.....	16
26. Inspections and Information Requests	16
27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements.....	17
28. Permit Transfers	17



29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations	17
30. Submitting Documents Required by this Permit	18
B. Facility-Wide Terms and Conditions.....	19
C. Emissions Unit Terms and Conditions	31
1. Emissions Unit Group - Brominated Y-Polymer: P520 and P521.....	32
2. Emissions Unit Group - Polyester Solution Manufacturing: P512, P513, and P514	42
3. Emissions Unit Group - Prepolymer Manufacturing: P505, P506, P507, P509, P510, P511, P515 and P535	48
4. Emissions Unit Group - Thixon Manufacturing: P051, P052, P053, P524, P529, P532, P537, P538 and P539	57



Draft Title V Permit
ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072
Effective Date: To be entered upon final issuance

Authorization

Facility ID: 0868090072
Facility Description: Adhesives and Sealants
Application Number(s): A0054400
Permit Number: P0119932
Permit Description: Initial Title V Permit To Operate for adhesives and sealants manufacturing facility. Title V permit required based on the requirements in 40 CFR 63.11494(e) for a new CMPU covered by the rule. The facility will continue to operate as a synthetic minor source emitting less than 10 tons for each individual Hazardous Air Pollutant (HAP) and 25 tons combined HAPs.
Permit Type: Initial
Issue Date: 8/17/2016
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Superseded Permit Number:

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

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

Ohio Environmental Protection Agency (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 a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Regional Air Pollution Control Agency. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director



Draft Title V Permit
ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072
Effective Date: To be entered upon final issuance

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
- (1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions
 - (2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions
 - (3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements
 - (4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
- (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

- c) The permittee shall submit required reports in the following manner:
- (1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any submitted scheduled maintenancerequests, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- (2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the

probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be submitted promptly to the Regional Air Pollution Control Agency. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- (3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Regional Air Pollution Control Agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally

enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

- (4) Each written report shall be signed by a Responsible Official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

- (5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Regional Air Pollution Control Agency unless otherwise specified.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))



Draft Title V Permit
ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

Effective Date: To be entered upon final issuance

4. Risk Management Plans

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

5. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

(Authority for term: OAC rule 3745-77-07(A)(5))

6. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

(Authority for term: OAC rule 3745-77-07(A)(6))

7. General Requirements

- a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit except as provided pursuant to A.16 below.
- c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.

- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.
- f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:
 - (1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or
 - (2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
 - (3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

(Authority for term: OAC rule 3745-77-07(A)(8))

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

12. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

(Authority for term: OAC rule 3745-77-07(B))

13. Compliance Requirements

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the Regional Air Pollution Control Agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Regional Air Pollution Control Agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
- (1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - (2) Compliance certifications shall include the following:
 - a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.
 - b. The permittee's current compliance status.
 - c. Whether compliance was continuous or intermittent consistent with A.13.d.2.a above.

- d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.
 - e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
- (3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

14. Permit Shield

- a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the Regional Air Pollution Control Agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the Regional Air Pollution Control Agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))



Draft Title V Permit
ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

Effective Date: To be entered upon final issuance

17. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

18. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Federal Register 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-07(A)(1))

21. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

(Authority for term: OAC rule 3745-77-07(A)(1))

22. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the Responsible Official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the Responsible Official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that 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 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

Unless otherwise exempted, no emissions unit identified in this permit that has been certified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.
- b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

- c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or record keeping information shall be submitted to the Regional Air Pollution Control Agency.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Regional Air Pollution Control Agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

25. Records Retention Requirements Under State Law Only

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

26. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

(Authority for term: OAC rule 3745-77-07(C))

27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the Regional Air Pollution Control Agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Regional Air Pollution Control Agency must be notified in writing of any transfer of this permit.

(Authority for term: OAC rule 3745-77-01(C))

29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or
- b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potential to emit; or
- c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.



Draft Title V Permit
ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

Effective Date: To be entered upon final issuance

30. Submitting Documents Required by this Permit

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



Draft Title V Permit
ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072
Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

a) B.5.

2. Synthetic Minor VOC Limitations:

The combined VOC emissions from the product categories identified below shall not exceed the limitations listed in the following table on a rolling 12-month basis:

	Emissions Unit Identification Numbers	Product Category	Rolling 12-Month VOC Emissions Limitation (tons)
a)	P505, P506, P507, P509, P510, P511, P515, P535	Prepolymer manufacturing	1.40
b)	P512, P513, P514	Polyester Solution	9.25
c)	P051, P052, P053, P524, P529, P532, P537, P538, P539	Thixons	13.5
d)	P520, P521	Brominated Y-Polymer	19.5

a) The permittee shall collect and record the following information each month for each product category listed in the table [2.a) through 2.d)], above:

- (1) The VOC monthly emission rate for each emissions unit, in tons, (the monthly VOC emissions rates calculated according to Section C. (Emissions Units Terms and Conditions) for each emissions unit, in pounds, divided by 2,000 pounds per ton);
- (2) The combined VOC emission rate for each product category, in tons, (the sum of the monthly VOC emissions rates for all the emissions units in each product category);
- (3) The rolling 12-month VOC emissions rate, in tons, for each product category [the sum of the VOC emissions calculated according to a)(2) for the previous 12-months].

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

b) The permittee shall submit quarterly deviation (excursion) reports, in accordance with the Standard Terms and Conditions of this permit, of the following information:

- (1) An identification of each month during which the rolling, 12-month VOC emissions rate from any product category listed in 2.a) through 2.d) exceeds its rolling 12-month emissions limit and the actual rolling, 12-month VOC emissions rate for that month.

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).

3. Synthetic Minor HAP Limitations:

The emissions of hazardous air pollutants (HAPs), as defined in Section 112(b) of Title III of the Clean Air Act, from all the emissions units at this facility, on a rolling 12-month basis, shall not exceed 9.9 tons for any individual HAP and 24.9 tons for any combination of HAPs.

- a) The permittee shall keep records for the entire facility each month of the following information:
- (1) The identification of each product manufactured;
 - (2) The product category for each batch (prepolymer, polyester solution, thixons or brominated Y-polymer) processed;
 - (3) The identification of each HAP processed.
 - (4) The weight, in tons, of each prepolymer, polyester solution, Thixons or brominated Y-Polymer manufactured;
 - (5) The emissions of each individual HAP, in pounds or tons, [the weight of each prepolymer, polyester solution, Thixons or brominated Y-Polymer from a)(4) multiplied by the individual HAP emissions factor developed by the company in, pounds HAP per ton of product];
 - (6) The emissions , in pounds or tons, of the combined HAPs that were processed [the sum of all the individual HAP emissions from a)(5)].
 - (7) The total facility-wide emissions (and associated calculations) for each individual HAP, in tons, [the sum of the individual HAP emission rates from all the emissions units at the facility calculated according to a)(3) through a)(5) including 20 pounds (0.01 ton) for each individual HAP emissions from solvent storage tanks and 180 pounds (0.09 ton) for each individual HAP from fugitive process leaks*].

*The emissions rates of 20 pounds (0.01 ton/year) for each individual HAP emissions from storage tanks and 180 pounds (0.09 ton/year) for each individual HAP from fugitive process leaks emissions rates were developed to represent potential emissions in lieu of keeping monthly records.
 - (8) The total facility-wide emissions (and associated calculations) for combined HAPs, in tons, [the sum of all the combined HAPs emission rates from all the emissions units at the facility calculated according to a)(3) through a)(6)].
 - (9) The rolling 12-month sum of the total individual HAP emissions rates for each HAP from all the emissions units at the facility, in tons [the sum of individual HAP emissions rates calculated according to a)(7) for the previous 12 months].

- (10) The rolling 12-month sum of the total combined HAP emissions rates from all the emissions units at the facility, in tons, [the sum of combined HAP emissions rates calculated according to a)(8) for the previous 12 months].
- b) The permittee shall submit quarterly deviation (excursion) reports, in accordance the Standard Terms and Conditions, of this permit, of the following information:
- (1) An identification of each month during which the rolling, 12-month individual HAP emissions rate (from the facility) exceeded 9.9 tons, and the actual rolling, 12-month sum of each individual HAP emissions rate (from the facility) for each such month.
 - (2) An identification of each month during which the rolling, 12-month combination of all HAP emissions rates (from the facility) exceeded 24.9 tons, and the actual rolling, 12-month sum of the combination of all HAP emissions rates (from the facility) for each such month.
 - (3) 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).

- c) The permittee shall submit annual reports that summarize the annual emissions of each individual HAP and the combined emissions of all HAPs for the facility. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data in the annual Synthetic Minor Title V Fee Emission Report.

4. Regenerative Thermal Oxidizer (RTO) requirements:

All of the VOC emissions from emissions units P051, P052, P053, P505, P506, P507, P509, P510, P511, P512, P513, P514, P524, P529, P532, P535 P537, P538, and P539 shall be vented to the regenerative thermal oxidizer (RTO) when one or more of the emissions units are in operation. The RTO system shall achieve a minimum VOC destruction efficiency of 97% on a dry weight basis excluding methane.

- a) In order to maintain compliance with the applicable emission limitations contained in this permit, the acceptable average combustion temperature within the RTO, for any 3-hour block of time when the emissions units controlled by the RTO 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 units were in compliance.
- b) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the RTO when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or

± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

- (1) all 3-hour blocks of time, when the emissions units controlled by the RTO were in operation, during which the average combustion temperature within the RTO was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance; and

(The most recent emissions testing that demonstrated compliance was conducted on June 6, 2012 with an average combustion chamber temperature of 1736 degrees Fahrenheit.)
- (2) a log (date and total time) of the downtime or bypass of the capture (collection) system and RTO, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

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

- c) Whenever the monitored average combustion temperature [as recorded in 4.b)] within the RTO deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- (1) the date and time the deviation began;
- (2) the magnitude of the deviation at that time;
- (3) the date the investigation was conducted;
- (4) the name(s) of the personnel who conducted the investigation; and
- (5) the findings and recommendations.

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

- (6) a description of the corrective action;
- (7) the date corrective action was completed;
- (8) the date and time the deviation ended;
- (9) the total period of time (in minutes) during which there was a deviation;

- (10) the temperature readings immediately after the corrective action was implemented; and
- (11) the name(s) of the personnel who performed the work.

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

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

- d) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - (1) all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the RTO 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;
 - (2) any records of downtime (date and length of time) for the capture (collection) system, the RTO, and/or the monitoring equipment when the emissions unit(s) was/were in operation;
 - (3) a log of the operating time for the capture system, RTO, monitoring equipment, and the emissions unit(s);
 - (4) any period of time (start time and date, and end time and date) when any of the emissions units were in operation and the process emissions were not vented to the RTO;
 - (5) each incident of deviation described in d)(1) or d)(4) (above) where a prompt investigation was not conducted;
 - (6) each incident of deviation described in d)(1) or d)(4) where prompt corrective action, that would bring the emissions units into compliance and/or the temperature within the RTO into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - (7) each incident of deviation described in d)(1) or d)(4) where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

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.

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).

- e) The permittee shall conduct, or have conducted, emission testing for the RTO system in accordance with the following requirements:
- (1) The emission testing shall be conducted within 3 months after issuance of the permit (following the effective date for the Title V permit) and within 6 months prior to the permit expiration.
 - (2) The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for VOC.
 - (3) The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
 - a. Method 25 or 25A and/or Method 18 as appropriate, must be employed to demonstrate compliance with the overall control efficiency limitation for VOC.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA from the appropriate Ohio EPA district office or local air agency.
 - b. 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.
 - (4) The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit(s) at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
 - (5) Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

5. Air Toxics:

The permit to install application for these emissions units, P051, P052, P053, P505, P506, P507, P509, P510, P511, P512, P513, P514, P515, P524, P529, P532, P535 P537, P538, and P539 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(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a) the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour work week, 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):
 - (1) 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
 - (2) 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 “worst case” toxic contaminant(s):

Toxic Contaminants: (VOC) dimethyl formamide, monochlorobenzene, 1,3-dioxolane, ethylene glycol, perchloroethylene, toluene, methyl isobutyl ketone, methanol, xylene, ethylbenzene.

TLV (mg/m³): 30.0 (dimethyl formamide - worst case)

Maximum Hourly Emission Rate (pounds/hour): 6.78 (dimethyl formamide - worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 192

MAGLC (µg/m³): 712

Toxic Contaminant: (particulate) zinc oxide

TLV (mg/m³): 10

Maximum Hourly Emission Rate (pound/hour): 1.05

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 181

MAGLC (µg/m³): 238

The permittee, has demonstrated that emissions of dimethyl formamide and zinc oxide, from these emissions units P051, P052, P053, P505, P506, P507, P509, P510, P511, P512, P513, P514, P515, P524, P529, P532, P535 P537, P538, and P539, 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).

- e) 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:

- (1) 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;
- (2) 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
- (3) 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.

- f) 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):
 - (1) 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.);
 - (2) 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);
 - (3) 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
 - (4) 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.
- g) 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.
- h) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

6. The following insignificant emissions units at this facility must comply with all applicable State and federal regulations, as well as any emissions limitations and/or control requirements contained within the identified permit-to-install for the emissions unit. The insignificant emissions units listed below are subject to one or more applicable requirements contained in a permit-to-install or in the SIP approved versions of OAC Chapters 3745-17, 3745-18, 3745-21, and 3745-31, and/or 40 CFR Part 60 or 63:

- B004 Emergency Fire Pump - Diesel, 87 HP
- B005 B005 Natural Gas <10 MMBtu/hr Steam Boiler
- B006 B006 Natural Gas <10 MMBtu/hr Steam Boiler
- B007 B007 Natural Gas Process Hot Oil Boiler 6.5 MMBtu/hr



Effective Date: To be entered upon final issuance

- P540 Stationary Refrigerated Trailer for Onsite Cold Storage Capacity
- T008 6,000 gallon storage tank vented to thermal oxidizer; TK-436
- T009 6,000 gallon storage tank vented to thermal oxidizer; TK-435
- T010 6,000 gallon storage tank vented to thermal oxidizer; TK-816
- T011 2,500 gallon storage tank vented to thermal oxidizer; TK-817
- T012 2,500 gallon storage tank vented to thermal oxidizer; TK-151
- T015 T0155,390 gallon resin storage tank TK122 connect to RTO

7. 40 CFR part 63 Subpart VVVVVV, National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources

40 CFR Part 63, Subpart VVVVVV establishes emission standards for hazardous air pollutants (HAP), operating limits and compliance requirements for Chemical Manufacturing Area Sources. The affected source is any chemical manufacturing process unit (CMPU) that uses as feedstocks, generates as byproducts, or produces as products any of the hazardous air pollutants (HAP) listed in Table 1 to this subpart and meets the conditions specified in section 63.11494. The following emissions units located at this facility are subject to 40 CFR, Part 63, Subpart VVVVVV:

- P506 Prepolymer kettle 421 with receiver condenser and RTO
- P507 Prepolymer kettle 422 with receiver condenser and RTO.

The permittee shall maintain emissions units P506 and P507 in compliance with the applicable standards and compliance requirements in the rule during periods of time when the units are processing, using, or producing the HAP shown in Table 1 of the rule.

Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
40 CFR 63.11494(a), (b), (d) through (f)	Applicability requirements and compliance dates.
40 CFR 63.11495(a), (c) and (d)	Management practices and other requirements.
40 CFR 63.11496(a), and (g)(1) through (8)	Standards and compliance requirements for batch process vents.
40 CFR 63.11501	Notification, recordkeeping, and reporting requirements.
Table 1 to 40 CFR Subpart VVVVVV	Hazardous Air Pollutants Used To Determine Applicability of Chemical Manufacturing Operations
Table 2 to 40 CFR Subpart VVVVVV	Emission Limits and Compliance Requirements for Batch Process Vents
Table 9 to 40 CFR Subpart VVVVVV	Applicability of General Provisions to Subpart VVVVVV

8. 40 CFR Part 63, Subpart A

The permittee is subject to the general requirements specified in 40 CFR Part 63, Subpart A in accordance with 40 CFR Part 63, Subpart A (including the Table(s) and Appendix(ices) referenced in Subpart A). The applicable general provisions are identified in Table 9 of 40 CFR Part 63, Subpart VVVVVV.



Draft Title V Permit
ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

Effective Date: To be entered upon final issuance



Draft Title V Permit
ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072
Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions



1. Emissions Unit Group - Brominated Y-Polymer: P520 and P521

EU ID	Operations, Property and/or Equipment Description
P520	Adhesive Reactor 141 with reflux condenser, solvent receiver, vacuum pump and chilled water/glycol (mixed) condenser with scrubber to remove hydrogen bromide
P521	Adhesive Reactor 142 with reflux condenser, solvent receiver, vacuum pump and chilled water/glycol (mixed) condenser

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) b)(1)d.

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.	ORC 3704.03(T) PTI P0109847 issued 7/24/2013	The volatile organic compound (VOC) emissions from each emissions unit shall not exceed 89.8 pounds per ton of brominated y-polymer product manufactured. Compliance with this rule also includes compliance with OAC rules 3745-31-05(D), and 3745-21-07(M)(1) and (M)(2). See b)(2)a. through b)(2)d.
b.	OAC rule 3745-31-05(D) (Synthetic Minor to avoid being major for VOC and HAPs) PTI P0109847 issued 7/24/2013	See Section B.2., B.3., b)(2)a., b)(2)d. and b)(2)e.
c.	OAC rule 3745-21-07(M)(1) and (M)(2)	The emissions limitations specified by this rule are less stringent than the control requirement established pursuant to ORC 3704.03(T). See b)(2)a.
d.	OAC rule 3745-114 and ORC 3704.03(F)	See d)(8) through d)(11) and e)(2)

(2) Additional Terms and Conditions

- a. All of the VOC emissions from emissions units P520 and 521 shall be vented to a chilled water and glycol (mixed) condenser that meets the operational, monitoring, and record keeping requirements of this permit, when the emissions units are in operation. The chilled water and glycol (mixed) condenser shall achieve a minimum VOC removal efficiency of 89% on a dry weight basis excluding methane.
- b. The 89.8 pounds VOC per ton of product manufacture was developed for PTI purpose to reflect the potential to emit for each of these emissions units, therefore, it is not necessary to develop monitoring and record keeping requirements for this emission limitation.
- c. There are two sets of condensers installed on these emissions units. Each emissions unit has a cold water condenser operated as reflux condensers with the primary purpose of capturing and condensing any solvent (VOC) 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. In addition to the reflux condensers all of the exhaust from the reflux condensers on emissions units P520 and P521 is vented to a chilled water and glycol (mixed) condenser to control VOC emissions.
- d. The combined VOC emissions from emissions units P520 and P521 shall not exceed 19.5 tons on a rolling 12-month basis.

The record keeping, reporting and testing requirements necessary to comply with the synthetic minor VOC emissions limitations are identified in Sections B.2. and B.4. of this permit.
- e. The hazardous air pollutant (HAP) emissions from all the emissions units at this facility shall not exceed 9.9 tons for any individual HAP and 24.9 tons for any combination of HAPs. on a rolling 12-month basis.

The record keeping, reporting and testing requirements necessary to comply with the synthetic minor HAP emissions limitations are identified in Section B.3. of this permit.
- f. Hydrogen Bromide (HBr) emissions from emissions unit P521 shall be vented to a wet scrubber during the bromination process.

c) Operational Restrictions

- (1) The pH of the scrubber liquor shall be maintained above 7 for the scrubber used to control HBr emissions from emissions unit P521 during the bromination phase of the reaction.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(1)]

- (2) The temperature of the scrubber liquor used to control HBr emissions from emissions unit P521 shall be maintained below 150 degrees Fahrenheit during the bromination process.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for these emissions units:
 - a. The name and identification of each brominated product manufactured.
 - b. The weight, in tons, of each brominated product manufactured in each emissions unit.
 - c. The VOC emissions factor for each brominated product manufactured, in pounds of VOC emissions per ton of product manufactured.
 - d. The total VOC emissions for all brominated products manufactured, in tons per month [the sum of d)(1)b x d)(1)c for each resin, adhesive intermediate and adhesive manufactured].
 - e. The rolling, 12-month summation of the monthly VOC emissions from emissions units P520 and P521 [the sum of the monthly emissions rates calculated in d)(1)d. for the previous 12 months for each emissions unit].

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (2) In order to maintain compliance with the applicable emission limitation contained in this permit, the average temperature of the exhaust gases from the chilled water and glycol (mixed) condenser, for any 3-hour block of time when the emission units controlled by the condenser are in operation, shall not exceed 106 degrees Fahrenheit.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the temperature, in degrees Fahrenheit, of the exhaust gases from the chilled water and glycol (mixed) condenser when the emissions unit(s) is/are in operation, including periods of startup and shutdown. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions units are in operation:

- a. all 3-hour blocks of time, when the emissions units controlled by the chilled water and glycol (mixed) condenser were in operation, during which the average temperature of the exhaust gases from the condenser was more than 106 degrees Fahrenheit; and
- b. a log or record of operating time for the chilled water and glycol (mixed) condenser, monitoring equipment, and the associated emissions unit.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (4) Whenever the monitored temperature of the exhaust gases from the chilled water and glycol (mixed) condenser deviates from the limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

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

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

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

The exhaust gas temperature limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio

EPA District Office or local air agency. The permittee may request revisions to the permitted exhaust gas temperature limit based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions units. In addition, approved revisions to the exhaust gas temperature limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (5) The permittee shall verify and record whether or not water is flowing to each cold water reflux condenser at the beginning and end of each batch.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (6) The permittee shall operate and maintain a continuous pH and temperature monitor and recorder which measures and records the pH and temperature of the scrubber liquor while the reactions is taking place in emissions unit P521 within the bromination phase. The pH and temperature monitors shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (7) The permittee shall collect and record the following information for each day emissions unit P521 is operation:
- a. The pH and temperature of the scrubber liquor during the bromination phase of each reaction conducted on that day.
 - b. A log or record of the operating duration for the scrubber liquor pump and the corresponding batches bromination phase.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (8) The permit to install application for this/these emissions units, P520 and P521, 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 these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic



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

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

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "12" 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 or "worst case" toxic contaminant(s):

Toxic Contaminant: perchloroethylene and xylene
TLV (mg/m³): 170 (worst case - perchloroethylene)
Maximum Hourly Emission Rate (lbs/hr): 4.49 (perchloroethylene)
Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 400
MAGLC (µg/m³): 8,074

- e. The permittee, has demonstrated that emissions of perchloroethylene, from emissions units P520 and P521, 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).

[Authority for term OAC rule 3745-114 and ORC 3704.03(F)]

- (9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

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

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

[Authority for term OAC rule 3745-114 and ORC 3704.03(F)]

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

that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term OAC rule 3745-114 and ORC 3704.03(F)]

- (11) 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.

[Authority for term OAC rule 3745-114 and ORC 3704.03(F)]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. any batch where water was not continuously flowing through the cold water reflux condenser on each emissions unit;
 - b. each period of time (start time and date, and end time and date) when the average temperature of the exhaust gases from the chilled water and glycol (mixed) condenser exceeded the temperature limit;
 - c. any period of time (start time and date, and end time and date) when the emissions units were in operation and the VOC emissions were not vented to the chilled water and glycol (mixed) condenser;
 - d. the probable cause of each deviation (excursion);
 - e. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions);
 - f. the magnitude and duration of each deviation (excursion);
 - g. the following information concerning the operations of the scrubber for emissions unit P51 while the reactions are taking place within the bromination phase:
 - i. when water was not flowing through the scrubber during the bromination phase of the reaction;
 - ii. the pH of the scrubber liquor was less than 7 for the scrubber during the bromination phase of the reaction; and
 - iii. the temperature of the scrubber liquor was greater than 150 degrees Fahrenheit during the bromination process.

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

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (2) The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting 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. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Authority for term OAC rule 3745-114 and ORC 3704.03(F)]

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 -

The VOC emissions from this emissions unit shall not exceed 89.8 pounds per ton of brominated γ -polymer product manufactured.

Applicable Compliance Method -

This VOC emissions limitation was determined by multiplying the emissions factor for uncontrolled non-fugitive VOC emissions by the 89% control efficiency of the chilled water and glycol (mixed) condenser [810 pounds VOC per ton of brominated γ -polymer x (1-0.89)] plus fugitive VOC emissions of 0.65 pound VOC per ton of brominated γ -polymer product.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(C)]

b. Emission Limitation -

The combined VOC emissions from these emissions units shall not exceed 19.5 tons on a rolling 12-month basis.

Applicable Compliance Method -

Compliance shall be based on the record keeping requirements of d)(1) and the sum of the VOC emissions from emissions units P520 and P521 for the previous 12 months.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(C)]

g) Miscellaneous Requirements



Draft Title V Permit
ROHM & HAAS CHEMICALS LLC
Permit Number: P0119932
Facility ID: 0868090072

Effective Date: To be entered upon final issuance

(1) None.



2. Emissions Unit Group - Polyester Solution Manufacturing: P512, P513, and P514

EU ID	Operations, Property and/or Equipment Description
P512	Resin Dissolving Tank 431 with condenser and RTO
P513	Resin dissolving tank 433 with condenser and RTO
P514	Resin Dissolving Tank 432 with condenser and RTO

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) b)(1)e.

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.	ORC 3704.03(T) PTI P0109847 issued 7/24/2013	The volatile organic compound (VOC) emissions from each emissions unit shall not exceed 2.30 pounds per ton of polyester solution product manufactured. See b)(2)a., b)(2)b. and b)(2)c.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008 PTI P0109847 issued 7/24/2013	The fugitive particulate emissions from each emissions unit shall not exceed 5.30 tons per year. See b)(2)a. Visible emissions of fugitive dust from each emissions unit shall not exceed twenty percent opacity as a three-minute average. See b)(2)d.
c.	OAC rule 3745-31-05(A)(3)(a)(iii) June 30, 2008 PTI P0109847 issued 7/24/2013	The Best Available Technology (BAT) requirements of OAC rule 3745-31-05(A)(3) do not apply to these emissions units since the potential to emit for particulate emissions from each are less than 10 tons per year. See b)(2)e.
d.	OAC rule 3745-31-05(D) (Synthetic Minor to avoid being	See Sections B.2. through B.4., b)(2)c. and b)(2)f.



Effective Date: To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	major for VOC and HAPs) PTI P0109847 issued 7/24/2013	
e.	OAC rule 3745-114 and ORC 3704.03(F)	See Section B.5.
f.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust from each emissions unit shall not exceed twenty percent opacity as a three-minute average.

(2) Additional Terms and Conditions

- a. The 2.30 pounds VOC per ton of polyester solution product manufactured and 5.30 tons per year of fugitive particulate emissions limitations were developed to reflect the potential to emit for each of these emissions units, therefore, it is not necessary to develop monitoring and record keeping requirements for these emission limitations.
- b. The condensers installed on these emissions units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent (VOC) 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.
- c. The combined VOC emissions from emissions units P512, P513, and P514 shall not exceed 9.25 tons on a rolling 12-month basis. All of the VOC emissions from the emissions units listed above shall be vented to the regenerative thermal oxidizer (RTO) that shall meet the operational, monitoring, and record keeping requirements of this permit, when one or more of the emissions units are in operation. The RTO system shall achieve a minimum VOC destruction efficiency of 97% on a dry weight basis excluding methane.

The record keeping, reporting and testing requirements necessary to comply with the synthetic minor VOC emissions limitations are identified in Sections B.2., and B.4. of this permit.
- d. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

- e. This paragraph applies once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(iii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- f. The hazardous air pollutant (HAP) emissions from all the emissions units at this facility shall not exceed 9.9 tons for any individual HAP and 24.9 tons for any combination of HAPs. on a rolling 12-month basis.

The record keeping, reporting and testing requirements necessary to comply with the synthetic minor HAP emissions limitations are identified in Section B.3. of this permit.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for these emissions units:
 - a. The name and identification of polyester solution manufactured.
 - b. The weight, in tons, of each polyester solution manufactured in each emissions unit.
 - c. The uncontrolled VOC emissions factor for each polyester solution manufactured, in pounds of VOC emissions per ton of product manufactured.
 - d. The controlled VOC emissions factor for polyester solution manufactured, in pounds of VOC emissions per ton of product manufactured [the uncontrolled VOC emissions factor from d)(1)c multiplied by the control efficiency for the RTO measured during the last performance test that demonstrated compliance].
 - e. The total VOC emissions for all polyester solutions manufactured, in tons per month [the sum of d)(1)b x d)(1)d for each polyester solution manufactured].
 - f. The rolling, 12-month summation of the monthly VOC emissions from emissions units P512, P513 and P514 [the sum of the monthly emissions rates calculated in d)(1)e. for the previous 12 months for each emissions unit].

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (2) The permittee shall verify and record whether or not water is flowing to each condenser at the beginning and end of each batch.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

- (3) The permittee shall perform monthly checks, when the emissions unit is in operation, for any visible particulate emissions for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, etc.) serving this emissions unit. The



presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

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

- a. any batch where water was not continuously flowing through the condenser on each unit.

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

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall submit semiannual written reports that identify:

- a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible emissions.



These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[OAC rule 3745-77-07(A)(3)(c)]

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 -

The VOC emissions from each emissions unit shall not exceed 2.30 pounds per ton of polyester solution product manufactured.

Applicable Compliance Method -

This VOC emissions limitation was determined by multiplying the emissions factor for uncontrolled non-fugitive VOC emissions by the 97% control efficiency of the RTO [67.3 pounds VOC per ton of polyester solution x (1-0.97)] plus fugitive VOC emissions of 0.23 pound VOC per ton of polyester solution.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(C)]

b. Emission Limitation -

The combined VOC emissions from emissions units P512, P513 and P514 shall not exceed 9.25 tons on a rolling 12-month basis.

Applicable Compliance Method -

Compliance shall be based on the record keeping requirements of d)(1) and the sum of the VOC emissions from emissions units P512, P513 and P514 for the previous 12 months.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(C)]

c. Emission Limitation -

The fugitive particulate emissions from each emissions unit shall not exceed 5.30 tons per year



Applicable Compliance Method -

Compliance with the particulate emissions limitation is based on the maximum annual powdered material process rate of 3,314 tons per year multiplied by the amount of material that becomes airborne during the reactor fill process of 0.16% (U.S. EPA, AP-42, Section 11.12 background document June, 2006).

[Authority for term PTI P0109847 and OAC rule 3745-77-07(C)]

d. Emission Limitation -

The RTO system, shall achieve a minimum VOC destruction efficiency of 97% on a dry weight basis excluding methane.

Applicable Compliance Method -

Compliance with this emissions limitation shall be determined according to Section B.4. of this permit

[Authority for term PTI P0109847 and OAC rule 3745-77-07(C)]

e. Emission Limitation -

Visible emissions of fugitive dust from each emissions unit shall not exceed twenty percent opacity as a three-minute average.

Applicable Compliance Method -

If requested, compliance with the visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Reference Method 9 and OAC rule 3745-17-03(B)(3).

[Authority for term PTI P0109847 and OAC rule 3745-77-07(C)]

g) Miscellaneous Requirements

- (1) None.



Effective Date: To be entered upon final issuance

3. Emissions Unit Group - Prepolymer Manufacturing: P505, P506, P507, P509, P510, P511, P515 and P535

EU ID	Operations, Property and/or Equipment Description
P505	Prepolymer Kettle 420 with receiver condenser and RTO
P506	Prepolymer kettle 421 with receiver condenser and RTO
P507	Prepolymer kettle 422 with receiver condenser and RTO
P509	Autoclave 424 with receiver, condenser and RTO
P510	Autoclave 425 with receiver, condenser and RTO
P511	Autoclave 426 with receiver, condenser and RTO
P515	Polymer blocks, granules, pellets, pelletizer 401, crystallizer tank 408, pellet dryer 409
P535	Recycled Polymer holding tank 434 and RTO

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
- (1) b)(1)h.
- 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.	ORC 3704.03(T) PTI P0109847 issued 7/24/2013	The volatile organic compound (VOC) emissions from each emissions unit shall not exceed 0.60 pound per ton of prepolymer product manufactured. Compliance with this rule also includes compliance with OAC rules 3745-31-05(D), 3745-21-07(M)(1) and (M)(2). See b)(2)a., b)(2)b., b)(2)c., and b)(2)h.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008 PTI P0109847 issued 7/24/2013	<u>Applicable to Emissions Units P505, P506 and P507:</u> The particulate emissions from each emissions unit shall not exceed 1.39 pounds per hour and 2.03 tons per year. See b)(2)a.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p><u>Applicable to Emissions Unit P515:</u> The particulate emissions from this emissions unit shall not exceed 5.0 pounds per hour and 4.68 tons per year. See b)(2)a.</p> <p>Compliance with this rule also includes compliance with OAC rules 3745-17-07(A) and 3745-17-11(B).</p> <p>See b)(2)d.</p>
c.	OAC rule 3745-31-05(A)(3)(a)(iii) June 30, 2008 PTI P0109847 issued 7/24/2013	<p><u>Applicable to Emissions Units P505, P506, P507 and P515:</u></p> <p>The Best Available Technology (BAT) requirements of OAC rule 3745-31-05(A)(3) do not apply to these emissions units since the potential to emit for particulate emissions from each are less than 10 tons per year.</p> <p>See b)(2)e.</p>
d.	OAC rule 3745-31-05(D) (Synthetic Minor to avoid being major for VOC and HAPs) PTI P0109847 issued 7/24/2013	See Sections B.2. through B.4., b)(2)c. and b)(2)f.
e.	OAC rule 3745-21-07(M)(1) and (M)(2)	<p><u>Applicable to Emissions Units P505, P506, P507, P509, P510, and P511:</u> The emissions limitations specified by this rule are less stringent than the control requirement established pursuant to ORC 3704.03(T).</p> <p>See b)(2)g. and b)(2)h.</p>
f.	OAC rule 3745-17-07(A)	<p><u>Applicable to Emissions Units P505, P506, P507 and P515:</u> Visible particulate emissions from the stacks serving these emissions units shall not exceed 20 percent opacity as a six-minute average.</p>
g.	OAC rule 3745-17-11(B)	<p><u>Applicable to Emissions Units P505, P506 and P507:</u> The particulate emissions from each emissions unit shall not exceed 2.78 pounds per hour.</p>



Effective Date: To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<u>Applicable to Emissions Unit P515:</u> The particulate emissions from each emissions unit shall not exceed 6.52 pounds per hour.
h.	OAC rule 3745-114 and ORC 3704.03(F)	See Section B.5.
i.	40 CFR part 63 Subpart VVVVVV	The requirements of this rule only apply to emissions units P506 and P507. See Section B.7. and b)(2)i.
j.	40 CFR Part 63, Subpart A, NESHAP - General Provisions	See Section See Section B.8.

(2) Additional Terms and Conditions

- a. The 0.60 pound VOC per ton of prepolymer product manufactured, the 1.39 and 5.0 pounds per hour of particulate emissions limitations were developed for PTI purposes to reflect the potential to emit for each of these emissions units, therefore, it is not necessary to develop monitoring and record keeping requirements for these emission limitations.
- b. The condensers installed on these emissions units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent (VOC) 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. In addition, the autoclaves (emissions units P509, P510 and P511) are equipped with freeze traps that use liquid nitrogen as coolant to recover any solvents that pass through the reflux condensers for product recovery.
- c. The combined VOC emissions from emissions units P505, 506, P507, P509, P510, P511, and P535 shall not exceed 1.40 tons on a rolling 12-month basis. All of the VOC emissions from the emissions units listed above shall be vented to the regenerative thermal oxidizer (RTO) that shall meet the operational, monitoring, and record keeping requirements of this permit, when one or more of the emissions units are in operation. The RTO system, shall achieve a minimum VOC destruction efficiency of 97% on a dry weight basis excluding methane.

The record keeping, reporting and testing requirements necessary to comply with the synthetic minor VOC emissions limitations are identified in Sections B.2. and B.4. of this permit.



- d. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- e. This rule paragraph applies once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(iii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- f. The hazardous air pollutant (HAP) emissions from all the emissions units at this facility shall not exceed 9.9 tons for any individual HAP and 24.9 tons for any combination of HAPs. on a rolling 12-month basis.

The record keeping, reporting and testing requirements necessary to comply with the synthetic minor HAP emissions limitations are identified in Section B.3. of this permit.

- g. All of the VOC emissions from emissions units P505, P506, P507, P509, P510 and P511 listed above shall be vented to the RTO that shall meet the operational, monitoring, and record keeping requirements of this permit, when one or more of the emissions units are in operation.
- h. The VOC emissions from emissions units P505, P506, P507, P509, P510 and P511 listed above shall be controlled through the application of a RTO system operating at a minimum of 97% VOC control efficiency.
- i. 40 CFR Part 63, Subpart VVVVVV establishes emission standards for hazardous air pollutants (HAP), operating limits and compliance requirements for Chemical Manufacturing Area Sources. The affected source is any chemical manufacturing process unit (CMPU) that uses as feedstocks, generates as byproducts, or produces as products any of the hazardous air pollutants (HAP) listed in Table 1 of this rule.

The permittee shall maintain emissions units P506 and P507 and operate the RTO in compliance with the applicable standards and compliance requirements in the rule during periods of time when the units are processing, using, or producing the HAP shown in Table 1 of the rule.

c) **Operational Restrictions**

- (1) None.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall collect and record the following information each month for these emissions units:
 - a. The name and identification of each prepolymer manufactured.
 - b. The weight, in tons, of each prepolymer manufactured in each emissions unit.

- c. The uncontrolled VOC emissions factor for each prepolymer manufactured, in pounds of VOC emissions per ton of product manufactured.
- d. The controlled VOC emissions factor for each prepolymer manufactured, in pounds of VOC emissions per ton of product manufactured [the uncontrolled VOC emissions factor from d)(1)c multiplied by the control efficiency for the RTO measured during the last performance test that demonstrated compliance].
- e. The total VOC emissions for all prepolymer, in tons per month [the sum of d)(1)b x d)(1)d for each resin, adhesive intermediate and adhesive manufactured].
- f. The rolling, 12-month summation of the monthly VOC emissions from emissions units P505, 506, P507, P509, P510, P511, and P535 [the sum of the monthly emissions rates calculated in d)(1)e. for the previous 12 months for each emissions unit].

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(1)]

- (2) The permittee shall verify and record whether or not water is flowing to each condenser at the beginning and end of each batch.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(1)]

- (3) The permittee shall perform monthly checks when the emissions unit is in operation, for any visible particulate emissions from the stack serving emissions units P505, P506 and P507 and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, etc.). The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal



operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term PTI P010984 and OAC rules 3745-77-07(A)(1) and 3745-17-07(A)]

e) Reporting Requirements

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

- a. any batch where water was not continuously flowing through the condenser on each unit.

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

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall submit semiannual written reports that identify:

- a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[OAC rule 3745-77-07(A)(3)(c)]

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 -

The VOC emissions from each emissions unit shall not exceed 0.60 pounds per ton of prepolymer product manufactured.

Applicable Compliance Method -

This VOC emissions limitation was determined by multiplying the emissions factor for uncontrolled non-fugitive VOC emissions by the 97% control efficiency



of the RTO [12.3 pounds VOC per ton of prepolymer x (1-0.97)] plus fugitive VOC emissions of 0.23 pound VOC per ton of prepolymer solution.

[Authority for term ORC 3704.03(T) and OAC rule 3745-77-07(C)]

b. Emission Limitation -

The combined VOC emissions from emissions units P505, 506, P507, P509, P510, P511, and P535 shall not exceed 1.40 tons on a rolling 12-month basis.

Applicable Compliance Method -

Compliance shall be based on the record keeping requirements of d)(1) and the sum of the VOC emissions from emissions units P505, 506, P507, P509, P510, P511, and P535 for the previous 12 months.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(C)]

c. Emission Limitation -

Emissions Units P505, P506, and P507: The particulate emissions from each emissions unit shall not exceed 1.39 pounds per hour.

Applicable Compliance Method -

Compliance with the particulate emissions limitation is based on the maximum hourly powdered material process rate of 8,700 pounds per hour multiplied by the amount of material that becomes airborne during the reactor fill process of 0.16% (U.S. EPA, AP-42, Section 11.12 background document June, 2006) multiplied by the 90 percent control efficiency (1-0.90) of the fabric filters on these emissions units.

[Authority for term OAC rules 3745-31-05(A)(3) and 3745-77-07(C)]

d. Emission Limitation -

Emissions Units P505, P506, and P507: The particulate emissions from each emissions unit shall not exceed 2.03 tons per year.

Applicable Compliance Method -

Compliance with the particulate emissions limitation is based on the maximum annual powdered material process rate of 12,690 tons per year multiplied by the amount of material that becomes airborne during the reactor fill process of 0.16% (U.S. EPA, AP-42, Section 11.12 background document June, 2006) multiplied by the 90 percent control efficiency (1 - 0.90) of the fabric filters on these emissions units.

[Authority for term OAC rules 3745-31-05(A)(3) and 3745-77-07(C)]



e. Emission Limitation -

Emissions Units P505, P506 and P507: The particulate emissions from each emissions unit shall not exceed 2.78 pounds per hour.

Applicable Compliance Method -

If requested, compliance with the particulate emissions limitation shall be determined through testing performed in accordance with U.S. EPA Reference Method 5 and OAC rule 3745-17-03(B)(10).

[Authority for term OAC rules 3745-17-11(B) and 3745-77-07(C)]

f. Emission Limitation -

Emissions Unit P515: The particulate emissions from this emissions unit shall not exceed 5.0 pounds per hour.

Applicable Compliance Method -

Compliance with the particulate emissions limitation is based on the maximum hourly process rate of 2.5 tons per hour multiplied by the emissions factor of 2.0 pounds particulate per ton of product.

[Authority for term OAC rules 3745-31-05(A)(3) and 3745-77-07(C)]

g. Emission Limitation -

Emissions Unit P515: The particulate emissions from this emissions unit shall not exceed 4.68 tons per year.

Applicable Compliance Method -

Compliance with the particulate emissions limitation is based on the maximum annual production rate of 4,683 tons per year multiplied by the permittee's engineering estimate of 2.0 pounds particulate per ton of product.

[Authority for term OAC rules 3745-31-05(A)(3) and 3745-77-07(C)]

h. Emission Limitation -

Emissions Unit P515: The particulate emissions from this emissions unit shall not exceed 6.52 pounds per hour.

Applicable Compliance Method -

If requested, compliance with the particulate emissions limitation shall be determined through testing performed in accordance with U.S. EPA Reference Method 5 and OAC rule 3745-17-03(B)(10).

[Authority for term OAC rules 3745-17-11(B) and 3745-77-07(C)]



i. Emission Limitation -

The RTO system shall achieve a minimum VOC destruction efficiency of 97% on a dry weight basis excluding methane.

Applicable Compliance Method -

Compliance with this emissions limitation shall be determined according to Section B.4. of this permit.

[Authority for term PTI P0119932 and OAC rules 3745-31-05(A)(3) and 3745-77-07(C)]

j. Emission Limitation -

Emissions Units P505, P506 P507 and P515: Visible particulate emissions from the stacks serving the fabric filters shall not exceed twenty percent opacity as a six-minute average.

Applicable Compliance Method -

If requested, compliance with the visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Reference Method 9 and OAC rule 3745-17-03(B)(10).

[Authority for term OAC rules 3745-17-07(A) and 3745-77-07(C)]

g) Miscellaneous Requirements

- (1) None.



4. Emissions Unit Group - Thixon Manufacturing: P051, P052, P053, P524, P529, P532, P537, P538 and P539

EU ID	Operations, Property and/or Equipment Description
P051	Emulsions: 500 gallon closed mixing vessel DI1001 with condenser; 1,000 gallon closed vessel R1002 with condenser; 400 gallon receiver TK1006, 30 gallon knockout pot TK1008, vented to RTO
P052	Clear Adhesives Manufacturing, Mixing Vessel 1027 with RTO
P053	DNSB Adhesives Manufacturing, Mixing Vessels 1028 and 1029 with RTO
P524	Reactor 145 with condenser and RTO
P529	Mixing Vessel 124 receiver common with 125 with condenser and RTO
P532	Ross Mixer/emulsifier 199 with condenser and RTO
P537	Mixing vessel 125 receiver common with 124 with condenser and RTO
P538	Mixing vessel 126 receiver common with 127 with condenser and RTO
P539	Mixing vessel 127 receiver common with 126 with condenser and RTO

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) b)(1)f.

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.	ORC 3704.03(T) PTI P0109847 issued 7/24/2013	The volatile organic compound (VOC) emissions from each emissions unit shall not exceed 8.00 pounds per ton of Thixon product manufactured. Compliance with this rule also includes compliance with OAC rules 3745-31-05(D), 3745-21-07(M)(1) and (M)(2). See b)(2)a., b)(2)b., b)(2)c. and b)(2)h.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008 PTI P0109847 issued 7/24/2013	The fugitive particulate emissions from each emissions unit shall not exceed 4.56 tons per year. See b)(2)a. Visible emissions of fugitive dust from each emissions unit shall not exceed twenty percent opacity as a three-minute



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		average See b(2)d.
c.	OAC rule 3745-31-05(A)(3)(a)(iii) June 30, 2008 PTI P0109847 issued 7/24/2013	The Best Available Technology (BAT) requirements of OAC rule 3745-31-05(A)(3) do not apply to these emissions units since the potential to emit for particulate emissions from each are less than 10 tons per year. See b)(2)e.
d.	OAC rule 3745-31-05(D) (Synthetic Minor to avoid being major for VOC and HAPs) PTI P0109847 issued 7/24/2013	See Sections B.2. through B.4., b)(2)c. and b)(2)f.
e.	OAC rule 3745-21-07(M)(1) and (M)(2)	<u>Applicable to emissions unit P524:</u> The emissions limitations specified by this rule are less stringent than the control requirement established pursuant to ORC 3704.03(T). See b)(2)g. and b)(2)h.
f.	OAC rule 3745-114 and ORC 3704.03(F)	See Section B.5.
g.	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust from each emissions unit shall not exceed twenty percent opacity as a three-minute average

(2) Additional Terms and Conditions

- a. The 8.00 pounds VOC per ton of Thixon product manufactured and 4.56 tons per year of particulate emissions limitations were developed for PTI purposes to reflect the potential to emit for each of these emissions units, therefore, it is not necessary to develop monitoring and record keeping requirements for these emission limitations.
- b. The condensers installed on these emissions units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent (VOC) 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.

- c. The combined VOC emissions from emissions units P051, P052, P053, P524, P529, P532, P537, P538, and P539 shall not exceed 13.5 tons on a rolling 12-month basis. All of the VOC emissions from the emissions units listed above shall be vented to the regenerative thermal oxidizer (RTO) that shall meet the operational, monitoring, and record keeping requirements of this permit, when one or more of the emissions units are in operation. The RTO system, shall achieve a minimum VOC destruction efficiency of 97% on a dry weight basis excluding methane.

The record keeping, reporting and testing requirements necessary to comply with the synthetic minor VOC emissions limitations are identified in Sections B.2. and B.4. of this permit.

- d. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- e. This rule paragraph applies once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(iii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.

- f. The hazardous air pollutant (HAP) emissions from all the emissions units at this facility shall not exceed 9.9 tons for any individual HAP and 24.9 tons for any combination of HAPs on a rolling 12-month basis.

The record keeping, reporting and testing requirements necessary to comply with the synthetic minor HAP emissions limitations are identified in Section B.3 of this permit.

- g. All of the VOC emissions from the emissions units P051, P052, P053, P524, P529, P532, P537, P538 and P539 shall be vented to the RTO that shall meet the operational, monitoring, and record keeping requirements of this permit, when one or more of the emissions units are in operation.
- h. The VOC emissions from the emissions units P051, P052, P053, P524, P529, P532, P537, P538 and P539 listed above shall be controlled through the application of a RTO system, operating at a minimum of 97% overall VOC destruction efficiency.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for these emissions units:
 - a. The name and identification of each Thixon product manufactured.
 - b. The weight, in tons, of each Thixon product manufactured in each emissions unit.
 - c. The uncontrolled VOC emissions factor for each Thixon product manufactured, in pounds of VOC emissions per ton of product manufactured.
 - d. The controlled VOC emissions factor for each Thixon product manufactured, in pounds of VOC emissions per ton of product manufactured [the uncontrolled VOC emissions factor from d)(1)c multiplied by the control efficiency for the RTO measured during the last performance test that demonstrated compliance].
 - e. The total VOC emissions for all Thixon products manufactured, in tons per month [the sum of d)(1)b x d)(1)d for each Thixon product manufactured].
 - f. The rolling, 12-month summation of the monthly VOC emissions from emissions units P051, P052, P053, P524, P529, P532, P537, P538, and P539 [the sum of the monthly emissions rates calculated in d for the previous 12 months for each emissions unit].

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(1)]

- (2) The permittee shall verify and record whether or not water is flowing to each condenser at the beginning and end of each batch.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(1)]

- (3) The permittee shall perform monthly checks, when the emissions unit is in operation, for any visible particulate emissions for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, etc.). The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.



If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term OAC rules 3745-77-07(A)(1) and 3745-31-05(A)(3)]

e) Reporting Requirements

(1) The permittee shall submit quarterly summaries of the following records:

- a. any batch where water was not continuously flowing through the condenser on each unit;

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

[Authority for term PTI P0109847 and OAC rule 3745-77-07(A)(3)]

(2) The permittee shall submit semiannual written reports that identify:

- a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
- b. any corrective actions taken to minimize or eliminate the visible emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[OAC rule 3745-77-07(A)(3)(c)]

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 -

The VOC emissions from each emissions unit shall not exceed 8.00 pounds per ton of Thixon product manufactured.

Applicable Compliance Method -

This VOC emissions limitation was determined by multiplying the emissions factor for uncontrolled non-fugitive VOC emissions by the 97% control efficiency of the RTO [242 pounds VOC per ton of polyester solution x (1-0.97)] plus fugitive VOC emissions of 0.65 pound VOC per ton of Thixon product.

[Authority for term ORC 3704.03(T) and OAC rule 3745-77-07(C)]

b. Emission Limitation -

The combined VOC emissions from emissions units P051, P052, P053, P524, P529, P532, P537, P538 and P539 shall not exceed 13.5 tons on a rolling 12-month basis.

Applicable Compliance Method -

Compliance shall be based on the record keeping requirements of d)(1) and the sum of the VOC emissions from emissions units P051, P052, P053, P524, P529, P532, P537, P538 and P539 for the previous 12 months.

[Authority for term PTI P0109847 and OAC rule 3745-77-07(C)]

c. Emission Limitation -

The fugitive particulate emissions from each emissions unit shall not exceed 4.56 tons per year

Applicable Compliance Method -

Compliance with the particulate emissions limitation is based on the maximum annual powdered material process rate of 2,851 tons per year multiplied by the amount of material that becomes airborne during the reactor fill process of 0.16% (U.S. EPA, AP-42, Section 11.12 background document June, 2006).

[Authority for term OAC rules 3745-31-05(A)(3) and 3745-77-07(C)]

d. Emission Limitation -

The RTO system, shall achieve a minimum VOC destruction efficiency of 97% on a dry weight basis excluding methane.



Applicable Compliance Method -

Compliance with this emissions limitation shall be determined according to Section B.4. of this permit.

[Authority for term PTI P0119932 and OAC rule and 3745-77-07(C)]

e. Emission Limitation -

Visible emissions of fugitive dust from each emissions unit shall not exceed twenty percent opacity as a three-minute average.

Applicable Compliance Method -

If requested, compliance with the visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Reference Method 9 and OAC rule 3745-17-03(B)(3).

[Authority for term OAC rules 3745-31-05(A)(3) and 3745-77-07(C)]

g) Miscellaneous Requirements

- (1) None.