Ohio Environmental Protection Agency

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

Certified Mail

3/3/2016

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

Mrs. Maureen Frushour
Polymer Additives, Inc.
7050 Krick Road
Walton Hills, OH 44146

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1318030264
Permit Number: P0119996
Permit Type: Administrative Modification
County: Cuyahoga

Dear Permit Holder:

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

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**
- **What should you do if you notice a spill or environmental emergency?**

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

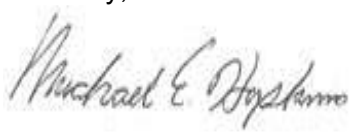
This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

What should you do if you notice a spill or environmental emergency?

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, please contact Cleveland Division of Air Quality at (216)664-2297 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



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

Cc: CDAQ

FINAL

Division of Air Pollution Control
Permit-to-Install and Operate
for
Polymer Additives, Inc.

Facility ID:	1318030264
Permit Number:	P0119996
Permit Type:	Administrative Modification
Issued:	3/3/2016
Effective:	3/3/2016
Expiration:	6/4/2024

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install and Operate
for
Polymer Additives, Inc.

Table of Contents

Authorization

Facility ID:	1318030264
Application Number(s):	M0003717
Permit Number:	P0119996
Permit Description:	PTIO administrative modification of permit P0115623 for emissions units P012, P014, P015, P018, P027, P028, P031, P033, P034, and P035 to accurately reflect the operating, monitoring, and recordkeeping of the emissions units and control equipment at the facility.
Permit Type:	Administrative Modification
Permit Fee:	$0.00
Issue Date:	3/3/2016
Effective Date:	3/3/2016
Expiration Date:	6/4/2024

Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Polymer Additives, Inc.
7050 KRICK ROAD
BEDFORD, OH 44146

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

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

Cleveland Division of Air Quality
2nd Floor
75 ErieviewPlaza
Cleveland, OH 44114
(216)664-2297

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0119996
Permit Description: PTIO administrative modification of permit P0115623 for emissions units P012, P014, P015, P018, P027, P028, P031, P033, P034, and P035 to accurately reflect the operating, monitoring, and recordkeeping of the emissions units and control equipment at the facility.

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

Emissions Unit ID:	**P012**
Company Equipment ID:	Liquids Blend Tank 6
Superseded Permit Number:	P0115623
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P014**
Company Equipment ID:	Liquids Reactor 5
Superseded Permit Number:	P0115623
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P015**
Company Equipment ID:	Liquids Reactor 6
Superseded Permit Number:	P0115623
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P018**
Company Equipment ID:	Liquids Reactor 7
Superseded Permit Number:	P0115623
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P027**
Company Equipment ID:	Soybean Oil Epoxidation Process
Superseded Permit Number:	P0115623
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P028**
Company Equipment ID:	Blender #1 & Blender #5
Superseded Permit Number:	P0115623
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P033**
Company Equipment ID:	Liquids Loading and Packaging
Superseded Permit Number:	P0115623
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P034**
Company Equipment ID:	Liquids Reactor 8
Superseded Permit Number:	P0115623
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P035**
Company Equipment ID:	Liquids Blend Tank 3
Superseded Permit Number:	P0115623
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

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

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

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

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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. Facility-Wide Terms and Conditions

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

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

      (1) None.

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

      (1) B.2

2. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63 Subpart VVVVVV, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing, Area Sources. Although Ohio EPA has determined that this Generally Available Control Technology NESHAP (GACT) applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised, that all requirements associated with this rule are in effect and shall be enforced by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: http://www.epa.gov/ttn/atw/area/arearules.html.

C. Emissions Unit Terms and Conditions

1. P012, Liquids Blend Tank 6

Operations, Property and/or Equipment Description:

4,000-gallon Blend Tank 6, the particulate emissions are controlled by a baghouse.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	VOC emissions shall not exceed 12 lbs/day and 2.2 TPY from the stack. Fugitive emissions of VOC shall not exceed 0.6 TPY. Particulate emissions shall not exceed 0.02 lb/hr and 0.1 TPY
b.	OAC rule 3745-21-07(M)	See b)(2)a. below.

(2) Additional Terms and Conditions

a. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no VOC control device for this emissions unit.

b. This is a batch operation with a maximum of 3 batches per day and 1,095 batches per year. The emission limitations represent the maximum potential to

emit when blending the product that produces the highest HAP and VOC emissions. Therefore, monitoring, recordkeeping and reporting requirements are not necessary.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.5 to 6.0 inches of water.

(2) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis when this emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this emissions unit:

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

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in "a" 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.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
VOC emissions shall not exceed 12 lbs/day (stack).

Applicable Compliance Method:
The permittee included detailed emission calculations with their application. Emission estimation methods are from the U.S. EPA Emissions Inventory Improvement Program, Volume II, Chapter 16 – Methods for estimating air emissions from Chemical Manufacturing Facilities, August 2007. Stack emissions were determined for the three phases of operation: liquid transfer, vessel heating and nitrogen purge. Fugitive emissions were determined for pump seals, valves (gas), valves (liquid), flanges, open-ended lines and sample connections.

b. Emission Limitation:
VOC emissions shall not exceed 2.2 TPY (stack) and 0.6 TPY (fugitive).

Applicable Compliance Method:
The stack ton per year emission rate shall be determined by multiplying the lbs/day emission rate in f)(1)a. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

The fugitive ton per year emission rate shall be determined by multiplying the fugitive emission rate determined in f)(1)a. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

c. Emission Limitation:
Particulate emissions shall not exceed 0.02 lb/hr.

Applicable Compliance Method:
Compliance shall be determined through use of a facility-specific particulate emission factor (0.0002 lb PM/lb solids) which is multiplied by the amount of solids per batch (800 lbs solids/batch) and divided by the batch processing time (8 hours/batch) to arrive at the lb/hr emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

d. Emission Limitation:
Particulate emissions shall not exceed 0.1 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8,760 hours/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lb/hr limitation.

g) Miscellaneous Requirements

(1) This emissions unit was installed in April 1976.

2. P014, Liquids Reactor 5

Operations, Property and/or Equipment Description:

Liquids Reactor 5 - 1,500-gallon reaction vessel equipped with a condenser for product reclaim, and the particulate emissions are controlled by a baghouse.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)	The particulate emission limitation specified in this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(F).
c.	OAC rule 3745-21-07(M)	See b)(2)a. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-31-05(F)	Particulate emissions shall not exceed 0.07 lb/hr and 0.3 TPY. Cadmium emissions shall not exceed 0.05 lb/hr and 0.2 TPY. VOC emissions shall not exceed 8.7 lbs/day and 1.6 TPY from the stack. Fugitive emissions of VOC shall not exceed 1.4 TPY.

(2) Additional Terms and Conditions

a. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no VOC control device for this emissions unit. The condenser is used for product reclaim.

b. This is a batch operation with a maximum of 1.5 batches per day and 548 batches per year. The emission limitations represent the maximum potential to emit when blending the product that produces the highest HAP and VOC emissions. Therefore, monitoring, recordkeeping and reporting requirements are not necessary.

c) Operational Restrictions

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

(2) The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) The average temperature of the exhaust gases from the condenser, for any 3-hour block of time when the emissions unit controlled by the condenser is in operation, shall not exceed 100 degrees Fahrenheit.

(2) The permittee shall properly operate, and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is 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 $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be 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 is in operation:

a. all 3-hour blocks of time, when the emissions unit controlled by the condenser was in operation, during which the average temperature of the exhaust gases from the condenser was more than 11 degrees Fahrenheit above the average temperature identified in d)(1) above; and

b. a log of the downtime for the capture (collection) system, condenser, and monitoring equipment when the associated emissions unit was in operation.

(3) Whenever the monitored temperature of the exhaust gases from the condenser deviates from the range/limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was deviation;

j. the temperature readings of the exhaust gas from 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 range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (Cleveland DAQ). The permittee may request revisions to the permitted exhaust gas temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit. In addition, approved revisions to the exhaust gas temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.5 to 6.0 inches of water.

(5) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis when this emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland DAQ.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the condenser during the 12-month reporting period for this emissions unit:

a. each period of time (start time and date, and end time and date) when the average temperature of the exhaust gases from the condenser was outside of the acceptable range;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the condenser;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature of the exhaust gases from the condenser into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(4) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this emissions unit:

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

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” 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.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:
Particulate emissions shall not exceed 0.07 lb/hr.

Applicable Compliance Method:
Compliance shall be determined through multiplying the emission factor provided by the facility for Cadmium (4 grams of Cd per pail) by the maximum batch size processed (28 pails per batch) and dividing by the batch processing time (16 hours) and the factor of (454 grams/lb) to arrive at the lb/hr emission rate.

Compliance shall be determined through use of the emission factor provided by the facility for Benzoic acid (0.02 lb per batch) and dividing the emission factor by the batch processing time (16 hours per batch) to arrive at the lb/hr emission rate.

The lb/hr emission rates calculated above are summed to obtain the total particulate emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:
Particulate emissions shall not exceed 0.3 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8,760 hours/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lb/hr limitation.

d. Emission Limitation:
Cadmium emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

Compliance shall be determined through multiplying the emission factor provided by the facility for Cadmium (4 grams of Cd per pail) by the maximum batch size processed (28 pails per batch) and dividing by the batch processing time (16 hours) and the factor of (454 grams/lb) to arrive at the lb/hr emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 29.

e. Emission Limitation:
Cadmium emissions shall not exceed 0.2 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the hourly Cadmium emission rate by the maximum operating schedule of 8,760 hours/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lb/hr limitation.

f. Emission Limitation:
VOC emissions shall not exceed 8.7 lbs/day (stack).

Applicable Compliance Method:
The permittee included detailed emission calculations with their application. Emission estimation methods are from the U.S. EPA Emissions Inventory Improvement Program, Volume II, Chapter 16 – Methods for estimating air emissions from Chemical Manufacturing Facilities, August 2007. Stack emissions were determined for the three phases of operation: liquid transfer, vessel heating and nitrogen purge. Fugitive emissions were determined for pump seals, valves (gas), valves (liquid), flanges, open-ended lines and sample connections.

g. Emission Limitation:
VOC emissions shall not exceed 1.6 TPY (stack) and 1.4 TPY (fugitive).

Applicable Compliance Method:
The stack ton per year emission rate shall be determined by multiplying the lbs/day emission rate in f)(1)a. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

The fugitive ton per year emission rate shall be determined by multiplying the fugitive emission rate determined in f)(1)f. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

g) Miscellaneous Requirements

(1) This emissions unit was installed on June 1, 1968.

3. P015, Liquids Reactor 6

Operations, Property and/or Equipment Description:

Liquids Reactor 6 - 1,500-gallon reaction vessel equipped with a condenser for product reclaim, and the particulate emissions are controlled by a baghouse.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 0.70 lb/hr.
c.	OAC rule 3745-21-07(M)	See b)(2)a. below.
d.	OAC rule 3745-31-05(F)	VOC emissions shall not exceed 27 lbs/day and 4.9 TPY from the stack. Fugitive emissions of VOC shall not exceed 1.6 TPY.

(2) Additional Terms and Conditions

a. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no VOC control device for this emissions unit. The condenser is used for product reclaim.

b. This is a batch operation with a maximum of 1.5 batches per day and 548 batches per year. The emission limitations represent the maximum potential to emit when blending the product that produces the highest HAP and VOC emissions. Therefore, monitoring, recordkeeping and reporting requirements are not necessary.

c) Operational Restrictions

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

(2) The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) The average temperature of the exhaust gases from the condenser, for any 3-hour block of time when the emissions unit controlled by the condenser is in operation, shall not exceed 100 degrees Fahrenheit.

(2) The permittee shall properly operate, and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is 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 $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be 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 is in operation:

a. all 3-hour blocks of time, when the emissions unit controlled by the condenser was in operation, during which the average temperature of the exhaust gases from the condenser was more than 11 degrees Fahrenheit above the average temperature identified in d)(1) above; and

b. a log of the downtime for the capture (collection) system, condenser, and monitoring equipment when the associated emissions unit was in operation.

(3) Whenever the monitored temperature of the exhaust gases from the condenser deviates from the range/limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was deviation;

j. the temperature readings of the exhaust gas from 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 range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (Cleveland DAQ). The permittee may request revisions to the permitted exhaust gas temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit. In addition, approved revisions to the exhaust gas temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.5 to 6.0 inches of water.

(5) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis when this emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland DAQ.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the condenser during the 12-month reporting period for this emissions unit:

a. each period of time (start time and date, and end time and date) when the average temperature of the exhaust gases from the condenser was outside of the acceptable range;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the condenser;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature of the exhaust gases from the condenser into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(4) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this emissions unit:

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

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;

d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in "a" 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.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:
Particulate emissions shall not exceed 0.70 lb/hr.

Applicable Compliance Method:
Compliance shall be determined through use of the emission factor provided by the facility for particulate emissions (0.02 lb per batch) and dividing the emission factor by the batch processing time (16 hours per batch) to arrive at the lb/hr emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:
VOC emissions shall not exceed 27 lbs/day (stack).

Applicable Compliance Method:
The permittee included detailed emission calculations with their application. Emission estimation methods are from the U.S. EPA Emissions Inventory Improvement Program, Volume II, Chapter 16 – Methods for estimating air emissions from Chemical Manufacturing Facilities, August 2007. Stack emissions were determined for the three phases of operation: liquid transfer, vessel heating and nitrogen purge. Fugitive emissions were determined for pump seals, valves (gas), valves (liquid), flanges, open-ended lines and sample connections.

d. Emission Limitation:
VOC emissions shall not exceed 4.9 TPY (stack) and 1.6 TPY (fugitive).

Applicable Compliance Method:
The stack ton per year emission rate shall be determined by multiplying the lbs/day emission rate in f)(1)a. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

The fugitive ton per year emission rate shall be determined by multiplying the fugitive emission rate determined in f)(1)a. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

g) Miscellaneous Requirements

(1) This emissions unit was installed on June 1, 1967.

4. P018, Liquids Reactor 7

Operations, Property and/or Equipment Description:

Liquids Reactor 7 - 1,500-gallon reaction vessel equipped with a condenser for mineral spirits (cleanup) reclaim, and particulate emissions are controlled by a scrubber.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)	The particulate emission limitation specified in this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(F).
c.	OAC rule 3745-31-05(F)	Particulate emissions shall not exceed 0.91 lb/hr and 4.0 TPY.

(2) Additional Terms and Conditions

a. This is a batch operation with a maximum of 1 batch per day and 365 batches per year. The emission limitations represent the maximum potential to emit when blending the product that produces the highest HAP emissions. Therefore, monitoring, recordkeeping and reporting requirements are not necessary.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the scrubber at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the flow rate through the scrubber, that shall be maintained in order to demonstrate compliance, shall be between 10 to 60 gallons per minute.

(2) The permittee shall properly operate, and maintain equipment to continuously monitor the flow rate through the scrubber (in gallons per minute) on a daily basis when this emissions unit is in operation. The permitee shall record the flow rate through the scrubber on a daily basis when this emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) 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 control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) 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 the corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the flow rate readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

These range(s) and/or limit(s) for the flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted range or limit for the flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate for this emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland DAQ.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the scrubber during the 12-month reporting period for this emissions unit:

a. each period of time (start time and date, and end time and date) when the flow rate through the scrubber was outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the scrubber;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the flow rate into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:
Particulate emissions shall not exceed 0.91 lb/hr.

Applicable Compliance Method:
Compliance shall be determined through multiplying the emission factor provided by the facility for particulate emissions (0.0002 lb of PE/lb of solids) by the maximum batch size processed (11,500 lbs of solids per batch) and dividing by the batch processing time (24 hours) to arrive at the lb/hr emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:
Particulate emissions shall not exceed 4.0 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8,760 hours/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lb/hr limitation.

g) Miscellaneous Requirements

(1) This emissions unit was installed on June 1, 1970.

(2) This vessel averages 4 boil out operations per year. Each boil out consists of 55 gallons of mineral spirits added to water in the vessel to clean out any residual solids from the batches. The mineral spirits are collected and disposed of after each boil out or series of boil outs depending on the amount of solids captured. The material is disposed of as hazardous waste in the facility's bulk flammable liquids waste stream.

5. P027, Soybean Oil Epoxidation Process

Operations, Property and/or Equipment Description:

Soybean Oil Epoxidation Process (R-1, R-2, R-3, and process vessels), the VOC emissions are controlled by an epoxy scrubber.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-00317 issued February 7, 1979)	The requirements of this rule include compliance with the requirements of OAC rule 3745-21-07(M)(2) and OAC rule 3745-21-07(M)(3)(b).
b.	OAC rule 3745-21-07(M)(2)	See b)(2)a. below.
c.	OAC rule 3745-21-07(M)(3)(b)	See b)(2)b. below.
d.	OAC rule 3745-31-05(F)	VOC (formic acid) emissions shall not exceed 3.40 lbs/hr and 14.9 TPY.

(2) Additional Terms and Conditions

a. This emissions unit shall be equipped with a control system that reduces the organic compound emissions by an overall control efficiency of at least eighty-five per cent, by weight.

b. The permitee shall submit a notification to the Cleveland DAQ of the need to be specified in paragraph (M)(1) of OAC rule 3745-21-07. The notification should include an identification of this emissions unit.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the outside epoxy scrubber at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the pressure drop across the outside epoxy scrubber, that shall be maintained in order to demonstrate compliance, shall be between 1.0 to 8.0 inches of water.

(2) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop across the epoxy scrubber (in inches of water) on a daily basis when this emissions unit is in operation. The permitee shall record the pressure drop across the scrubber on a daily basis when this emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) 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 control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) 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 the corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

These range(s) and/or limit(s) for the pressure drop are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted range or limit for the pressure drop based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate for this emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland DAQ.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the epoxy scrubber during the 12-month reporting period for this emissions unit:

a. each period of time (start time and date, and end time and date) when the pressure drop across the outside epoxy scrubber was outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the outside scrubber;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the pressure drop into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
VOC (formic acid) emissions shall not exceed 3.40 lbs/hr.

Applicable Compliance Method:
Compliance shall be determined through multiplying the formic acid content of the scrubber water 0.2% (0.002) by the maximum hourly flow rate for the scrubber (1,375.3 gallons/hr), scrubber water density of (8.34 lbs/gallon) and the control efficiency of the scrubber 85% (1- 0.85) to arrive at the lb/hr emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 25 and the procedures specified in 40 CFR Part 60, Appendix A.

b. Emission Limitation:
VOC (formic acid) emissions shall not exceed 14.9 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the hourly formic acid emission rate by the maximum operating schedule of 8,760 hours/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lb/hr limitation.

g) Miscellaneous Requirements

(1) None.

6. P028, Blender #1 & Blender #5

Operations, Property and/or Equipment Description:

Blender # 1 & Blender # 5, particulate emissions are controlled by a baghouse.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-02800 issued January 12, 1994)	Particulate emissions shall not exceed 1.45 lbs/hr and 6.35 TPY. Visible particulate emissions shall not exceed 5% opacity as a six minute average.
b.	OAC rule 3745-17-07(A)	The visible particulate emission limitation specified in this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-11(B)	The particulate emission limitation specified in this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.25 to 7.0 inches of water.

(2) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis when this emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland DAQ.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this emissions unit:

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

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in "a" 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.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
Visible particulate emissions shall not exceed 5% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:
Particulate emissions shall not exceed 1.45 lbs/hr.

Applicable Compliance Method:
Compliance shall be determined through use of the dust collectors manufacturer emission rate of (0.01 grains/dscf) which is multiplied by the exhaust flow rate(1,000 dscf/minute), the factor of (60 minutes/hour) divided by the factor of (lb/7,000 grains) to arrive at the lb/hr emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:
Particulate emissions shall not exceed 6.35 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8,760 hours/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lb/hr limitation.

g) Miscellaneous Requirements

(1) None.

7. P031, Pretreatment-Biological Wastewater Treatment System

Operations, Property and/or Equipment Description:

31,000 gallons per day Pretreatment-Biological Wastewater Treatment System

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-02618 issued on February 3, 1993)	VOC emissions shall not exceed 20 lbs/day and 3.7 TPY.
b.	OAC rule 3745-21-07(M)	See b)(2)a. below.

(2) Additional Terms and Conditions

a. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no VOC control device for this emissions unit.

c) Operational Restrictions

(1) The daily average flow rate of the wastewater determined each month for this emissions unit shall not exceed 30,800 gallons.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the calculated average daily flow rate of the wastewater for each month.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland DAQ.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report any calculated average daily flow rate of the wastewater that exceeds 30,800 gallons.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
VOC emissions shall not exceed 20 lbs/day.

Applicable Compliance Method:
The permittee included detailed emission calculations with their application. Emissions were calculated using the equations outlined in AP-42 Section 4.3, Wastewater Collection, Treatment and Storage, Fifth Edition, Volume 1, February 1998. Emissions were determined at the North and South Aeration Basin phase of the wastewater treatment process. There are only two locations in the wastewater treatment system that are open to the atmoshphere: neutralization & oil separation (small vent in tank), and the North and South aeration basins. Analytical data are only available for the influent to the aeration basins; therefore, it is assumed that all emissions of organics occur at the aeration basins.

b. Emission Limitation:
VOC emissions shall not exceed 3.7 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the daily VOC emission rate by the maximum operating schedule of 365 days/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lbs/day limitation.

g) Miscellaneous Requirements

(1) The organic concentration and the amount of wastewater processed in this emissions unit remain consistent. Therefore, there are no variations in the VOC emissions generated from this emissions unit.

8. P033, Liquids Loading and Packaging

Operations, Property and/or Equipment Description:

Product loading and packaging with carbon adsorption system

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-03162 issued November 27, 1996)	VOC emissions shall not exceed 1.67 lbs/hr and 7.3 TPY. See b)(2)a. below.
b.	OAC rule 3745-21-07(M)(2)	The control efficiency requirement specified by this rule is less stringent than the control efficiency established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The BAT determination established for this emissions unit is the use of a carbon adsorption system with a 99% control efficiency.

c) Operational Restrictions

(1) All of the VOC emissions from this emissions unit shall be vented to the carbon adsorber that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.

(2) The permitee shall replace the carbon bed every three years or when the throughput of product exceeds 4,000,000 gallons, whichever comes first.

(3) The permitee shall replace the carbon bed should the monthly monitoring indicate a confirmed breakthrough of the VOCs through the carbon adsorber.

d) Monitoring and/or Recordkeeping Requirements

(1) The permitee shall monitor the carbon bed monthly with a properly calibrated photoionization detector, to determine if a breakthrough has occurred. The monitoring shall be performed at a point where the emissions vent to the atmosphere and while the emission unit is in operation. For each monthly monitoring, the permittee shall take five (5) measurements at one minute intervals. If any of the measurements exceed the breakthrough amount as defined below, a second set of five measurements shall be taken to confirm the presence of a breakthrough.

(2) A confirmed breakthrough of VOC shall be deemed to have occurred if any of the second set of five measurements of the concentration of VOC's at the monitoring point, as measured in accordance with the manufacturer's instructions, exceed fifteen (15) parts per million VOC above the ambient background level. The ambient background level shall be determined by quarterly monitoring with a properly calibrated photoionization detector, to be performed by the permtitee at a location that is a substantial distance from any source of VOC's.

(3) The permitee shall maintain monthly records to demonstrate compliance with the above limitations, including, the volume of gallons throughput, all measurements of VOC emissions from the emissions unit, and all measurements of ambient VOC background levels.

(4) Whenever the monitored carbon bed VOC concentration to determine breakthrough per d)(2) 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 a deviation;

j. the carbon bed VOC concentration to determine breakthrough per d)(2) readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

The carbon bed VOC concentration to determine breakthrough per d)(2)limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted carbon bed VOC concentration to determine breakthrough limit based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the carbon bed VOC concentration to determine breakthrough limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland DAQ.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the carbon adsorber during the 12-month reporting period for this emissions unit:

a. each period of time (start time and date, and end time and date) when the VOC concentration to determine breakthrough of the carbon bed after replacement was outside of the acceptable range;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the carbon adsorber;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in ”a” or “b” where prompt corrective action, that would bring the emissions unit into compliance and/or the VOC concentration to determine breakthrough of the carbon bed (after replacement) into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
VOC emissions shall not exceed 1.67 lbs/hr.

Applicable Compliance Method:
Compliance shall be determined through multiplying the maximum batch size for this emissions unit (42,000 lbs/batch), the number of batches processed per day (1 batch/day), the maximum % by weight of solvent contained in the batch (1% or 0.01), the 99% control efficiency of the carbon adsorber (1- 0.99) and dividing by 24 hrs/day to arrive at the lb/hr emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 25.

b. Emission Limitation:
VOC emissions shall not exceed 7.3 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the hourly lb/hr emission rate by the maximum operating schedule of 8,760 hours/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lb/hr limitation.

g) Miscellaneous Requirements

(1) None.

9. P034, Liquids Reactor 8

Operations, Property and/or Equipment Description:

Liquids Reactor 8 System equipped with a condenser for product reclaim, the VOC and particulate emissions are controlled by a liquid scrubber, and two baghouses.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-03163 issued November 27, 1996)	VOC emissions shall not exceed 23.6 lbs/day and 4.3 TPY from the stack. Fugitive emissions of VOC shall not exceed 3.0 TPY.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	The particulate emission limitation specified in this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(F).
d.	OAC rule 3745-21-07(M)(2)	See b)(2)a. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-21-07(M)(3)(b)	See b)(2)b. below.
f.	OAC rule 3745-31-05(F)	Particulate emissions shall not exceed 0.21 lb/hr and 0.9 TPY.

(2) Additional Terms and Conditions

a. This emissions unit shall be equipped with a control system that reduces the organic compound emissions by an overall control efficiency of at least eighty-five per cent, by weight.

b. The permitee shall submit a notification to the Cleveland DAQ of the need to be specified in paragraph (M)(1) of OAC rule 3745-21-07. The notification should include an identification of this emissions unit.

c. This is a batch operation with a maximum of 1.5 batches per day and 548 batches per year. The emission limitations represent the maximum potential to emit when blending the product that produces the highest HAP and VOC emissions. Therefore, monitoring, recordkeeping and reporting requirements are not necessary.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the scrubber at all times the emissions unit is in operation.

(2) The emissions from this emissions unit shall also be vented to the manway baghouse whenever solids are being added to the reactor.

(3) The emissions from this emissions unit shall also be vented to the conveyor baghouse whenever the automated solids charging system is in operation.

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

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the flow rate through the scrubber, that shall be maintained in order to demonstrate compliance, shall be between 10 to 60 gallons per minute.

(2) The permittee shall properly operate, and maintain equipment to continuously monitor the flow rate throughthe scrubber (in gallons per minute) on a daily basis when this emissions unit is in operation. The permitee shall record the flow rate through the

scrubber on a daily basis when this emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) 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 control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) 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 the corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the flow rate readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

These range(s) and/or limit(s) for the flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted range or limit for the flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate for this emissions unit. In addition, approved revisions to the range or 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.

(3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the manway baghouse is between 0.5 to 6.0 inches of water.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the conveyor baghouse is between 2 to 10 inches of water.

(5) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across each baghouse when solids are being loaded in the reactor or when the automated solids charging system is in operation.. The permittee shall record the pressure drop across each baghouse on a daily basis when solids are being loaded in the reactor or when the automated solids charging system is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across each baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or 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.

(6) The average temperature of the exhaust gases from the condenser, for any 3-hour block of time when the emission unit controlled by the condenser is in operation, shall not exceed 100 degrees Fahrenheit.

(7) The permittee shall properly operate, and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is 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 $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:

a. all 3-hour blocks of time, when the emissions unit controlled by the condenser was in operation, during which the average temperature of the exhaust gases from the condenser was more than 11 degrees Fahrenheit above the average temperature identified in d)(5) above; and

b. a log of the downtime for the capture (collection) system, condenser, and monitoring equipment when the associated emissions unit was in operation.

(8) Whenever the monitored temperature of the exhaust gases from the condenser deviates from the range/limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was deviation;

j. the temperature readings of the exhaust gas from 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 range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted exhaust gas temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit. In addition, approved revisions to the exhaust gas temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland DAQ.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the scrubber during the 12-month reporting period for this emissions unit:

a. each period of time (start time and date, and end time and date) when the flow rate through the scrubber was outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the scrubber;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the flow rate into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(4) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouses during the 12-month reporting period for this emissions unit:

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

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation when solids were being loaded to the reactor and the process emissions were not vented to the manway baghouse;

c. any period of time (start time and date, and end time and date) when the emissions unit was in operation when the automated solids charging system was in operation and the process emissions were not vented to the conveyor baghouse;

d. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

e. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

f. each incident of deviation described in “a” 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.

(5) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the condenser during the 12-month reporting period for this emissions unit:

a. each period of time (start time and date, and end time and date) when the average temperature of the exhaust gases from the condenser was outside of the acceptable range;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the condenser;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature of the exhaust gases from the condenser into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
VOC emissions shall not exceed 23.6 lbs/day (stack).

Applicable Compliance Method:
The permittee included detailed emission calculations with their application. Emission estimation methods are from the U.S. EPA Emissions Inventory Improvement Program, Volume II, Chapter 16 – Methods for estimating air emissions from Chemical Manufacturing Facilities, August 2007. Stack emissions were determined for the three phases of operation: liquid transfer, vessel heating and nitrogen purge. Fugitive emissions were determined for pump seals, valves (gas), valves (liquid), flanges, open-ended lines and sample connections.

b. Emission Limitation:
VOC emissions shall not exceed 4.3 TPY (stack) and 3.0 TPY (fugitive).

Applicable Compliance Method:
The stack ton per year emission rate shall be determined by multiplying the lbs/day emission rate in f)(1)a. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

The fugitive ton per year emission rate shall be determined by multiplying the fugitive emission rate determined in f)(1)a. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

c. Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

d. Emission Limitation:
Particulate emissions shall not exceed 0.21 lb/hr.

Applicable Compliance Method:
Compliance shall be determined through multiplying the emission factor provided by the facility for particulate emissions (0.0002 lb of PE/lb of solids) by the maximum batch size processed (11,000 lbs of solids per batch), the 99% control efficiency of the baghouse (1- 0.99) and dividing by the batch processing time (16 hours) to arrive at the lb/hr emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

e. Emission Limitation:
Particulate emissions shall not exceed 0.9 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the hourly lb/hr emission rate by the maximum operating schedule of 8,760 hours/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lb/hr limitation.

g) Miscellaneous Requirements

(1) None.

10. P035, Liquids Blend Tank 3

Operations, Property and/or Equipment Description:

#3 Liquids Blend Tank equipped with a condenser for product reclaim, and the particulate emissions are controlled by a baghouse.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI # 13-03157 issued April 23, 1997)	VOC emissions shall not exceed 40 lbs/day and 7.3 TPY from the stack. Fugitive emissions of VOC shall not exceed 1.85 TPY. Particulate emissions shall not exceed 0.26 lb/hr and 1.14 TPY Visible particulate emissions shall not exceed 5% opacity as a six minute average.
b.	OAC rule 3745-17-07(A)	The visible particulate emission limitation specified in this rule is less stringent than the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	The particulate emission limitation specified in this rule is less stringent than the particulate emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-21-07(M)	See b)(2)a. below.

(2) Additional Terms and Conditions

a. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no VOC control device for this emissions unit.

b. This is a batch operation with a maximum of 2 batches per day and 730 batches per year. The emission limitations represent the maximum potential to emit when blending the product that produces the highest HAP and VOC emissions. Therefore, monitoring, recordkeeping and reporting requirements are not necessary.

c) Operational Restrictions

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

(2) The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) The average temperature of the exhaust gases from the condenser, for any 3-hour block of time when the emissions unit controlled by the condenser is in operation, shall not exceed 100 degrees Fahrenheit.

(2) The permittee shall properly operate, and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit is 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 $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be 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 is in operation:

a. all 3-hour blocks of time, when the emissions unit controlled by the condenser was in operation, during which the average temperature of the exhaust gases from the condenser was more than 11 degrees Fahrenheit above the average temperature identified in d)(1) above; and

b. a log of the downtime for the capture (collection) system, condenser, and monitoring equipment when the associated emissions unit was in operation.

(3) Whenever the monitored temperature of the exhaust gases from the condenser deviates from the range/limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was deviation;

j. the temperature readings of the exhaust gas from 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 range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (Cleveland DAQ). The permittee may request revisions to the permitted exhaust gas temperature range/limit based upon information obtained

during future performance tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit. In addition, approved revisions to the exhaust gas temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.5 to 6.0 inches of water.

(5) The permittee shall properly operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis when this emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

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

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

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

This range or limit on the pressure drop across the baghouse are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland DAQ. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

e) Reporting Requirements

(1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Cleveland DAQ.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Cleveland DAQ by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

(3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the condenser during the 12-month reporting period for this emissions unit:

a. each period of time (start time and date, and end time and date) when the average temperature of the exhaust gases from the condenser was outside of the acceptable range;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the condenser;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature of the exhaust gases from the condenser into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(4) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this emissions unit:

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

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;

c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” 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.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
VOC emissions shall not exceed 40 lbs/day. (stack)

Applicable Compliance Method:
The permittee included detailed emission calculations with their application. Emission estimation methods are from the U.S. EPA Emissions Inventory Improvement Program, Volume II, Chapter 16 – Methods for estimating air emissions from Chemical Manufacturing Facilities, August 2007. Stack emissions were determined for the three phases of operation: liquid transfer, vessel heating and nitrogen purge. Fugitive emissions were determined for pump seals, valves (gas), valves (liquid), flanges, open-ended lines and sample connections.

b. Emission Limitation:
VOC emissions shall not exceed 7.3 TPY (stack) and 1.85 TPY (fugitive).

Applicable Compliance Method:
The stack ton per year emission rate shall be determined by multiplying the

lbs/day emission rate in f)(1)a. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

The fugitive ton per year emission rate shall be determined by multiplying the fugitive emission rate determined in f)(1)a. above by 365 days/year and dividing by the factor of 2,000 pounds/ton.

c. Emission Limitation:
Visible particulate emissions shall not exceed 5% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

d. Emission Limitation:
Particulate emissions shall not exceed 0.26 lb/hr.

Applicable Compliance Method:
Compliance shall be determined through multiplying the emission factor provided by the facility for particulate emissions (0.0002 lb of PE/lb of solids) by the maximum batch size processed (1,200 lbs of solids per batch) and dividing by the batch processing time (12 hours) to arrive at the lb/hr emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

e. Emission Limitation:
Particulate emissions shall not exceed 1.14 TPY.

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the hourly particulate emission rate by the maximum operating schedule of 8,760 hours/year, and dividing by 2,000 pounds/ton. Therefore, compliance with the annual emission limitation shall be demonstrated provided compliance is maintained with the lb/hr limitation.

g) Miscellaneous Requirements

(1) None.