

Facility ID: 0247040822 Issuance type: Title V Draft Permit

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part II - Specific Facility Terms and Conditions

a State and Federally Enforceable Section

1. The following emissions units contained in this permit are subject to 40 CFR Part 63, Subpart UUUU: P001, P002, P003, P004, P005, P007, P008, P009 and P010. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Ohio EPA, Northeast District office.
2. The following insignificant emissions units are located at the facility:
B001 - 4.0 MM Btu/hour gas-fired boiler. Boiler #1 (02-4768);
B002 - 4.0 MM Btu/hour gas-fired boiler. Boiler #2 (02-4768);
T001 - 23,500-gallon storage tank containing carbon disulfide (02-16640); and
T002 - 23,500-gallon storage tank containing carbon disulfide (02-16640).

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

b State Only Enforceable Section

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:
B003 - 4.0 MM Btu/hour gas-fired boiler. Boiler #3;
Z004 - 8,000-gallon storage tank containing 15% sodium hypochlorite;
Z005 - 6,000-gallon storage tank containing 93% sulfuric acid;
Z006 - 6,000-gallon storage tank containing fungicide;
Z007 - 10,000-gallon storage tank containing magnesium chloride;
Z008 - 10,000-gallon storage tank containing magnesium chloride;
Z010 - 6,000-gallon storage tank containing 50% hydrogen peroxide;
Z011 - 16,000-gallon storage tank containing 50% NaOH; and
Z012 - 16,000-gallon storage tank containing 50% NaOH.

- [Go to Part III for Emissions Unit P001](#)
- [Go to Part III for Emissions Unit P002](#)
- [Go to Part III for Emissions Unit P003](#)
- [Go to Part III for Emissions Unit P004](#)
- [Go to Part III for Emissions Unit P005](#)
- [Go to Part III for Emissions Unit P007](#)
- [Go to Part III for Emissions Unit P008](#)
- [Go to Part III for Emissions Unit P009](#)
- [Go to Part III for Emissions Unit P010](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P001 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Xanthation Reactor # 1 and support equipment (200-gallon steeping caustic tank, 200-gallon carbon disulfide batch tank, 50-gallon water tank) with Biofiltration System and Packed Bed Scrubber	OAC rule 3745-31-05(A)(3) (PTI 02-18240)	Emissions of organic compounds (OC) shall not exceed 0.25 pound per hour and 1.1 tons per year.
	OAC rule 3745-21-07(G)(2) 40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	Combined facility emissions of OC shall not exceed 50.8 pounds per hour and 222.5 tons per year. See sections A.I.2.a through A.I.2.c. Exempt, see section A.I.2.d.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a six-month rolling average. See sections A.I.2.e through A.I.2.i. Table 10 of Subpart UUUU of 40 CFR Part 63 - General Provisions Applicability to Subpart UUUU which shows which parts of the General Provisions in 40 CFR 63.1 - 15 apply.

2. Additional Terms and Conditions

- a. This emissions unit shall be vented to a biofiltration system at all times. The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it. This removal efficiency shall be determined based on the arithmetic average of the preceding sixty (60) consecutive days' average removal efficiency.
- b. The inlet to the biofiltration units shall capture a minimum of 85 percent (%) of all facility emissions of OC and hydrogen sulfide. This capture efficiency shall be determined by monitoring the inlet concentrations of OC and hydrogen sulfide to the biofiltration units and the inlet concentrations of OC and hydrogen sulfide to the plant ventilation stack. (See section A.V.1.f. below.)
- c. While this emissions unit is in operation, a negative pressure shall be maintained within the manufacturing area of the facility which contains the emissions units. (See section A.V.1.g. below.)
- d. The permittee shall not employ organic liquids which are photochemically reactive, as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (G)); therefore, paragraph (G) is no longer part of the State regulations. However, U.S. EPA has not yet approved the

revisions to OAC rule 3745-21-07 as part of the federally-approved State Implementation Plan (SIP). The requirement to not employ organic liquids which are photochemically reactive shall cease on the date the U.S. EPA approves the removal of OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds.

- e. All vent streams vented to a control device shall be routed through a closed-vent system.
- f. All closed-vent systems containing a bypass line that is able to divert a vent stream away from a control device shall secure the bypass in the closed position with a car-seal or lock and key type configuration and inspect the seal or closure mechanism at least once per month.
- g. Periods of planned routine maintenance of each control device, during which the control device does not meet the applicable emissions limit, must not exceed 240 hours per year.
- h. The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- i. The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR, Section 63.6(e)(3).

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. The pressure drop across the biofiltration system (from the inlet duct work of the biofiltration system to the inlet duct work of the back-up scrubber) shall be maintained within the range of 0.5 to 15.0 inches of water while the emissions unit is in operation.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
2. The average gas temperature at the inlet of the biofiltration system shall not be more than 50 degrees Centigrade.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
3. To ensure the sulfate concentration of each biofiltration systems discharge liquor remains below 5 percent (%), the conductivity of the discharge liquor shall not exceed 200 millisiemens.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The pH of the back-up scrubber liquor, when operating, shall be maintained above 10.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the records required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall maintain the following for the biofilter:
 - a. the daily average biofilter inlet gas temperature;
 - b. the daily average biofilter effluent pH; and
 - c. the daily average pressure drop.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the biofiltration system while the 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). The permittee shall record the pressure drop across the biofiltration system on a daily basis.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

4. The permittee shall operate and maintain a continuous temperature monitor which measures the gas temperature at the inlet of the biofiltration system when the emissions unit is operating. Units shall be in degrees Centigrade. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. When the caustic scrubber is operating, the permittee shall maintain the following:
 - a. the daily average pressure drop;
 - b. the daily average scrubber liquid flow rate;
 - c. the daily average scrubber liquid pH; and
 - d. the daily average scrubber liquid conductivity.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall monitor the conductivity of each biofiltration system's discharge liquor weekly. From this data, the permittee shall determine the sulfate concentration of the discharge liquor.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
7. The permittee shall maintain a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall determine an average daily removal efficiency for the air pollution control system (i.e., biofiltration unit and backup scrubber) for OC and hydrogen sulfide. The inlet to and outlet from the biofiltration system shall be monitored, at least once per shift, while the facility is operating, using a gas chromatograph. The daily removal efficiency shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
9. The permittee shall determine average daily emissions from the plant ventilation stack for OC and hydrogen sulfide. The plant ventilation stack shall be monitored, at least once per shift, while the facility is operating, gathering three sets of samples, and within one hour of monitoring the biofiltration stack, using a gas chromatograph. This daily average shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
10. The permittee shall ensure, once per shift, that the manufacturing area of the facility is maintained under negative pressure, in accordance with the procedure specified in section A.V.1.g.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
11. The permittee shall inspect annually all closed-vent systems used to route emissions to a control device.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
12. During start-up, shutdown and malfunctions, deviations are not violations as long as the permittee can demonstrate that the SSM Plan was followed.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
13. All monitoring shall be continuous except for during startup, shutdown, or malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
14. The permittee shall maintain records, that are easily accessible, of the following for at least five (5) years:
 - a. each notification and report that is submitted;
 - b. all records related to start-up, shutdown, and malfunctions;
 - c. a site-specific monitoring plan;
 - d. records of performance tests;
 - e. nitrogen unloading and storage systems;
 - f. records of material balances;
 - g. records of calculations;
 - h. control device maintenance records; and
 - i. safety device records.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports identifying each day during which any photochemically reactive materials were employed.

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the reports required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall submit pressure drop deviation (excursion) reports identifying all periods of time during which the pressure drop across the biofiltration system did not comply with the allowable range specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the average inlet temperature to the biofiltration system did not comply with the temperature restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall submit pH deviation (excursion) reports identifying all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the sulfate concentration of the biofiltration system's discharge liquor did not comply with the requirements specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC removal efficiency from the biofiltration system was less than 80 percent (%) and the actual average OC removal efficiency for each such day.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
7. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC capture efficiency of the biofiltration system was less than 85 percent (%) and the actual average OC capture efficiency.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the pressure in the manufacturing area of the facility did not comply with the negative pressure requirement.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
9. Compliance reports must contain the following information:
 - a. company name and address;
 - b. statement by a responsible official, with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete;
 - c. date of report and beginning and ending dates of the reporting period;
 - d. if a start-up, shutdown, or malfunction occurred during the reporting period;
 - e. if no deviation occurred, a statement to that effect shall be made;
 - f. the total operating time of each emissions unit; and
 - g. the number, duration, and cause of any deviations that occurred as well as any corrective action taken.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
10. The permittee shall report each instance in which continuous compliance was not demonstrated and each operating limit that was exceeded. This includes periods of start-up, shutdown, and malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. Testing Requirements

1. Compliance with the emission limitations and control system requirements specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

OC emissions shall not exceed 0.25 pound per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 15.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

OC emissions shall not exceed 1.1 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (0.25 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

Combined facility emissions of OC shall not exceed 50.8 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Combined facility emissions of OC shall not exceed 222.5 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (50.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it, averaged over the preceding 60 consecutive days.

Applicable Compliance Method:

The control efficiency shall be determined by the following equation:

$$EF = (1 - (BO / BI))$$

where:

EF = removal efficiency of biofiltration units;

BO = outlet concentration from biofiltration units, per monitoring and record keeping requirement A.III.8.;

and

BI = inlet concentration to biofiltration units, per monitoring and record keeping requirements A.III.8.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

The inlet to the biofiltration system shall capture 85 percent (%) of all facility emissions of OC.

Applicable Compliance Method:

The capture efficiency shall be determined by the following equation:

$$TCE = BI / (BI + V)$$

where:

TCE = total biofiltration capture efficiency;

BI = concentration at inlet to biofiltration unit; and

V = concentration at inlet to plant ventilation stack.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

While this emissions unit is in operation, a negative pressure shall be maintained within the facility.

Applicable Compliance Method:

Compliance shall be demonstrated by hanging lightweight strips of material from egress points abutting the manufacturing area and ensuring the air current is moving towards the manufacturing area.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

h. Emission Limitation:

The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a 6-month rolling average.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$ESF = ECS + (EH \times (MCS / MH)) + (ECOS \times (MCS / MCOS))$$

where:

ESF = total emission rate of sulfide in stream, lb/hr, as carbon disulfide;
 ECS = emission rate of carbon disulfide in stream, lb/hr;
 EH = emission rate of hydrogen sulfide in stream, lb/hr;
 MCS = mass of carbon disulfide per mole of carbon disulfide, 76 lb/lb-mole;
 MH = mass of hydrogen sulfide per mole of hydrogen disulfide, 68 lb/lb-mole;
 ECOS = emission rate of carbonyl sulfide in stream, lb/hr; and
 MCOS = mass of carbonyl sulfide per mole of carbon disulfide, 120 lb/lb-mole.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

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

a. The emission testing shall be conducted within six (6) months after the effective date of this permit and again within four (4) to four and a half (4.5) years after the effective date of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the facility-wide hourly OC emission limitation and OC control efficiency for the air pollution control system.

c. The following test method(s) shall be employed to demonstrate compliance with the control efficiency limitation for OC: USEPA reference methods 1 through 4 and 15, as specified in 40 CFR Part 60, Appendix A. Alternative USEPA-approved test methods may be used with prior approval from the Ohio EPA.

d. During the performance test, the permittee shall establish site-specific operating limits for the biofiltration system and the caustic scrubber.

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

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P001 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Xanthation Reactor #1 and support equipment (200-gallon steeping caustic tank, 200-gallon carbon disulfide batch tank, 50-gallon water tank) with Biofiltration System and Packed Bed Scrubber	OAC rule 3745-114-01	

2. **Additional Terms and Conditions**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. **Operational Restrictions**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit (P001) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute" ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" or

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

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, (i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:
- $$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$
- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons per year) or "worst case" toxic contaminants:
- Toxic Contaminant: Carbon Disulfide
- TLV (mg/m3) 31.14
- Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 0.25; Facility - 50.8
- Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 69.86
- MAGLC (ug/m3): 741.43
- The permittee, has demonstrated that emissions of carbon disulfide, from emissions unit P001, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).
2. Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour MAGLC, the permittee shall re-model the change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour MAGLC include, but not limited to, the following:
- a. changes in the composition of the materials used or the use of raw materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.
3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit annual reports to the Ohio EPA Northeast District Office, documenting any

changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P002 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Xanthation Reactor # 2 and support equipment (200-gallon steeping caustic tank, 200-gallon carbon disulfide batch tank, 50-gallon water tank) with Biofiltration System and Packed Bed Scrubber	OAC rule 3745-31-05(A)(3) (PTI 02-18240)	Emissions of organic compounds (OC) shall not exceed 0.25 pound per hour and 1.1 tons per year.
	OAC rule 3745-21-07(G)(2)	Combined facility emissions of OC shall not exceed 50.8 pounds per hour and 222.5 tons per year.
	40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	See sections A.I.2.a through A.I.2.c. Exempt, see section A.I.2.d. The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a six-month rolling average.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	See sections A.I.2.e through A.I.2.i. Table 10 of Subpart UUUU of 40 CFR Part 63 - General Provisions Applicability to Subpart UUUU which shows which parts of the General Provisions in 40 CFR 63.1 - 15 apply.

2. Additional Terms and Conditions

- a. This emissions unit shall be vented to a biofiltration system at all times. The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it. This removal efficiency shall be determined based on the arithmetic average of the preceding sixty (60) consecutive days' average removal efficiency.
- b. The inlet to the biofiltration units shall capture a minimum of 85 percent (%) of all facility emissions of OC and hydrogen sulfide. This capture efficiency shall be determined by monitoring the inlet concentrations of OC and hydrogen sulfide to the biofiltration units and the inlet concentrations of OC and hydrogen sulfide to the plant ventilation stack. (See section A.V.1.f. below.)

- c. While this emissions unit is in operation, a negative pressure shall be maintained within the manufacturing area of the facility which contains the emissions units. (See section A.V.1.g. below.)
- d. The permittee shall not employ organic liquids which are photochemically reactive, as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (G)); therefore, paragraph (G) is no longer part of the State regulations. However, U.S. EPA has not yet approved the revisions to OAC rule 3745-21-07 as part of the federally-approved State Implementation Plan (SIP). The requirement to not employ organic liquids which are photochemically reactive shall cease on the date the U.S. EPA approves the removal of OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds.
- e. All vent streams vented to a control device shall be routed through a closed-vent system.
- f. All closed-vent systems containing a bypass line that is able to divert a vent stream away from a control device shall secure the bypass in the closed position with a car-seal or lock and key type configuration and inspect the seal or closure mechanism at least once per month.
- g. Periods of planned routine maintenance of each control device, during which the control device does not meet the applicable emissions limit, must not exceed 240 hours per year.
- h. The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- i. The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR, Section 63.6(e)(3).

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. The pressure drop across the biofiltration system (from the inlet duct work of the biofiltration system to the inlet duct work of the back-up scrubber) shall be maintained within the range of 0.5 to 15.0 inches of water while the emissions unit is in operation.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
2. The average gas temperature at the inlet of the biofiltration system shall not be more than 50 degrees Centigrade.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
3. To ensure the sulfate concentration of each biofiltration systems discharge liquor remains below 5 percent (%), the conductivity of the discharge liquor shall not exceed 200 millisiemens.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The pH of the back-up scrubber liquor, when operating, shall be maintained above 10.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the records required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall maintain the following for the biofilter:
 - a. the daily average biofilter inlet gas temperature;
 - b. the daily average biofilter effluent pH; and
 - c. the daily average pressure drop.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the biofiltration system while the 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). The permittee shall record the pressure drop across the biofiltration system on a daily basis.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall operate and maintain a continuous temperature monitor which measures the gas temperature at the inlet of the biofiltration system when the emissions unit is operating. Units shall be in degrees Centigrade. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature on a daily basis.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. When the caustic scrubber is operating, the permittee shall maintain the following:
 - a. the daily average pressure drop;
 - b. the daily average scrubber liquid flow rate;
 - c. the daily average scrubber liquid pH; and
 - d. the daily average scrubber liquid conductivity.[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall monitor the conductivity of each biofiltration system's discharge liquor weekly. From this data, the permittee shall determine the sulfate concentration of the discharge liquor.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
7. The permittee shall maintain a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall determine an average daily removal efficiency for the air pollution control system (i.e., biofiltration unit and backup scrubber) for OC and hydrogen sulfide. The inlet to and outlet from the biofiltration system shall be monitored, at least once per shift, while the facility is operating, using a gas chromatograph. The daily removal efficiency shall be based on a minimum of three sets of samples.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
9. The permittee shall determine average daily emissions from the plant ventilation stack for OC and hydrogen sulfide. The plant ventilation stack shall be monitored, at least once per shift, while the facility is operating, gathering three sets of samples, and within one hour of monitoring the biofiltration stack, using a gas chromatograph. This daily average shall be based on a minimum of three sets of samples.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
10. The permittee shall ensure, once per shift, that the manufacturing area of the facility is maintained under negative pressure, in accordance with the procedure specified in section A.V.1.g.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
11. The permittee shall inspect annually all closed-vent systems used to route emissions to a control device.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
12. During start-up, shutdown and malfunctions, deviations are not violations as long as the permittee can demonstrate that the SSM Plan was followed.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
13. All monitoring shall be continuous except for during startup, shutdown, or malfunctions.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
14. The permittee shall maintain records, that are easily accessible, of the following for at least five (5) years:
 - a. each notification and report that is submitted;
 - b. all records related to start-up, shutdown, and malfunctions;
 - c. a site-specific monitoring plan;
 - d. records of performance tests;
 - e. nitrogen unloading and storage systems;
 - f. records of material balances;
 - g. records of calculations;

- h. control device maintenance records; and
- i. safety device records.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports identifying each day during which any photochemically reactive materials were employed.

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the reports required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall submit pressure drop deviation (excursion) reports identifying all periods of time during which the pressure drop across the biofiltration system did not comply with the allowable range specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the average inlet temperature to the biofiltration system did not comply with the temperature restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall submit pH deviation (excursion) reports identifying all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the sulfate concentration of the biofiltration system's discharge liquor did not comply with the requirements specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC removal efficiency from the biofiltration system was less than 80 percent (%) and the actual average OC removal efficiency for each such day.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
7. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC capture efficiency of the biofiltration system was less than 85 percent (%) and the actual average OC capture efficiency.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the pressure in the manufacturing area of the facility did not comply with the negative pressure requirement.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
9. Compliance reports must contain the following information:
 - a. company name and address;
 - b. statement by a responsible official, with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete;
 - c. date of report and beginning and ending dates of the reporting period;
 - d. if a start-up, shutdown, or malfunction occurred during the reporting period;
 - e. if no deviation occurred, a statement to that effect shall be made;
 - f. the total operating time of each emissions unit; and
 - g. the number, duration, and cause of any deviations that occurred as well as any corrective action taken.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
10. The permittee shall report each instance in which continuous compliance was not demonstrated and each operating limit that was exceeded. This includes periods of start-up, shutdown, and malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. Compliance with the emission limitations and control system requirements specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

OC emissions shall not exceed 0.25 pound per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 15.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - b. Emission Limitation:

OC emissions shall not exceed 1.1 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (0.25 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
 - c. Emission Limitation:

Combined facility emissions of OC shall not exceed 50.8 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - d. Emission Limitation:

Combined facility emissions of OC shall not exceed 222.5 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (50.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
 - e. Emission Limitation:

The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it, averaged over the preceding 60 consecutive days.

Applicable Compliance Method:

The control efficiency shall be determined by the following equation:

$$EF = (1 - (BO / BI))$$

where:

EF = removal efficiency of biofiltration units;
BO = outlet concentration from biofiltration units, per monitoring and record keeping requirement A.III.8.;
and
BI = inlet concentration to biofiltration units, per monitoring and record keeping requirements A.III.8.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
 - f. Emission Limitation:

The inlet to the biofiltration system shall capture 85 percent (%) of all facility emissions of OC.

Applicable Compliance Method:

The capture efficiency shall be determined by the following equation:

$$TCE = BI / (BI + V)$$

where:

TCE = total biofiltration capture efficiency;
 BI = concentration at inlet to biofiltration unit; and
 V = concentration at inlet to plant ventilation stack.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

While this emissions unit is in operation, a negative pressure shall be maintained within the facility.

Applicable Compliance Method:

Compliance shall be demonstrated by hanging lightweight strips of material from egress points abutting the manufacturing area and ensuring the air current is moving towards the manufacturing area.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

h. Emission Limitation:

The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a 6-month rolling average.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$ESF = ECS + (EH \times (MCS / MH)) + (ECOS \times (MCS / MCOS))$$

where:

ESF = total emission rate of sulfide in stream, lb/hr, as carbon disulfide;
 ECS = emission rate of carbon disulfide in stream, lb/hr;
 EH = emission rate of hydrogen sulfide in stream, lb/hr;
 MCS = mass of carbon disulfide per mole of carbon disulfide, 76 lb/lb-mole;
 MH = mass of hydrogen sulfide per mole of hydrogen disulfide, 68 lb/lb-mole;
 ECOS = emission rate of carbonyl sulfide in stream, lb/hr; and
 MCOS = mass of carbonyl sulfide per mole of carbon disulfide, 120 lb/lb-mole.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

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

a. The emission testing shall be conducted within six (6) months after the effective date of this permit and again within four (4) to four and a half (4.5) years after the effective date of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the facility-wide hourly OC emission limitation and OC control efficiency for the air pollution control system.

c. The following test method(s) shall be employed to demonstrate compliance with the control efficiency limitation for OC: USEPA reference methods 1 through 4 and 15, as specified in 40 CFR Part 60, Appendix A. Alternative USEPA-approved test methods may be used with prior approval from the Ohio EPA.

d. During the performance test, the permittee shall establish site-specific operating limits for the biofiltration system and the caustic scrubber.

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

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P002 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- 1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Xanthation Reactor # 2 and support equipment (200-gallon steeping caustic tank, 200-gallon carbon disulfide batch tank, 50-gallon water tank) with Biofiltration System and Packed Bed Scrubber	OAC rule 3745-114-01	

2. **Additional Terms and Conditions**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. **Operational Restrictions**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. **Monitoring and/or Record Keeping Requirements**

- 1. The permit to install for this emissions unit (P002) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute" ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" or

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

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, (i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:

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

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons per year) or "worst case" toxic contaminants:

Toxic Contaminant: Carbon Disulfide

TLV (mg/m3) 31.14

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 0.25; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 69.86

MAGLC (ug/m3): 741.43

The permittee, has demonstrated that emissions of carbon disulfide, from emissions unit P002, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

2. Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour MAGLC, the permittee shall re-model the change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour MAGLC include, but not limited to, the following:
 - a. changes in the composition of the materials used or the use of raw materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.
3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s)

for the change and if the change would increase the ground-level concentration.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit annual reports to the Ohio EPA Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. Testing Requirements

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. Miscellaneous Requirements

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P003 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Continuous Sponge Cooking Machine # 1	OAC rule 3745-31-05(A)(3) (PTI 02-18240)	Emissions of organic compounds (OC) shall not exceed 8.5 pounds per hour and 37.22 tons per year. Combined facility emissions of OC shall not exceed 50.8 pounds per hour and 222.5 tons per year.
		Emissions of hydrogen sulfide (H2S) shall not exceed 0.76 pound per hour and 3.33 tons per year. Combined facility emissions of H2S shall not exceed 2.27 pounds per hour and 9.95 tons per year.
	OAC rule 3745-21-07(G)(2) 40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	See sections A.I.2.a through A.I.2.c. Exempt, see Section A.I.2.d. The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a six-month rolling average.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU)	See sections A.I.2.e through A.I.2.i. Table 10 of Subpart UUUU of 40 CFR Part 63 - General Provisions Applicability to Subpart UUUU

Table 10)

which shows which parts of the General Provisions in 40 CFR 63.1 - 15 apply.

2. Additional Terms and Conditions

- a. This emissions unit shall be vented to a biofiltration system at all times. The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it. This removal efficiency shall be determined based on the arithmetic average of the preceding sixty (60) consecutive days' average removal efficiency.
- b. The inlet to the biofiltration units shall capture a minimum of 85 percent (%) of all facility emissions of OC and hydrogen sulfide. This capture efficiency shall be determined by monitoring the inlet concentrations of OC and hydrogen sulfide to the biofiltration units and the inlet concentrations of OC and hydrogen sulfide to the plant ventilation stack. (See section A.V.1.j. below.)
- c. While this emissions unit is in operation, a negative pressure shall be maintained within the manufacturing area of the facility which contains the emissions units. (See section A.V.1.k. below.)
- d. The permittee shall not employ organic liquids which are photochemically reactive, as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (G)); therefore, paragraph (G) is no longer part of the State regulations. However, U.S. EPA has not yet approved the revisions to OAC rule 3745-21-07 as part of the federally-approved State Implementation Plan (SIP). The requirement to not employ organic liquids which are photochemically reactive shall cease on the date the U.S. EPA approves the removal of OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds.
- e. All vent streams vented to a control device shall be routed through a closed-vent system.
- f. All closed-vent systems containing a bypass line that is able to divert a vent stream away from a control device shall secure the bypass in the closed position with a car-seal or lock and key type configuration and inspect the seal or closure mechanism at least once per month.
- g. Periods of planned routine maintenance of each control device, during which the control device does not meet the applicable emissions limit, must not exceed 240 hours per year.
- h. The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- i. The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR, Section 63.6(e)(3)..

[Go to the top of this document](#)[Go to the top of Part III for this Emissions Unit](#)*****THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.*******II. Operational Restrictions**

1. The pressure drop across the biofiltration system (from the inlet duct work of the biofiltration system to the inlet duct work of the back-up scrubber) shall be maintained within the range of 0.5 to 15.0 inches of water while the emissions unit is in operation.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
2. The average gas temperature at the inlet of the biofiltration system shall not be more than 50 degrees Centigrade.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
3. To ensure the sulfate concentration of each biofiltration systems discharge liquor remains below 5 percent (%), the conductivity of the discharge liquor shall not exceed 200 millisiemens.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The pH of the back-up scrubber liquor, when operating, shall be maintained above 10.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)[Go to the top of Part III for this Emissions Unit](#)*****THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.*******III. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as

defined in OAC rule 3745-21-01(C)(5).

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the records required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall maintain the following for the biofilter:
 - a. the daily average biofilter inlet gas temperature;
 - b. the daily average biofilter effluent pH; and
 - c. the daily average pressure drop.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the biofiltration system while the 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). The permittee shall record the pressure drop across the biofiltration system on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall operate and maintain a continuous temperature monitor which measures the gas temperature at the inlet of the biofiltration system when the emissions unit is operating. Units shall be in degrees Centigrade. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. When the caustic scrubber is operating, the permittee shall maintain the following:
 - a. the daily average pressure drop;
 - b. the daily average scrubber liquid flow rate;
 - c. the daily average scrubber liquid pH; and
 - d. the daily average scrubber liquid conductivity.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall monitor the conductivity of each biofiltration system's discharge liquor weekly. From this data, the permittee shall determine the sulfate concentration of the discharge liquor.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
7. The permittee shall maintain a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall determine an average daily removal efficiency for the air pollution control system (i.e., biofiltration unit and backup scrubber) for OC and hydrogen sulfide. The inlet to and outlet from the biofiltration system shall be monitored, at least once per shift, while the facility is operating, using a gas chromatograph. The daily removal efficiency shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
9. The permittee shall determine average daily emissions from the plant ventilation stack for OC and hydrogen sulfide. The plant ventilation stack shall be monitored, at least once per shift, while the facility is operating, gathering three sets of samples, and within one hour of monitoring the biofiltration stack, using a gas chromatograph. This daily average shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
10. The permittee shall ensure, once per shift, that the manufacturing area of the facility is maintained under negative pressure, in accordance with the procedure specified in section A.V.1.k.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
11. The permittee shall inspect annually all closed-vent systems used to route emissions to a control device.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
12. During start-up, shutdown and malfunctions, deviations are not violations as long as the permittee can demonstrate that the SSM Plan was followed.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
13. All monitoring shall be continuous except for during startup, shutdown, or malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

14. The permittee shall maintain records, that are easily accessible, of the following for at least five (5) years:
- a. each notification and report that is submitted;
 - b. all records related to start-up, shutdown, and malfunctions;
 - c. a site-specific monitoring plan;
 - d. records of performance tests;
 - e. nitrogen unloading and storage systems;
 - f. records of material balances;
 - g. records of calculations;
 - h. control device maintenance records; and
 - i. safety device records.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

*****THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.*****

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports identifying each day during which any photochemically reactive materials were employed.

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the reports required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall submit pressure drop deviation (excursion) reports identifying all periods of time during which the pressure drop across the biofiltration system did not comply with the allowable range specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the average inlet temperature to the biofiltration system did not comply with the temperature restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall submit pH deviation (excursion) reports identifying all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the sulfate concentration of the biofiltration system's discharge liquor did not comply with the requirements specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC removal efficiency from the biofiltration system was less than 80 percent (%) and the actual average OC removal efficiency for each such day.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
7. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC capture efficiency of the biofiltration system was less than 85 percent (%) and the actual average OC capture efficiency.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the pressure in the manufacturing area of the facility did not comply with the negative pressure requirement.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
9. Compliance reports must contain the following information:
 - a. company name and address;
 - b. statement by a responsible official, with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete;
 - c. date of report and beginning and ending dates of the reporting period;
 - d. if a start-up, shutdown, or malfunction occurred during the reporting period;

- e. if no deviation occurred, a statement to that effect shall be made;
- f. the total operating time of each emissions unit; and
- g. the number, duration, and cause of any deviations that occurred as well as any corrective action taken.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

10. The permittee shall report each instance in which continuous compliance was not demonstrated and each operating limit that was exceeded. This includes periods of start-up, shutdown, and malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

*****THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.*****

V. Testing Requirements

1. Compliance with the emission limitations and control system requirements specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

OC emissions shall not exceed 8.5 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 15.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

OC emissions shall not exceed 37.22 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (8.5 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

Combined facility emissions of OC shall not exceed 50.8 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Combined facility emissions of OC shall not exceed 222.5 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (50.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

H2S emissions shall not exceed 0.76 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

f. Emissions Limitation:

H2S emissions shall not exceed 3.33 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H2S emission limitation (0.76 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

g. Emissions Limitation:

Combined facility emissions of H2S shall not exceed 2.27 pounds per hour

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

h. Emissions Limitation:

Combined facility emissions of H2S shall not exceed 9.95 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H2S emission limitation (2.27 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

i. Emission Limitation:

The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it, averaged over the preceding 60 consecutive days.

Applicable Compliance Method:

The control efficiency shall be determined by the following equation:

$$EF = (1 - (BO / BI))$$

where:

EF = removal efficiency of biofiltration units;

BO = outlet concentration from biofiltration units, per monitoring and record keeping requirement A.III.8.; and

BI = inlet concentration to biofiltration units, per monitoring and record keeping requirements A.III.8.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

j. Emission Limitation:

The inlet to the biofiltration system shall capture 85 percent (%) of all facility emissions of OC.

Applicable Compliance Method:

The capture efficiency shall be determined by the following equation:

$$TCE = BI / (BI + V)$$

where:

TCE = total biofiltration capture efficiency;

BI = concentration at inlet to biofiltration unit; and

V = concentration at inlet to plant ventilation stack.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

k. Emission Limitation:

While this emissions unit is in operation, a negative pressure shall be maintained within the facility.

Applicable Compliance Method:

Compliance shall be demonstrated by hanging lightweight strips of material from egress points abutting the manufacturing area and ensuring the air current is moving towards the manufacturing area.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

I. Emission Limitation:

The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a 6-month rolling average.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$ESF = ECS + (EH \times (MCS / MH)) + (ECOS \times (MCS / MCOS))$$

where:

ESF = total emission rate of sulfide in stream, lb/hr, as carbon disulfide;
 ECS = emission rate of carbon disulfide in stream, lb/hr;
 EH = emission rate of hydrogen sulfide in stream, lb/hr;
 MCS = mass of carbon disulfide per mole of carbon disulfide, 76 lb/lb-mole;
 MH = mass of hydrogen sulfide per mole of hydrogen disulfide, 68 lb/lb-mole;
 ECOS = emission rate of carbonyl sulfide in stream, lb/hr; and
 MCOS = mass of carbonyl sulfide per mole of carbon disulfide, 120 lb/lb-mole.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

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

a. The emission testing shall be conducted within six (6) months after the effective date of this permit and again within four (4) to four and a half (4.5) years after the effective date of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the facility-wide hourly OC emission limitation and OC control efficiency for the air pollution control system.

c. The following test method(s) shall be employed to demonstrate compliance with the control efficiency limitation for OC: USEPA reference methods 1 through 4 and 15, as specified in 40 CFR Part 60, Appendix A. Alternative USEPA-approved test methods may be used with prior approval from the Ohio EPA.

d. During the performance test, the permittee shall establish site-specific operating limits for the biofiltration system and the caustic scrubber.

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

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. Miscellaneous Requirements

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P003 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Continuous Sponge Cooking Machine # 1	OAC rule 3745-114-01	
2. Additional Terms and Conditions		
1. None		

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (P003) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute" ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" or

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

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, (i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:

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

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons per year) or "worst case" toxic contaminants:

Toxic Contaminant: Carbon Disulfide

TLV (mg/m3) 31.14

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 8.5; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 69.86

MAGLC (ug/m3): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m3) 13.91

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 0.76; Facility - 2.27

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 3.13

MAGLC (ug/m3): 331.19

The permittee, has demonstrated that emissions of carbon disulfide and hydrogen sulfide from emissions unit P003, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

2. Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour MAGLC, the permittee shall re-model the change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour MAGLC include, but not limited to, the following:
 - a. changes in the composition of the materials used or the use of raw materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.
3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit annual reports to the Ohio EPA Northeast District Office, documenting any

changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P004 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Continuous Sponge Cooking Machine # 2	OAC rule 3745-31-05(A)(3) (PTI 02-18240)	Emissions of organic compounds (OC) shall not exceed 8.5 pounds per hour and 37.22 tons per year. Combined facility emissions of OC shall not exceed 50.8 pounds per hour and 222.5 tons per year.
		Emissions of hydrogen sulfide (H2S) shall not exceed 0.76 pound per hour and 3.33 tons per year. Combined facility emissions of H2S shall not exceed 2.27 pounds per hour and 9.95 tons per year.
	OAC rule 3745-21-07(G)(2)	See sections A.I.2.a through A.I.2.c.
	40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	Exempt, see Section A.I.2.d. The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a six-month rolling average.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	See sections A.I.2.e through A.I.2.i. Table 10 of Subpart UUUU of 40 CFR Part 63 - General Provisions Applicability to Subpart UUUU which shows which parts of the General Provisions in 40 CFR 63.1 - 15 apply.

2. Additional Terms and Conditions

- a. This emissions unit shall be vented to a biofiltration system at all times. The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it. This removal efficiency shall be determined based on the arithmetic average of the preceding sixty (60) consecutive days' average removal efficiency.

- b. The inlet to the biofiltration units shall capture a minimum of 85 percent (%) of all facility emissions of OC and hydrogen sulfide. This capture efficiency shall be determined by monitoring the inlet concentrations of OC and hydrogen sulfide to the biofiltration units and the inlet concentrations of OC and hydrogen sulfide to the plant ventilation stack. (See section A.V.1.j. below.)
- c. While this emissions unit is in operation, a negative pressure shall be maintained within the manufacturing area of the facility which contains the emissions units. (See section A.V.1.k. below.)
- d. The permittee shall not employ organic liquids which are photochemically reactive, as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (G)); therefore, paragraph (G) is no longer part of the State regulations. However, U.S. EPA has not yet approved the revisions to OAC rule 3745-21-07 as part of the federally-approved State Implementation Plan (SIP). The requirement to not employ organic liquids which are photochemically reactive shall cease on the date the U.S. EPA approves the removal of OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds.
- e. All vent streams vented to a control device shall be routed through a closed-vent system.
- f. All closed-vent systems containing a bypass line that is able to divert a vent stream away from a control device shall secure the bypass in the closed position with a car-seal or lock and key type configuration and inspect the seal or closure mechanism at least once per month.
- g. Periods of planned routine maintenance of each control device, during which the control device does not meet the applicable emissions limit, must not exceed 240 hours per year.
- h. The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- i. The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR, Section 63.6(e)(3)..

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

- 1. The pressure drop across the biofiltration system (from the inlet duct work of the biofiltration system to the inlet duct work of the back-up scrubber) shall be maintained within the range of 0.5 to 15.0 inches of water while the emissions unit is in operation.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
- 2. The average gas temperature at the inlet of the biofiltration system shall not be more than 50 degrees Centigrade.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
- 3. To ensure the sulfate concentration of each biofiltration systems discharge liquor remains below 5 percent (%), the conductivity of the discharge liquor shall not exceed 200 millisiemens.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
- 4. The pH of the back-up scrubber liquor, when operating, shall be maintained above 10.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall maintain the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the records required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
- 2. The permittee shall maintain the following for the biofilter:
 - a. the daily average biofilter inlet gas temperature;

b. the daily average biofilter effluent pH; and

c. the daily average pressure drop.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the biofiltration system while the 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). The permittee shall record the pressure drop across the biofiltration system on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

4. The permittee shall operate and maintain a continuous temperature monitor which measures the gas temperature at the inlet of the biofiltration system when the emissions unit is operating. Units shall be in degrees Centigrade. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

5. When the caustic scrubber is operating, the permittee shall maintain the following:

a. the daily average pressure drop;

b. the daily average scrubber liquid flow rate;

c. the daily average scrubber liquid pH; and

d. the daily average scrubber liquid conductivity.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

6. The permittee shall monitor the conductivity of each biofiltration system's discharge liquor weekly. From this data, the permittee shall determine the sulfate concentration of the discharge liquor.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

7. The permittee shall maintain a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

8. The permittee shall determine an average daily removal efficiency for the air pollution control system (i.e., biofiltration unit and backup scrubber) for OC and hydrogen sulfide. The inlet to and outlet from the biofiltration system shall be monitored, at least once per shift, while the facility is operating, using a gas chromatograph. The daily removal efficiency shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

9. The permittee shall determine average daily emissions from the plant ventilation stack for OC and hydrogen sulfide. The plant ventilation stack shall be monitored, at least once per shift, while the facility is operating, gathering three sets of samples, and within one hour of monitoring the biofiltration stack, using a gas chromatograph. This daily average shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

10. The permittee shall ensure, once per shift, that the manufacturing area of the facility is maintained under negative pressure, in accordance with the procedure specified in section A.V.1.k.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

11. The permittee shall inspect annually all closed-vent systems used to route emissions to a control device.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

12. During start-up, shutdown and malfunctions, deviations are not violations as long as the permittee can demonstrate that the SSM Plan was followed.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

13. All monitoring shall be continuous except for during startup, shutdown, or malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

14. The permittee shall maintain records, that are easily accessible, of the following for at least five (5) years:

a. each notification and report that is submitted;

b. all records related to start-up, shutdown, and malfunctions;

c. a site-specific monitoring plan;

d. records of performance tests;

- e. nitrogen unloading and storage systems;
- f. records of material balances;
- g. records of calculations;
- h. control device maintenance records; and
- i. safety device records.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

*****THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.*****

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports identifying each day during which any photochemically reactive materials were employed.

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the reports required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall submit pressure drop deviation (excursion) reports identifying all periods of time during which the pressure drop across the biofiltration system did not comply with the allowable range specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the average inlet temperature to the biofiltration system did not comply with the temperature restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall submit pH deviation (excursion) reports identifying all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the sulfate concentration of the biofiltration system's discharge liquor did not comply with the requirements specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC removal efficiency from the biofiltration system was less than 80 percent (%) and the actual average OC removal efficiency for each such day.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
7. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC capture efficiency of the biofiltration system was less than 85 percent (%) and the actual average OC capture efficiency.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the pressure in the manufacturing area of the facility did not comply with the negative pressure requirement.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
9. Compliance reports must contain the following information:
 - a. company name and address;
 - b. statement by a responsible official, with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete;
 - c. date of report and beginning and ending dates of the reporting period;
 - d. if a start-up, shutdown, or malfunction occurred during the reporting period;
 - e. if no deviation occurred, a statement to that effect shall be made;
 - f. the total operating time of each emissions unit; and
 - g. the number, duration, and cause of any deviations that occurred as well as any corrective action taken.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

10. The permittee shall report each instance in which continuous compliance was not demonstrated and each operating limit that was exceeded. This includes periods of start-up, shutdown, and malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

*****THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.*****

V. Testing Requirements

1. Compliance with the emission limitations and control system requirements specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

OC emissions shall not exceed 8.5 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 15.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

OC emissions shall not exceed 37.22 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (8.5 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

Combined facility emissions of OC shall not exceed 50.8 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Combined facility emissions of OC shall not exceed 222.5 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (50.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

H2S emissions shall not exceed 0.76 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

f. Emissions Limitation:

H2S emissions shall not exceed 3.33 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H2S emission limitation (0.76 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by

2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

g. Emissions Limitation:

Combined facility emissions of H₂S shall not exceed 2.27 pounds per hour

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

h. Emissions Limitation:

Combined facility emissions of H₂S shall not exceed 9.95 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H₂S emission limitation (2.27 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

i. Emission Limitation:

The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it, averaged over the preceding 60 consecutive days.

Applicable Compliance Method:

The control efficiency shall be determined by the following equation:

$$EF = (1 - (BO / BI))$$

where:

EF = removal efficiency of biofiltration units;

BO = outlet concentration from biofiltration units, per monitoring and record keeping requirement A.III.8.; and

BI = inlet concentration to biofiltration units, per monitoring and record keeping requirements A.III.8.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

j. Emission Limitation:

The inlet to the biofiltration system shall capture 85 percent (%) of all facility emissions of OC.

Applicable Compliance Method:

The capture efficiency shall be determined by the following equation:

$$TCE = BI / (BI + V)$$

where:

TCE = total biofiltration capture efficiency;

BI = concentration at inlet to biofiltration unit; and

V = concentration at inlet to plant ventilation stack.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

k. Emission Limitation:

While this emissions unit is in operation, a negative pressure shall be maintained within the facility.

Applicable Compliance Method:

Compliance shall be demonstrated by hanging lightweight strips of material from egress points abutting the manufacturing area and ensuring the air current is moving towards the manufacturing area.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

l. Emission Limitation:

The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a 6-month rolling average.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$ESF = ECS + (EH \times (MCS / MH)) + (ECOS \times (MCS / MCOS))$$

where:

ESF = total emission rate of sulfide in stream, lb/hr, as carbon disulfide;
 ECS = emission rate of carbon disulfide in stream, lb/hr;
 EH = emission rate of hydrogen sulfide in stream, lb/hr;
 MCS = mass of carbon disulfide per mole of carbon disulfide, 76 lb/lb-mole;
 MH = mass of hydrogen sulfide per mole of hydrogen disulfide, 68 lb/lb-mole;
 ECOS = emission rate of carbonyl sulfide in stream, lb/hr; and
 MCOS = mass of carbonyl sulfide per mole of carbon disulfide, 120 lb/lb-mole.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

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

- a. The emission testing shall be conducted within six (6) months after the effective date of this permit and again within four (4) to four and a half (4.5) years after the effective date of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the facility-wide hourly OC emission limitation and OC control efficiency for the air pollution control system.
- c. The following test method(s) shall be employed to demonstrate compliance with the control efficiency limitation for OC: USEPA reference methods 1 through 4 and 15, as specified in 40 CFR Part 60, Appendix A. Alternative USEPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. During the performance test, the permittee shall establish site-specific operating limits for the biofiltration system and the caustic scrubber.

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

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P004 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Continuous Sponge Cooking Machine # 2	OAC rule 3745-114-01	

2. Additional Terms and Conditions

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (P004) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute" ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" or

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

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, (i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:

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

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons per year) or "worst case" toxic contaminants:

Toxic Contaminant: Carbon Disulfide

TLV (mg/m3) 31.14

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 8.5; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 69.86

MAGLC (ug/m3): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m3): 13.91

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 0.76; Facility - 2.27

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 3.13

MAGLC (ug/m3): 331.19

The permittee, has demonstrated that emissions of carbon disulfide and hydrogen sulfide, from emissions unit P004, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

2. Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour MAGLC, the permittee shall re-model the change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour MAGLC include, but not limited to, the following:
 - a. changes in the composition of the materials used or the use of raw materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.
3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit annual reports to the Ohio EPA Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. Testing Requirements

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

- 1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P005 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Sponge Cloth Machine # 1	OAC rule 3745-31-05(A)(3) (PTI 02-18240)	Emissions of organic compounds (OC) shall not exceed 2.76 pounds per hour and 12.1 tons per year. Combined facility emissions of OC shall not exceed 50.8 pounds per hour and 222.5 tons per year. Emissions of hydrogen sulfide (H2S) shall not exceed 0.25 pound per hour and 1.10 tons per year. Combined facility emissions of H2S shall not exceed 2.27 pounds per hour and 9.95 tons per year.
	OAC rule 3745-21-07(G)(2) 40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	See sections A.I.2.a through A.I.2.c. Exempt, see Section A.I.2.d. The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a six-month rolling average.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	See sections A.I.2.e through A.I.2.i. Table 10 of Subpart UUUU of 40 CFR Part 63 - General Provisions Applicability to Subpart UUUU which shows which parts of the General Provisions in 40 CFR 63.1 - 15 apply.

2. Additional Terms and Conditions

- a. This emissions unit shall be vented to a biofiltration system at all times. The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it. This removal efficiency shall be determined based on the arithmetic average of the preceding sixty (60) consecutive days' average removal efficiency.
- b. The inlet to the biofiltration units shall capture a minimum of 85 percent (%) of all facility emissions of OC and hydrogen sulfide. This capture efficiency shall be determined by monitoring the inlet concentrations of OC and hydrogen sulfide to the biofiltration units and the inlet concentrations of OC and hydrogen sulfide to the plant ventilation stack. (See section A.V.1.j. below.)
- c. While this emissions unit is in operation, a negative pressure shall be maintained within the manufacturing area of the facility which contains the emissions units. (See section A.V.1.k. below.)
- d. The permittee shall not employ organic liquids which are photochemically reactive, as defined in OAC

rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (G)); therefore, paragraph (G) is no longer part of the State regulations. However, U.S. EPA has not yet approved the revisions to OAC rule 3745-21-07 as part of the federally-approved State Implementation Plan (SIP). The requirement to not employ organic liquids which are photochemically reactive shall cease on the date the U.S. EPA approves the removal of OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds.

- e. All vent streams vented to a control device shall be routed through a closed-vent system.
- f. All closed-vent systems containing a bypass line that is able to divert a vent stream away from a control device shall secure the bypass in the closed position with a car-seal or lock and key type configuration and inspect the seal or closure mechanism at least once per month.
- g. Periods of planned routine maintenance of each control device, during which the control device does not meet the applicable emissions limit, must not exceed 240 hours per year.
- h. The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- i. The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR, Section 63.6(e)(3)..

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. The pressure drop across the biofiltration system (from the inlet duct work of the biofiltration system to the inlet duct work of the back-up scrubber) shall be maintained within the range of 0.5 to 15.0 inches of water while the emissions unit is in operation.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
2. The average gas temperature at the inlet of the biofiltration system shall not be more than 50 degrees Centigrade.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
3. To ensure the sulfate concentration of each biofiltration systems discharge liquor remains below 5 percent (%), the conductivity of the discharge liquor shall not exceed 200 millisiemens.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The pH of the back-up scrubber liquor, when operating, shall be maintained above 10.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the records required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall maintain the following for the biofilter:
 - a. the daily average biofilter inlet gas temperature;
 - b. the daily average biofilter effluent pH; and
 - c. the daily average pressure drop.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the biofiltration system while the 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). The permittee shall record the pressure drop across the biofiltration system on a daily

basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

4. The permittee shall operate and maintain a continuous temperature monitor which measures the gas temperature at the inlet of the biofiltration system when the emissions unit is operating. Units shall be in degrees Centigrade. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

5. When the caustic scrubber is operating, the permittee shall maintain the following:

- a. the daily average pressure drop;
- b. the daily average scrubber liquid flow rate;
- c. the daily average scrubber liquid pH; and
- d. the daily average scrubber liquid conductivity.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

6. The permittee shall monitor the conductivity of each biofiltration system's discharge liquor weekly. From this data, the permittee shall determine the sulfate concentration of the discharge liquor.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

7. The permittee shall maintain a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

8. The permittee shall determine an average daily removal efficiency for the air pollution control system (i.e., biofiltration unit and backup scrubber) for OC and hydrogen sulfide. The inlet to and outlet from the biofiltration system shall be monitored, at least once per shift, while the facility is operating, using a gas chromatograph. The daily removal efficiency shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

9. The permittee shall determine average daily emissions from the plant ventilation stack for OC and hydrogen sulfide. The plant ventilation stack shall be monitored, at least once per shift, while the facility is operating, gathering three sets of samples, and within one hour of monitoring the biofiltration stack, using a gas chromatograph. This daily average shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

10. The permittee shall ensure, once per shift, that the manufacturing area of the facility is maintained under negative pressure, in accordance with the procedure specified in section A.V.1.k.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

11. The permittee shall inspect annually all closed-vent systems used to route emissions to a control device.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

12. During start-up, shutdown and malfunctions, deviations are not violations as long as the permittee can demonstrate that the SSM Plan was followed.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

13. All monitoring shall be continuous except for during startup, shutdown, or malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

14. The permittee shall maintain records, that are easily accessible, of the following for at least five (5) years:

- a. each notification and report that is submitted;
- b. all records related to start-up, shutdown, and malfunctions;
- c. a site-specific monitoring plan;
- d. records of performance tests;
- e. nitrogen unloading and storage systems;
- f. records of material balances;
- g. records of calculations;
- h. control device maintenance records; and
- i. safety device records.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports identifying each day during which any photochemically reactive materials were employed.

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the reports required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall submit pressure drop deviation (excursion) reports identifying all periods of time during which the pressure drop across the biofiltration system did not comply with the allowable range specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the average inlet temperature to the biofiltration system did not comply with the temperature restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall submit pH deviation (excursion) reports identifying all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the sulfate concentration of the biofiltration system's discharge liquor did not comply with the requirements specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC removal efficiency from the biofiltration system was less than 80 percent (%) and the actual average OC removal efficiency for each such day.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
7. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC capture efficiency of the biofiltration system was less than 85 percent (%) and the actual average OC capture efficiency.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the pressure in the manufacturing area of the facility did not comply with the negative pressure requirement.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
9. Compliance reports must contain the following information:
 - a. company name and address;
 - b. statement by a responsible official, with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete;
 - c. date of report and beginning and ending dates of the reporting period;
 - d. if a start-up, shutdown, or malfunction occurred during the reporting period;
 - e. if no deviation occurred, a statement to that effect shall be made;
 - f. the total operating time of each emissions unit; and
 - g. the number, duration, and cause of any deviations that occurred as well as any corrective action taken.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
10. The permittee shall report each instance in which continuous compliance was not demonstrated and each operating limit that was exceeded. This includes periods of start-up, shutdown, and malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. Compliance with the emission limitations and control system requirements specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

OC emissions shall not exceed 2.76 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 15.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - b. Emission Limitation:

OC emissions shall not exceed 12.1 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (2.76 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
 - c. Emission Limitation:

Combined facility emissions of OC shall not exceed 50.8 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - d. Emission Limitation:

Combined facility emissions of OC shall not exceed 222.5 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (50.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
 - e. Emission Limitation:

H2S emissions shall not exceed 0.25 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - f. Emissions Limitation:

H2S emissions shall not exceed 1.1 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H2S emission limitation (0.25 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
 - g. Emissions Limitation:

Combined facility emissions of H2S shall not exceed 2.27 pounds per hour

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

h. Emissions Limitation:

Combined facility emissions of H₂S shall not exceed 9.95 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H₂S emission limitation (2.27 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

i. Emission Limitation:

The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it, averaged over the preceding 60 consecutive days.

Applicable Compliance Method:

The control efficiency shall be determined by the following equation:

$$EF = (1 - (BO / BI))$$

where:

EF = removal efficiency of biofiltration units;

BO = outlet concentration from biofiltration units, per monitoring and record keeping requirement A.III.8.; and

BI = inlet concentration to biofiltration units, per monitoring and record keeping requirements A.III.8.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

j. Emission Limitation:

The inlet to the biofiltration system shall capture 85 percent (%) of all facility emissions of OC.

Applicable Compliance Method:

The capture efficiency shall be determined by the following equation:

$$TCE = BI / (BI + V)$$

where:

TCE = total biofiltration capture efficiency;

BI = concentration at inlet to biofiltration unit; and

V = concentration at inlet to plant ventilation stack.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

k. Emission Limitation:

While this emissions unit is in operation, a negative pressure shall be maintained within the facility.

Applicable Compliance Method:

Compliance shall be demonstrated by hanging lightweight strips of material from egress points abutting the manufacturing area and ensuring the air current is moving towards the manufacturing area.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

l. Emission Limitation:

The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a 6-month rolling average.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$ESF = ECS + (EH \times (MCS / MH)) + (ECOS \times (MCS / MCOS))$$

where:

ESF = total emission rate of sulfide in stream, lb/hr, as carbon disulfide;
 ECS = emission rate of carbon disulfide in stream, lb/hr;
 EH = emission rate of hydrogen sulfide in stream, lb/hr;
 MCS = mass of carbon disulfide per mole of carbon disulfide, 76 lb/lb-mole;
 MH = mass of hydrogen sulfide per mole of hydrogen disulfide, 68 lb/lb-mole;
 ECOS = emission rate of carbonyl sulfide in stream, lb/hr; and
 MCOS = mass of carbonyl sulfide per mole of carbon disulfide, 120 lb/lb-mole.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- The emission testing shall be conducted within six (6) months after the effective date of this permit and again within four (4) to four and a half (4.5) years after the effective date of this permit.
 - The emission testing shall be conducted to demonstrate compliance with the facility-wide hourly OC emission limitation and OC control efficiency for the air pollution control system.
 - The following test method(s) shall be employed to demonstrate compliance with the control efficiency limitation for OC: USEPA reference methods 1 through 4 and 15, as specified in 40 CFR Part 60, Appendix A. Alternative USEPA-approved test methods may be used with prior approval from the Ohio EPA.
 - During the performance test, the permittee shall establish site-specific operating limits for the biofiltration system and the caustic scrubber.

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

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

- None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P005 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Sponge Cloth Machine # 1	OAC rule 3745-114-01	

2. **Additional Terms and Conditions**
 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (P005) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute" ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" or

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

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, (i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:

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

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons per year) or "worst case" toxic contaminants:

Toxic Contaminant: Carbon Disulfide

TLV (mg/m3) 31.14

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 2.76; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 69.86

MAGLC (ug/m3): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m3): 13.91

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 0.25; Facility - 2.27

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 3.13

MAGLC (ug/m3): 331.19

The permittee, has demonstrated that emissions of carbon disulfide and hydrogen sulfide, from emissions unit P005, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

2. Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour MAGLC, the permittee shall re-model the change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour MAGLC include, but not limited to, the following:
 - a. changes in the composition of the materials used or the use of raw materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.
3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit annual reports to the Ohio EPA Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. Testing Requirements

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. Miscellaneous Requirements

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P007 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Sponge Block Line	OAC rule 3745-31-05(A)(3) (PTI 02-18240)	Emissions of organic compounds (OC) shall not exceed 25.88 pounds per hour and 113.34 tons per year. Combined facility emissions of OC shall not exceed 50.8 pounds per hour and 222.5 tons per year. Emissions of hydrogen sulfide (H2S) shall not exceed 0.12 pound per hour and 0.53 tons per year. Combined facility emissions of H2S shall not exceed 2.27 pounds per hour and 9.95 tons per year.
	40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	See sections A.I.2.a through A.I.2.c. Exempt, see Section A.I.2.d.
	40 CFR Part 63, Subpart UUUU	The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a six-month rolling average.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	See sections A.I.2.e through A.I.2.i. Table 10 of Subpart UUUU of 40 CFR Part 63 - General Provisions Applicability to Subpart UUUU which shows which parts of the General Provisions in 40 CFR 63.1 - 15 apply.

2. Additional Terms and Conditions

- a. This emissions unit shall be vented to a biofiltration system at all times. The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it. This removal efficiency shall be determined based on the arithmetic average of the preceding sixty (60) consecutive days' average removal efficiency.
- b. The inlet to the biofiltration units shall capture a minimum of 85 percent (%) of all facility emissions of OC and hydrogen sulfide. This capture efficiency shall be determined by monitoring the inlet concentrations of OC and hydrogen sulfide to the biofiltration units and the inlet concentrations of OC and hydrogen sulfide to the plant ventilation stack. (See section A.V.1.j. below.)
- c. While this emissions unit is in operation, a negative pressure shall be maintained within the manufacturing area of the facility which contains the emissions units. (See section A.V.1.k. below.)
- d. The permittee shall not employ organic liquids which are photochemically reactive, as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (G)); therefore, paragraph (G) is no longer part of the State regulations. However, U.S. EPA has not yet approved the revisions to OAC rule 3745-21-07 as part of the federally-approved State Implementation Plan (SIP). The requirement to not employ organic liquids which are photochemically reactive shall cease on the date the U.S. EPA approves the removal of OAC rule 3745-21-07(G) as a revision to the Ohio SIP for

organic compounds.

- e. All vent streams vented to a control device shall be routed through a closed-vent system.
- f. All closed-vent systems containing a bypass line that is able to divert a vent stream away from a control device shall secure the bypass in the closed position with a car-seal or lock and key type configuration and inspect the seal or closure mechanism at least once per month.
- g. Periods of planned routine maintenance of each control device, during which the control device does not meet the applicable emissions limit, must not exceed 240 hours per year.
- h. The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- i. The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR, Section 63.6(e)(3).

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. The pressure drop across the biofiltration system (from the inlet duct work of the biofiltration system to the inlet duct work of the back-up scrubber) shall be maintained within the range of 0.5 to 15.0 inches of water while the emissions unit is in operation.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
2. The average gas temperature at the inlet of the biofiltration system shall not be more than 50 degrees Centigrade.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
3. To ensure the sulfate concentration of each biofiltration systems discharge liquor remains below 5 percent (%), the conductivity of the discharge liquor shall not exceed 200 millisiemens.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The pH of the back-up scrubber liquor, when operating, shall be maintained above 10.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the records required by this section shall be voided entirely.]
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall maintain the following for the biofilter:
 - a. the daily average biofilter inlet gas temperature;
 - b. the daily average biofilter effluent pH; and
 - c. the daily average pressure drop.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the biofiltration system while the 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). The permittee shall record the pressure drop across the biofiltration system on a daily basis.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall operate and maintain a continuous temperature monitor which measures the gas temperature at the inlet of the biofiltration system when the emissions unit is operating. Units shall be in degrees Centigrade. The monitoring device shall be capable of accurately measuring the desired

parameter. The temperature monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

5. When the caustic scrubber is operating, the permittee shall maintain the following:
 - a. the daily average pressure drop;
 - b. the daily average scrubber liquid flow rate;
 - c. the daily average scrubber liquid pH; and
 - d. the daily average scrubber liquid conductivity.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall monitor the conductivity of each biofiltration system's discharge liquor weekly. From this data, the permittee shall determine the sulfate concentration of the discharge liquor.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
7. The permittee shall maintain a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall determine an average daily removal efficiency for the air pollution control system (i.e., biofiltration unit and backup scrubber) for OC and hydrogen sulfide. The inlet to and outlet from the biofiltration system shall be monitored, at least once per shift, while the facility is operating, using a gas chromatograph. The daily removal efficiency shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
9. The permittee shall determine average daily emissions from the plant ventilation stack for OC and hydrogen sulfide. The plant ventilation stack shall be monitored, at least once per shift, while the facility is operating, gathering three sets of samples, and within one hour of monitoring the biofiltration stack, using a gas chromatograph. This daily average shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
10. The permittee shall ensure, once per shift, that the manufacturing area of the facility is maintained under negative pressure, in accordance with the procedure specified in section A.V.1.k.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
11. The permittee shall inspect annually all closed-vent systems used to route emissions to a control device.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
12. During start-up, shutdown and malfunctions, deviations are not violations as long as the permittee can demonstrate that the SSM Plan was followed.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
13. All monitoring shall be continuous except for during startup, shutdown, or malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
14. The permittee shall maintain records, that are easily accessible, of the following for at least five (5) years:
 - a. each notification and report that is submitted;
 - b. all records related to start-up, shutdown, and malfunctions;
 - c. a site-specific monitoring plan;
 - d. records of performance tests;
 - e. nitrogen unloading and storage systems;
 - f. records of material balances;
 - g. records of calculations;
 - h. control device maintenance records; and
 - i. safety device records.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports identifying each day during which any photochemically reactive materials were employed.

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the reports required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall submit pressure drop deviation (excursion) reports identifying all periods of time during which the pressure drop across the biofiltration system did not comply with the allowable range specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the average inlet temperature to the biofiltration system did not comply with the temperature restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall submit pH deviation (excursion) reports identifying all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the sulfate concentration of the biofiltration system's discharge liquor did not comply with the requirements specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC removal efficiency from the biofiltration system was less than 80 percent (%) and the actual average OC removal efficiency for each such day.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
7. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC capture efficiency of the biofiltration system was less than 85 percent (%) and the actual average OC capture efficiency.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the pressure in the manufacturing area of the facility did not comply with the negative pressure requirement.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
9. Compliance reports must contain the following information:
 - a. company name and address;
 - b. statement by a responsible official, with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete;
 - c. date of report and beginning and ending dates of the reporting period;
 - d. if a start-up, shutdown, or malfunction occurred during the reporting period;
 - e. if no deviation occurred, a statement to that effect shall be made;
 - f. the total operating time of each emissions unit; and
 - g. the number, duration, and cause of any deviations that occurred as well as any corrective action taken.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
10. The permittee shall report each instance in which continuous compliance was not demonstrated and each operating limit that was exceeded. This includes periods of start-up, shutdown, and malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. Compliance with the emission limitations and control system requirements specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
 - OC emissions shall not exceed 25.88 pounds per hour.
 - Applicable Compliance Method:

If required, compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 15.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

OC emissions shall not exceed 113.34 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (25.88 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

Combined facility emissions of OC shall not exceed 50.8 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Combined facility emissions of OC shall not exceed 222.5 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (50.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

H2S emissions shall not exceed 0.12 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

f. Emissions Limitation:

H2S emissions shall not exceed 0.53 ton per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H2S emission limitation (0.12 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

g. Emissions Limitation:

Combined facility emissions of H2S shall not exceed 2.27 pounds per hour

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

h. Emissions Limitation:

Combined facility emissions of H₂S shall not exceed 9.95 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H₂S emission limitation (2.27 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

i. Emission Limitation:

The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it, averaged over the preceding 60 consecutive days.

Applicable Compliance Method:

The control efficiency shall be determined by the following equation:

$$EF = (1 - (BO / BI))$$

where:

EF = removal efficiency of biofiltration units;
BO = outlet concentration from biofiltration units, per monitoring and record keeping requirement A.III.8.; and
BI = inlet concentration to biofiltration units, per monitoring and record keeping requirements A.III.8.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

j. Emission Limitation:

The inlet to the biofiltration system shall capture 85 percent (%) of all facility emissions of OC.

Applicable Compliance Method:

The capture efficiency shall be determined by the following equation:

$$TCE = BI / (BI + V)$$

where:

TCE = total biofiltration capture efficiency;
BI = concentration at inlet to biofiltration unit; and
V = concentration at inlet to plant ventilation stack.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

k. Emission Limitation:

While this emissions unit is in operation, a negative pressure shall be maintained within the facility.

Applicable Compliance Method:

Compliance shall be demonstrated by hanging lightweight strips of material from egress points abutting the manufacturing area and ensuring the air current is moving towards the manufacturing area.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

l. Emission Limitation:

The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a 6-month rolling average.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$ESF = ECS + (EH \times (MCS / MH)) + (ECOS \times (MCS / MCOS))$$

where:

ESF = total emission rate of sulfide in stream, lb/hr, as carbon disulfide;
ECS = emission rate of carbon disulfide in stream, lb/hr;
EH = emission rate of hydrogen sulfide in stream, lb/hr;
MCS = mass of carbon disulfide per mole of carbon disulfide, 76 lb/lb-mole;
MH = mass of hydrogen sulfide per mole of hydrogen disulfide, 68 lb/lb-mole;
ECOS = emission rate of carbonyl sulfide in stream, lb/hr; and
MCOS = mass of carbonyl sulfide per mole of carbon disulfide, 120 lb/lb-mole.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within six (6) months after the effective date of this permit and again within four (4) to four and a half (4.5) years after the effective date of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the facility-wide hourly OC emission limitation and OC control efficiency for the air pollution control system.
 - c. The following test method(s) shall be employed to demonstrate compliance with the control efficiency limitation for OC: USEPA reference methods 1 through 4 and 15, as specified in 40 CFR Part 60, Appendix A. Alternative USEPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. During the performance test, the permittee shall establish site-specific operating limits for the biofiltration system and the caustic scrubber.

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

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P007 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
---	--------------------------------------	--

- Sponge Block Line OAC rule 3745-114-01
2. **Additional Terms and Conditions**
1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. **Operational Restrictions**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. **Monitoring and/or Record Keeping Requirements**

1. The permit to install for this emissions unit (P007) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute" ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" or

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

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, (i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:

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

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons per year) or "worst case" toxic contaminants:

Toxic Contaminant: Carbon Disulfide

TLV (mg/m3) 31.14

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 25.88; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 69.86

MAGLC (ug/m3): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m3): 13.91

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 0.12; Facility - 2.27

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 3.13

MAGLC (ug/m3): 331.19

The permittee, has demonstrated that emissions of carbon disulfide and hydrogen sulfide, from emissions unit P007, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

2. Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour MAGLC, the permittee shall re-model the change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour MAGLC include, but not limited to, the following:
 - a. changes in the composition of the materials used or the use of raw materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.
3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit annual reports to the Ohio EPA Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. Testing Requirements

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. Miscellaneous Requirements

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P008 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Xanthation Reactor # 3 and support equipment (200-gallon steeping caustic tank, 200-gallon carbon disulfide batch tank, 50-gallon water tank) with Biofiltration System and Packed Bed Scrubber	OAC rule 3745-31-05(A)(3) (PTI 02-18240)	Emissions of organic compounds (OC) shall not exceed 0.25 pound per hour and 1.1 tons per year.
	OAC rule 3745-21-07(G)(2) 40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	Combined facility emissions of OC shall not exceed 50.8 pounds per hour and 222.5 tons per year. See sections A.I.2.a through A.I.2.c. Exempt, see section A.I.2.d. The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a six-month rolling average.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	See sections A.I.2.e through A.I.2.i. Table 10 of Subpart UUUU of 40 CFR Part 63 - General Provisions Applicability to Subpart UUUU which shows which parts of the General Provisions in 40 CFR 63.1 - 15 apply.

2. Additional Terms and Conditions

- a. This emissions unit shall be vented to a biofiltration system at all times. The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it. This removal efficiency shall be determined based on the arithmetic average of the preceding sixty (60) consecutive days' average removal efficiency.
- b. The inlet to the biofiltration units shall capture a minimum of 85 percent (%) of all facility emissions of OC and hydrogen sulfide. This capture efficiency shall be determined by monitoring the inlet concentrations of OC and hydrogen sulfide to the biofiltration units and the inlet concentrations of OC and hydrogen sulfide to the plant ventilation stack. (See section A.V.1.f. below.)
- c. While this emissions unit is in operation, a negative pressure shall be maintained within the manufacturing area of the facility which contains the emissions units. (See section A.V.1.g. below.)
- d. The permittee shall not employ organic liquids which are photochemically reactive, as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (G)); therefore, paragraph (G) is no longer part of the State regulations. However, U.S. EPA has not yet approved the revisions to OAC rule 3745-21-07 as part of the federally-approved State Implementation Plan (SIP). The requirement to not employ organic liquids which are photochemically reactive shall cease on the date the U.S. EPA approves the removal of OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds.
- e. All vent streams vented to a control device shall be routed through a closed-vent system.
- f. All closed-vent systems containing a bypass line that is able to divert a vent stream away from a control device shall secure the bypass in the closed position with a car-seal or lock and key type configuration and inspect the seal or closure mechanism at least once per month.
- g. Periods of planned routine maintenance of each control device, during which the control device does not meet the applicable emissions limit, must not exceed 240 hours per year.
- h. The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.

- i. The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR, Section 63.6(e)(3).

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

*****THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.*****

II. Operational Restrictions

1. The pressure drop across the biofiltration system (from the inlet duct work of the biofiltration system to the inlet duct work of the back-up scrubber) shall be maintained within the range of 0.5 to 15.0 inches of water while the emissions unit is in operation.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
2. The average gas temperature at the inlet of the biofiltration system shall not be more than 50 degrees Centigrade.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
3. To ensure the sulfate concentration of each biofiltration systems discharge liquor remains below 5 percent (%), the conductivity of the discharge liquor shall not exceed 200 millisiemens.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The pH of the back-up scrubber liquor, when operating, shall be maintained above 10.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

*****THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.*****

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the records required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall maintain the following for the biofilter:
 - a. the daily average biofilter inlet gas temperature;
 - b. the daily average biofilter effluent pH; and
 - c. the daily average pressure drop.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the biofiltration system while the 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). The permittee shall record the pressure drop across the biofiltration system on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall operate and maintain a continuous temperature monitor which measures the gas temperature at the inlet of the biofiltration system when the emissions unit is operating. Units shall be in degrees Centigrade. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. When the caustic scrubber is operating, the permittee shall maintain the following:
 - a. the daily average pressure drop;
 - b. the daily average scrubber liquid flow rate;
 - c. the daily average scrubber liquid pH; and
 - d. the daily average scrubber liquid conductivity.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

6. The permittee shall monitor the conductivity of each biofiltration system's discharge liquor weekly. From this data, the permittee shall determine the sulfate concentration of the discharge liquor.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
7. The permittee shall maintain a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall determine an average daily removal efficiency for the air pollution control system (i.e., biofiltration unit and backup scrubber) for OC and hydrogen sulfide. The inlet to and outlet from the biofiltration system shall be monitored, at least once per shift, while the facility is operating, using a gas chromatograph. The daily removal efficiency shall be based on a minimum of three sets of samples.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
9. The permittee shall determine average daily emissions from the plant ventilation stack for OC and hydrogen sulfide. The plant ventilation stack shall be monitored, at least once per shift, while the facility is operating, gathering three sets of samples, and within one hour of monitoring the biofiltration stack, using a gas chromatograph. This daily average shall be based on a minimum of three sets of samples.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
10. The permittee shall ensure, once per shift, that the manufacturing area of the facility is maintained under negative pressure, in accordance with the procedure specified in section A.V.1.g.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
11. The permittee shall inspect annually all closed-vent systems used to route emissions to a control device.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
12. During start-up, shutdown and malfunctions, deviations are not violations as long as the permittee can demonstrate that the SSM Plan was followed.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
13. All monitoring shall be continuous except for during startup, shutdown, or malfunctions.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
14. The permittee shall maintain records, that are easily accessible, of the following for at least five (5) years:
 - a. each notification and report that is submitted;
 - b. all records related to start-up, shutdown, and malfunctions;
 - c. a site-specific monitoring plan;
 - d. records of performance tests;
 - e. nitrogen unloading and storage systems;
 - f. records of material balances;
 - g. records of calculations;
 - h. control device maintenance records; and
 - i. safety device records.
 [Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports identifying each day during which any photochemically reactive materials were employed.
[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the reports required by this section shall be voided entirely.]
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall submit pressure drop deviation (excursion) reports identifying all periods of time during which the pressure drop across the biofiltration system did not comply with the allowable range specified above.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the average inlet temperature to the biofiltration system did not comply with the temperature restriction specified above.

- [Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall submit pH deviation (excursion) reports identifying all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.
- [Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the sulfate concentration of the biofiltration system's discharge liquor did not comply with the requirements specified above.
- [Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC removal efficiency from the biofiltration system was less than 80 percent (%) and the actual average OC removal efficiency for each such day.
- [Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
7. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC capture efficiency of the biofiltration system was less than 85 percent (%) and the actual average OC capture efficiency.
- [Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the pressure in the manufacturing area of the facility did not comply with the negative pressure requirement.
- [Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
9. Compliance reports must contain the following information:
- company name and address;
 - statement by a responsible official, with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete;
 - date of report and beginning and ending dates of the reporting period;
 - if a start-up, shutdown, or malfunction occurred during the reporting period;
 - if no deviation occurred, a statement to that effect shall be made;
 - the total operating time of each emissions unit; and
 - the number, duration, and cause of any deviations that occurred as well as any corrective action taken.
- [Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
10. The permittee shall report each instance in which continuous compliance was not demonstrated and each operating limit that was exceeded. This includes periods of start-up, shutdown, and malfunctions.
- [Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. Compliance with the emission limitations and control system requirements specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
- Emission Limitation:

OC emissions shall not exceed 0.25 pound per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 15.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - Emission Limitation:

OC emissions shall not exceed 1.1 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (0.25 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

Combined facility emissions of OC shall not exceed 50.8 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Combined facility emissions of OC shall not exceed 222.5 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (50.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it, averaged over the preceding 60 consecutive days.

Applicable Compliance Method:

The control efficiency shall be determined by the following equation:

$$EF = (1 - (BO / BI))$$

where:

EF = removal efficiency of biofiltration units;

BO = outlet concentration from biofiltration units, per monitoring and record keeping requirement A.III.8.;

and

BI = inlet concentration to biofiltration units, per monitoring and record keeping requirements A.III.8.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

The inlet to the biofiltration system shall capture 85 percent (%) of all facility emissions of OC.

Applicable Compliance Method:

The capture efficiency shall be determined by the following equation:

$$TCE = BI / (BI + V)$$

where:

TCE = total biofiltration capture efficiency;

BI = concentration at inlet to biofiltration unit; and

V = concentration at inlet to plant ventilation stack.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

While this emissions unit is in operation, a negative pressure shall be maintained within the facility.

Applicable Compliance Method:

Compliance shall be demonstrated by hanging lightweight strips of material from egress points abutting the manufacturing area and ensuring the air current is moving towards the manufacturing area.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

h. Emission Limitation:

The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a 6-month rolling average.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$ESF = ECS + (EH \times (MCS / MH)) + (ECOS \times (MCS / MCOS))$$

where:

- ESF = total emission rate of sulfide in stream, lb/hr, as carbon disulfide;
- ECS = emission rate of carbon disulfide in stream, lb/hr;
- EH = emission rate of hydrogen sulfide in stream, lb/hr;
- MCS = mass of carbon disulfide per mole of carbon disulfide, 76 lb/lb-mole;
- MH = mass of hydrogen sulfide per mole of hydrogen disulfide, 68 lb/lb-mole;
- ECOS = emission rate of carbonyl sulfide in stream, lb/hr; and
- MCOS = mass of carbonyl sulfide per mole of carbon disulfide, 120 lb/lb-mole.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within six (6) months after the effective date of this permit and again within four (4) to four and a half (4.5) years after the effective date of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the facility-wide hourly OC emission limitation and OC control efficiency for the air pollution control system.
 - c. The following test method(s) shall be employed to demonstrate compliance with the control efficiency limitation for OC: USEPA reference methods 1 through 4 and 15, as specified in 40 CFR Part 60, Appendix A. Alternative USEPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. During the performance test, the permittee shall establish site-specific operating limits for the biofiltration system and the caustic scrubber.

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

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P008 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Xanthation Reactor # 3 and support equipment (200-gallon steeping caustic tank, 200-gallon carbon disulfide batch tank, 50-gallon water tank) with Biofiltration System and Packed Bed Scrubber	OAC rule 3745-114-01	

2. Additional Terms and Conditions

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (P008) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute" ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" or

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

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, (i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:

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

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons per year) or "worst case" toxic contaminants:

Toxic Contaminant: Carbon Disulfide

TLV (mg/m3) 31.14

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 0.25; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 69.86

MAGLC (ug/m3): 741.43

The permittee, has demonstrated that emissions of carbon disulfide, from emissions unit P008, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

2. Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour MAGLC, the permittee shall re-model the change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour MAGLC include, but not limited to, the following:
 - a. changes in the composition of the materials used or the use of raw materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.
3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit annual reports to the Ohio EPA Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. Testing Requirements

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. Miscellaneous Requirements

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P009 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Xanthation Reactor # 4 and support equipment (200-gallon steeping caustic tank, 200-gallon carbon disulfide batch tank, 50-gallon water tank) with Biofiltration System and Packed Bed Scrubber	OAC rule 3745-31-05(A)(3) (PTI 02-18240)	Emissions of organic compounds (OC) shall not exceed 0.25 pound per hour and 1.1 tons per year.
	OAC rule 3745-21-07(G)(2) 40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	Combined facility emissions of OC shall not exceed 50.8 pounds per hour and 222.5 tons per year. See sections A.I.2.a through A.I.2.c. Exempt, see section A.I.2.d.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a six-month rolling average. See sections A.I.2.e through A.I.2.i. Table 10 of Subpart UUUU of 40 CFR Part 63 - General Provisions Applicability to Subpart UUUU which shows which parts of the General Provisions in 40 CFR 63.1 - 15 apply.

2. Additional Terms and Conditions

- a. This emissions unit shall be vented to a biofiltration system at all times. The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it. This removal efficiency shall be determined based on the arithmetic average of the preceding sixty (60) consecutive days' average removal efficiency.
- b. The inlet to the biofiltration units shall capture a minimum of 85 percent (%) of all facility emissions of OC and hydrogen sulfide. This capture efficiency shall be determined by monitoring the inlet concentrations of OC and hydrogen sulfide to the biofiltration units and the inlet concentrations of OC and hydrogen sulfide to the plant ventilation stack. (See section A.V.1.f. below.)
- c. While this emissions unit is in operation, a negative pressure shall be maintained within the manufacturing area of the facility which contains the emissions units. (See section A.V.1.g. below.)
- d. The permittee shall not employ organic liquids which are photochemically reactive, as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (G)); therefore, paragraph (G) is no longer part of the State regulations. However, U.S. EPA has not yet approved the revisions to OAC rule 3745-21-07 as part of the federally-approved State Implementation Plan (SIP). The requirement to not employ organic liquids which are photochemically reactive shall cease on the date the U.S. EPA approves the removal of OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds.
- e. All vent streams vented to a control device shall be routed through a closed-vent system.
- f. All closed-vent systems containing a bypass line that is able to divert a vent stream away from a control device shall secure the bypass in the closed position with a car-seal or lock and key type configuration and inspect the seal or closure mechanism at least once per month.

- g. Periods of planned routine maintenance of each control device, during which the control device does not meet the applicable emissions limit, must not exceed 240 hours per year.
- h. The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- i. The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR, Section 63.6(e)(3).

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. The pressure drop across the biofiltration system (from the inlet duct work of the biofiltration system to the inlet duct work of the back-up scrubber) shall be maintained within the range of 0.5 to 15.0 inches of water while the emissions unit is in operation.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
2. The average gas temperature at the inlet of the biofiltration system shall not be more than 50 degrees Centigrade.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
3. To ensure the sulfate concentration of each biofiltration systems discharge liquor remains below 5 percent (%), the conductivity of the discharge liquor shall not exceed 200 millisiemens.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The pH of the back-up scrubber liquor, when operating, shall be maintained above 10.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the records required by this section shall be voided entirely.]
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall maintain the following for the biofilter:
 - a. the daily average biofilter inlet gas temperature;
 - b. the daily average biofilter effluent pH; and
 - c. the daily average pressure drop.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the biofiltration system while the 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). The permittee shall record the pressure drop across the biofiltration system on a daily basis.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall operate and maintain a continuous temperature monitor which measures the gas temperature at the inlet of the biofiltration system when the emissions unit is operating. Units shall be in degrees Centigrade. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature on a daily basis.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. When the caustic scrubber is operating, the permittee shall maintain the following:
 - a. the daily average pressure drop;

- b. the daily average scrubber liquid flow rate;
- c. the daily average scrubber liquid pH; and
- d. the daily average scrubber liquid conductivity.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

6. The permittee shall monitor the conductivity of each biofiltration system's discharge liquor weekly. From this data, the permittee shall determine the sulfate concentration of the discharge liquor.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
7. The permittee shall maintain a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall determine an average daily removal efficiency for the air pollution control system (i.e., biofiltration unit and backup scrubber) for OC and hydrogen sulfide. The inlet to and outlet from the biofiltration system shall be monitored, at least once per shift, while the facility is operating, using a gas chromatograph. The daily removal efficiency shall be based on a minimum of three sets of samples.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
9. The permittee shall determine average daily emissions from the plant ventilation stack for OC and hydrogen sulfide. The plant ventilation stack shall be monitored, at least once per shift, while the facility is operating, gathering three sets of samples, and within one hour of monitoring the biofiltration stack, using a gas chromatograph. This daily average shall be based on a minimum of three sets of samples.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
10. The permittee shall ensure, once per shift, that the manufacturing area of the facility is maintained under negative pressure, in accordance with the procedure specified in section A.V.1.g.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
11. The permittee shall inspect annually all closed-vent systems used to route emissions to a control device.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
12. During start-up, shutdown and malfunctions, deviations are not violations as long as the permittee can demonstrate that the SSM Plan was followed.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
13. All monitoring shall be continuous except for during startup, shutdown, or malfunctions.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
14. The permittee shall maintain records, that are easily accessible, of the following for at least five (5) years:
 - a. each notification and report that is submitted;
 - b. all records related to start-up, shutdown, and malfunctions;
 - c. a site-specific monitoring plan;
 - d. records of performance tests;
 - e. nitrogen unloading and storage systems;
 - f. records of material balances;
 - g. records of calculations;
 - h. control device maintenance records; and
 - i. safety device records.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports identifying each day during which any photochemically reactive materials were employed.

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the reports required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

2. The permittee shall submit pressure drop deviation (excursion) reports identifying all periods of time during which the pressure drop across the biofiltration system did not comply with the allowable range specified above.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the average inlet temperature to the biofiltration system did not comply with the temperature restriction specified above.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall submit pH deviation (excursion) reports identifying all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the sulfate concentration of the biofiltration system's discharge liquor did not comply with the requirements specified above.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC removal efficiency from the biofiltration system was less than 80 percent (%) and the actual average OC removal efficiency for each such day.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
7. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC capture efficiency of the biofiltration system was less than 85 percent (%) and the actual average OC capture efficiency.
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the pressure in the manufacturing area of the facility did not comply with the negative pressure requirement.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
9. Compliance reports must contain the following information:
 - a. company name and address;
 - b. statement by a responsible official, with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete;
 - c. date of report and beginning and ending dates of the reporting period;
 - d. if a start-up, shutdown, or malfunction occurred during the reporting period;
 - e. if no deviation occurred, a statement to that effect shall be made;
 - f. the total operating time of each emissions unit; and
 - g. the number, duration, and cause of any deviations that occurred as well as any corrective action taken.
 [Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
10. The permittee shall report each instance in which continuous compliance was not demonstrated and each operating limit that was exceeded. This includes periods of start-up, shutdown, and malfunctions.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. Compliance with the emission limitations and control system requirements specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

OC emissions shall not exceed 0.25 pound per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 15.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - b. Emission Limitation:

OC emissions shall not exceed 1.1 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (0.25 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

Combined facility emissions of OC shall not exceed 50.8 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Combined facility emissions of OC shall not exceed 222.5 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (50.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it, averaged over the preceding 60 consecutive days.

Applicable Compliance Method:

The control efficiency shall be determined by the following equation:

$$EF = (1 - (BO / BI))$$

where:

EF = removal efficiency of biofiltration units;

BO = outlet concentration from biofiltration units, per monitoring and record keeping requirement A.III.8.;

and

BI = inlet concentration to biofiltration units, per monitoring and record keeping requirements A.III.8.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

The inlet to the biofiltration system shall capture 85 percent (%) of all facility emissions of OC.

Applicable Compliance Method:

The capture efficiency shall be determined by the following equation:

$$TCE = BI / (BI + V)$$

where:

TCE = total biofiltration capture efficiency;

BI = concentration at inlet to biofiltration unit; and

V = concentration at inlet to plant ventilation stack.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

While this emissions unit is in operation, a negative pressure shall be maintained within the facility.

Applicable Compliance Method:

Compliance shall be demonstrated by hanging lightweight strips of material from egress points abutting

the manufacturing area and ensuring the air current is moving towards the manufacturing area.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

h. Emission Limitation:

The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a 6-month rolling average.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$ESF = ECS + (EH \times (MCS / MH)) + (ECOS \times (MCS / MCOS))$$

where:

ESF = total emission rate of sulfide in stream, lb/hr, as carbon disulfide;
 ECS = emission rate of carbon disulfide in stream, lb/hr;
 EH = emission rate of hydrogen sulfide in stream, lb/hr;
 MCS = mass of carbon disulfide per mole of carbon disulfide, 76 lb/lb-mole;
 MH = mass of hydrogen sulfide per mole of hydrogen disulfide, 68 lb/lb-mole;
 ECOS = emission rate of carbonyl sulfide in stream, lb/hr; and
 MCOS = mass of carbonyl sulfide per mole of carbon disulfide, 120 lb/lb-mole.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

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

a. The emission testing shall be conducted within six (6) months after the effective date of this permit and again within four (4) to four and a half (4.5) years after the effective date of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the facility-wide hourly OC emission limitation and OC control efficiency for the air pollution control system.

c. The following test method(s) shall be employed to demonstrate compliance with the control efficiency limitation for OC: USEPA reference methods 1 through 4 and 15, as specified in 40 CFR Part 60, Appendix A. Alternative USEPA-approved test methods may be used with prior approval from the Ohio EPA.

d. During the performance test, the permittee shall establish site-specific operating limits for the biofiltration system and the caustic scrubber.

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

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. Miscellaneous Requirements

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P009 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Xanthation Reactor # 4 and support equipment (200-gallon steeping caustic tank, 200-gallon carbon disulfide batch tank, 50-gallon water tank) with Biofiltration System and Packed Bed Scrubber	OAC rule 3745-114-01	

2. Additional Terms and Conditions

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (P009) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute" ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" or

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

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, (i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:

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

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons per year) or "worst case" toxic contaminants:

Toxic Contaminant: Carbon Disulfide

TLV (mg/m3) 31.14

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 0.25; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 69.86

MAGLC (ug/m3): 741.43

The permittee, has demonstrated that emissions of carbon disulfide, from emissions unit P009, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

2. Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour MAGLC, the permittee shall re-model the change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour MAGLC include, but not limited to, the following:
 - a. changes in the composition of the materials used or the use of raw materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.
3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit annual reports to the Ohio EPA Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. Testing Requirements

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

1. None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P010 Issuance type: Title V Draft Permit

A. State and Federally Enforceable Section

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

1. None.

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Sponge Cloth Machine # 2	OAC rule 3745-31-05(A)(3) (PTI 02-18240)	Emissions of organic compounds (OC) shall not exceed 4.16 pounds per hour and 18.24 tons per year. Combined facility emissions of OC shall not exceed 50.8 pounds per hour and 222.5 tons per year. Emissions of hydrogen sulfide (H2S) shall not exceed 0.38 pound per hour and 1.66 tons per year. Combined facility emissions of H2S shall not exceed 2.27 pounds per hour and 9.95 tons per year.
	OAC rule 3745-21-07(G)(2) 40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	See sections A.I.2.a through A.I.2.c. Exempt, see Section A.I.2.d. The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a six-month rolling average.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	See sections A.I.2.e through A.I.2.i. Table 10 of Subpart UUUU of 40 CFR Part 63 - General Provisions Applicability to Subpart UUUU which shows which parts of the General Provisions in 40 CFR 63.1 - 15 apply.

2. Additional Terms and Conditions

- a. This emissions unit shall be vented to a biofiltration system at all times. The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it. This removal efficiency shall be determined based on the arithmetic average of the preceding sixty (60) consecutive days' average removal efficiency.
- b. The inlet to the biofiltration units shall capture a minimum of 85 percent (%) of all facility emissions of OC and hydrogen sulfide. This capture efficiency shall be determined by monitoring the inlet concentrations of OC and hydrogen sulfide to the biofiltration units and the inlet concentrations of OC and hydrogen sulfide to the plant ventilation stack. (See section A.V.1.j. below.)
- c. While this emissions unit is in operation, a negative pressure shall be maintained within the manufacturing area of the facility which contains the emissions units. (See section A.V.1.k. below.)
- d. The permittee shall not employ organic liquids which are photochemically reactive, as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (G)); therefore, paragraph (G) is no longer part of the State regulations. However, U.S. EPA has not yet approved the revisions to OAC rule 3745-21-07 as part of the federally-approved State Implementation Plan (SIP). The requirement to not employ organic liquids which are photochemically reactive shall cease on the date the U.S. EPA approves the removal of OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds.

- e. All vent streams vented to a control device shall be routed through a closed-vent system.
- f. All closed-vent systems containing a bypass line that is able to divert a vent stream away from a control device shall secure the bypass in the closed position with a car-seal or lock and key type configuration and inspect the seal or closure mechanism at least once per month.
- g. Periods of planned routine maintenance of each control device, during which the control device does not meet the applicable emissions limit, must not exceed 240 hours per year.
- h. The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- i. The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR, Section 63.6(e)(3)..

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. The pressure drop across the biofiltration system (from the inlet duct work of the biofiltration system to the inlet duct work of the back-up scrubber) shall be maintained within the range of 0.5 to 15.0 inches of water while the emissions unit is in operation.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
2. The average gas temperature at the inlet of the biofiltration system shall not be more than 50 degrees Centigrade.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
3. To ensure the sulfate concentration of each biofiltration systems discharge liquor remains below 5 percent (%), the conductivity of the discharge liquor shall not exceed 200 millisiemens.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The pH of the back-up scrubber liquor, when operating, shall be maintained above 10.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(A)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the records required by this section shall be voided entirely.]
[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall maintain the following for the biofilter:
 - a. the daily average biofilter inlet gas temperature;
 - b. the daily average biofilter effluent pH; and
 - c. the daily average pressure drop.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the biofiltration system while the 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). The permittee shall record the pressure drop across the biofiltration system on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

4. The permittee shall operate and maintain a continuous temperature monitor which measures the gas temperature at the inlet of the biofiltration system when the emissions unit is operating. Units shall be in degrees Centigrade. The monitoring device shall be capable of accurately measuring the desired parameter. The temperature monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature on a daily basis.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

5. When the caustic scrubber is operating, the permittee shall maintain the following:
 - a. the daily average pressure drop;
 - b. the daily average scrubber liquid flow rate;
 - c. the daily average scrubber liquid pH; and
 - d. the daily average scrubber liquid conductivity.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

6. The permittee shall monitor the conductivity of each biofiltration system's discharge liquor weekly. From this data, the permittee shall determine the sulfate concentration of the discharge liquor.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

7. The permittee shall maintain a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

8. The permittee shall determine an average daily removal efficiency for the air pollution control system (i.e., biofiltration unit and backup scrubber) for OC and hydrogen sulfide. The inlet to and outlet from the biofiltration system shall be monitored, at least once per shift, while the facility is operating, using a gas chromatograph. The daily removal efficiency shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

9. The permittee shall determine average daily emissions from the plant ventilation stack for OC and hydrogen sulfide. The plant ventilation stack shall be monitored, at least once per shift, while the facility is operating, gathering three sets of samples, and within one hour of monitoring the biofiltration stack, using a gas chromatograph. This daily average shall be based on a minimum of three sets of samples.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

10. The permittee shall ensure, once per shift, that the manufacturing area of the facility is maintained under negative pressure, in accordance with the procedure specified in section A.V.1.k.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

11. The permittee shall inspect annually all closed-vent systems used to route emissions to a control device.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

12. During start-up, shutdown and malfunctions, deviations are not violations as long as the permittee can demonstrate that the SSM Plan was followed.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

13. All monitoring shall be continuous except for during startup, shutdown, or malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

14. The permittee shall maintain records, that are easily accessible, of the following for at least five (5) years:

- a. each notification and report that is submitted;
- b. all records related to start-up, shutdown, and malfunctions;
- c. a site-specific monitoring plan;
- d. records of performance tests;
- e. nitrogen unloading and storage systems;
- f. records of material balances;
- g. records of calculations;
- h. control device maintenance records; and
- i. safety device records.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports identifying each day during which any photochemically reactive materials were employed.

[Note: After the removal of OAC rule 3745-21-07(G) is approved by U.S. EPA as part of the Ohio SIP, the reports required by this section shall be voided entirely.]

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
2. The permittee shall submit pressure drop deviation (excursion) reports identifying all periods of time during which the pressure drop across the biofiltration system did not comply with the allowable range specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
3. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the average inlet temperature to the biofiltration system did not comply with the temperature restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
4. The permittee shall submit pH deviation (excursion) reports identifying all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
5. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the sulfate concentration of the biofiltration system's discharge liquor did not comply with the requirements specified above.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
6. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC removal efficiency from the biofiltration system was less than 80 percent (%) and the actual average OC removal efficiency for each such day.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
7. The permittee shall submit deviation (excursion) reports identifying any day during which the average OC capture efficiency of the biofiltration system was less than 85 percent (%) and the actual average OC capture efficiency.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
8. The permittee shall submit deviation (excursion) reports identifying all periods of time during which the pressure in the manufacturing area of the facility did not comply with the negative pressure requirement.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
9. Compliance reports must contain the following information:
 - a. company name and address;
 - b. statement by a responsible official, with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete;
 - c. date of report and beginning and ending dates of the reporting period;
 - d. if a start-up, shutdown, or malfunction occurred during the reporting period;
 - e. if no deviation occurred, a statement to that effect shall be made;
 - f. the total operating time of each emissions unit; and
 - g. the number, duration, and cause of any deviations that occurred as well as any corrective action taken.
[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]
10. The permittee shall report each instance in which continuous compliance was not demonstrated and each operating limit that was exceeded. This includes periods of start-up, shutdown, and malfunctions.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. **Testing Requirements**

1. Compliance with the emission limitations and control system requirements specified in section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

OC emissions shall not exceed 4.16 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be demonstrated by using 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 15.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - b. Emission Limitation:

OC emissions shall not exceed 18.24 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (4.16 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
 - c. Emission Limitation:

Combined facility emissions of OC shall not exceed 50.8 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - d. Emission Limitation:

Combined facility emissions of OC shall not exceed 222.5 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable OC emission limitation (50.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
 - e. Emission Limitation:

H2S emissions shall not exceed 0.38 pound per hour.

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]
 - f. Emissions Limitation:

H2S emissions shall not exceed 1.66 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H2S emission limitation (0.38 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]
 - g. Emissions Limitation:

Combined facility emissions of H2S shall not exceed 2.27 pounds per hour

Applicable Compliance Method:

Compliance shall be determined by using 40 CFR, Part 60, Appendix A, Method 1 through 4 and Method 15, as specified in section A.V.2. below.

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), and OAC rule 3745-77-07(C)(1)]

h. Emissions Limitation:

Combined facility emissions of H₂S shall not exceed 9.95 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H₂S emission limitation (2.27 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

i. Emission Limitation:

The air pollution control system shall remove a minimum of 80 percent (%) of OC vented to it, averaged over the preceding 60 consecutive days.

Applicable Compliance Method:

The control efficiency shall be determined by the following equation:

$$EF = (1 - (BO / BI))$$

where:

EF = removal efficiency of biofiltration units;

BO = outlet concentration from biofiltration units, per monitoring and record keeping requirement A.III.8.; and

BI = inlet concentration to biofiltration units, per monitoring and record keeping requirements A.III.8.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

j. Emission Limitation:

The inlet to the biofiltration system shall capture 85 percent (%) of all facility emissions of OC.

Applicable Compliance Method:

The capture efficiency shall be determined by the following equation:

$$TCE = BI / (BI + V)$$

where:

TCE = total biofiltration capture efficiency;

BI = concentration at inlet to biofiltration unit; and

V = concentration at inlet to plant ventilation stack.

[Authority for term: PTI 02-18240 and OAC rule 3745-77-07(C)(1)]

k. Emission Limitation:

While this emissions unit is in operation, a negative pressure shall be maintained within the facility.

Applicable Compliance Method:

Compliance shall be demonstrated by hanging lightweight strips of material from egress points abutting the manufacturing area and ensuring the air current is moving towards the manufacturing area.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

l. Emission Limitation:

The sum of all uncontrolled sulfide emissions (reported as carbon disulfide) shall be reduced by at least 75 percent (%) based on a 6-month rolling average.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$ESF = ECS + (EH \times (MCS / MH)) + (ECOS \times (MCS / MCOS))$$

where:

ESF = total emission rate of sulfide in stream, lb/hr, as carbon disulfide;
 ECS = emission rate of carbon disulfide in stream, lb/hr;
 EH = emission rate of hydrogen sulfide in stream, lb/hr;
 MCS = mass of carbon disulfide per mole of carbon disulfide, 76 lb/lb-mole;
 MH = mass of hydrogen sulfide per mole of hydrogen disulfide, 68 lb/lb-mole;
 ECOS = emission rate of carbonyl sulfide in stream, lb/hr; and
 MCOS = mass of carbonyl sulfide per mole of carbon disulfide, 120 lb/lb-mole.

[Authority for term: PTI 02-18240, OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- The emission testing shall be conducted within six (6) months after the effective date of this permit and again within four (4) to four and a half (4.5) years after the effective date of this permit.
 - The emission testing shall be conducted to demonstrate compliance with the facility-wide hourly OC emission limitation and OC control efficiency for the air pollution control system.
 - The following test method(s) shall be employed to demonstrate compliance with the control efficiency limitation for OC: USEPA reference methods 1 through 4 and 15, as specified in 40 CFR Part 60, Appendix A. Alternative USEPA-approved test methods may be used with prior approval from the Ohio EPA.
 - During the performance test, the permittee shall establish site-specific operating limits for the biofiltration system and the caustic scrubber.

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

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date (s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

[Authority for term: PTI 02-18240, OAC rule 3745-15-04(A), OAC rule 3745-77-07(C)(1), and 40 CFR, Part 63, Subpart UUUU]

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. **Miscellaneous Requirements**

- None

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 0247040822 Issuance type: Title V Draft Permit

[Go to the top of this document](#)

Facility ID: 0247040822 Emissions Unit ID: P010 Issuance type: Title V Draft Permit

B. State Enforceable Section

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

- None.

I. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Sponge Cloth Machine # 2	OAC rule 3745-114-01	
2. Additional Terms and Conditions		
1. None		

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

II. Operational Restrictions

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (P010) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute" ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result from the the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and a 40-hour work week, for each toxic compound emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" or

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

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, (i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:

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

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons per year) or "worst case" toxic contaminants:

Toxic Contaminant: Carbon Disulfide

TLV (mg/m3) 31.14

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 4.16; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 69.86

MAGLC (ug/m3): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m3): 13.91

Maximum Hourly Emission Rate (lbs/hr):
Emissions unit - 0.38; Facility - 2.27

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3):
Facility - 3.13

MAGLC (ug/m3): 331.19

The permittee, has demonstrated that emissions of carbon disulfide and hydrogen sulfide, from emissions unit P010, is calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

2. Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour MAGLC, the permittee shall re-model the change to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour MAGLC include, but not limited to, the following:
 - a. changes in the composition of the materials used or the use of raw materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.
3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

IV. Reporting Requirements

1. The permittee shall submit annual reports to the Ohio EPA Northeast District Office, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

V. Testing Requirements

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION.

VI. Miscellaneous Requirements

1. None