



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center  
50 West Town Street, Suite 700  
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049  
Columbus, OH 43216-1049

05/02/08

CERTIFIED MAIL

**RE: Draft Title V Chapter 3745-77  
permit**

02-47-04-0822  
3M Elyria  
Dominique Alibeckoff  
1301 Lowell st.  
Elyria, OH 44035-4864

Dear Dominique Alibeckoff:

You are hereby notified that the Ohio Environmental Protection Agency has prepared the enclosed draft of the Title V permit for the facility referenced above. The purpose of this draft is to solicit public comments. A public notice concerning the draft will appear in the Ohio EPA Weekly Review and the major newspaper in the county where the facility is located. Comments and/or a request for a public hearing from the public and any affected parties will be accepted by Northeast District Office within 30 days of the date of publication in the newspaper. You will be notified in writing if a public hearing is scheduled. **In order to facilitate our review of all the comments or concerns you may have with the enclosed draft permit, please provide a hand marked-up copy of the draft permit showing the changes you think are necessary, along with any additional summary comments, by the end of the draft public comment period. The hard marked-up copy and any additional summary comments should be submitted to the Ohio EPA District Office or local air agency identified below and to the following address:**

**Andrew Hall  
Permit Review/Development Section  
Ohio EPA, Division of Air Pollution Control  
122 South Front Street  
Columbus, Ohio 43215**

A decision on processing the Title V permit will be made after consideration of written public comments and oral testimony (if a public hearing is conducted). After the comment period, you will be provided with a Preliminary Proposed Title V permit and an opportunity to comment prior to the Proposed Title V permit submittal to USEPA.

If you have any questions concerning this draft Title V permit, please contact Northeast District Office.

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

cc: USEPA (electronically submitted)  
File, DAPC PIER  
Northeast District Office



State of Ohio Environmental Protection Agency

DRAFT TITLE V PERMIT

Issue Date: 05/02/08	Effective Date: To be entered upon final issuance	Expiration Date: To be entered upon final issuance
----------------------	---	--

This document constitutes issuance of a Title V permit for Facility ID: 02-47-04-0822 to:  
 3M Elyria  
 1301 Lowell st.  
 Elyria, OH 44035-4864

**Emissions Unit ID (Company ID)/Emissions Unit Activity Description**

P001 (P001) Sponge production related equipment	P004 (P004) Sponge production equipment	Sponge production related equipment
P002 (P002) Sponge production related equipment	P005 (P005) Sponge production equipment	P009 (P009) Sponge production related equipment
P003 (P003) Sponge production equipment	P007 (P007) Sponge production equipment	P010 (P010) Sponge production equipment
	P008 (P008)	

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Northeast District Office  
 2110 East Aurora Road  
 Twinsburg, OH 44087  
 (330) 425-9171

Ohio Environmental Protection Agency

---

Chris Korleski  
 Director

## PART I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Section

#### 1. Monitoring and Related Record Keeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.III of Part III of this Title V permit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

- i. The date, place (as defined in the permit), and time of sampling or measurements.
- ii. The date(s) analyses were performed.
- iii. The company or entity that performed the analyses.
- iv. The analytical techniques or methods used.
- v. The results of such analyses.
- vi. The operating conditions existing at the time of sampling or measurement.  
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.  
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c. The permittee shall submit required reports in the following manner:

- i. **All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:**

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

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

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided

in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

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

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

- ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II of this Title V permit, all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

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

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

See B.6 below if no deviations occurred during the quarter.

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

- iii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; General Terms and Conditions: A.2, A.3, A.4, A.6.e, A.7, A.12, A.14, A.18, A.19, A.20, and A.22 of Part I of this Title V permit, as well as any deviations from the requirements in Section A.V or A.VI of Part III of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office

or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in Part II.A of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with General Term and Condition A.1.c.ii above.

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

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

- iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."

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

- v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

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

## 2. Scheduled Maintenance

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

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

## 3. Risk Management Plans

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

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

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

## 4. Title IV Provisions

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

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

**5. Severability Clause**

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

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

**6. General Requirements**

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.
- f. Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable upon final issuance of all applicable OAC Chapter 3745-35 operating permits and/or registrations for all subject emissions units located at the facility and:
  - i. the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or
  - ii. the permittee no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
  - iii. a combination of i. and ii. above.

The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

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

**7. Fees**

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

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

**8. Marketable Permit Programs**

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.  
(Authority for term: OAC rule 3745-77-07(A)(9))

**9. Reasonably Anticipated Operating Scenarios**

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.  
(Authority for term: OAC rule 3745-77-07(A)(10))

**10. Reopening for Cause**

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

- a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.  
(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

**11. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.  
(Authority for term: OAC rule 3745-77-07(B))

**12. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.

- iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
- i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.
  - ii. Compliance certifications shall include the following:
    - (a) An identification of each term or condition of this permit that is the basis of the certification.
    - (b) The permittee's current compliance status.
    - (c) Whether compliance was continuous or intermittent.
    - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
    - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
  - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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

### **13. Permit Shield**

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

### **14. Operational Flexibility**

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed

under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

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

**15. Emergencies**

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

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

**16. Off-Permit Changes**

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

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

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

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

**17. Compliance Method Requirements**

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

*(This term is provided for informational purposes only.)*

**18. Insignificant Activities or Emissions Levels**

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.

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

**19. Permit to Install Requirement**

Prior to the “installation” or “modification” of any “air contaminant source,” as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.  
(Authority for term: OAC rule 3745-77-07(A)(1))

**20. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.  
(Authority for term: OAC rule 3745-77-07(A)(1))

**21. Permanent Shutdown of an Emissions Unit**

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

After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent “modification” or “installation” as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an “emissions unit” as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.  
(Authority for term: OAC rule 3745-77-01)

**22. Title VI Provisions**

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

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

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

**B. State Only Enforceable Section**

**1. Reporting Requirements Related to Monitoring and Record Keeping Requirements**

The permittee shall submit required reports in the following manner:

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

**2. Records Retention Requirements**

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

**3. Inspections and Information Requests**

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

**4. Scheduled Maintenance/Malfunction Reporting**

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

**5. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**6. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations

occurred during that quarter. The reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

- a. where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in General Term and Condition A.1.c.ii; or
- b. where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or
- c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

## 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.

### 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.

## Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** P001 (P001)

**Activity Description:** Sponge production related equipment

### A. State and Federally Enforceable Section

#### 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.  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.
	OAC rule 3745-21-07(G)(2)	Exempt, see section A.I.2.d.
	40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	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.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	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

- 2.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.
- 2.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.)

## 2. Additional Terms and Conditions (continued)

**2.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.)

**2.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.

**2.e** All vent streams vented to a control device shall be routed through a closed-vent system.

**2.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.

**2.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.

**2.h** The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.

**2.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).

## 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]

## 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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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]

### 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)]

#### IV. Reporting Requirements (continued)

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]

#### IV. Reporting Requirements (continued)

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]

#### 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:

1.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)]

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)]

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)]

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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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]

## V. Testing Requirements (continued)

### 1.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.

## **V. Testing Requirements (continued)**

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]

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**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**

None

**II. Operational Restrictions**

None

**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.

### III. Monitoring and/or Record Keeping Requirements (continued)

- 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/m<sup>3</sup>) 31.14

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

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 69.86

MAGLC (ug/m<sup>3</sup>): 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.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

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.

### **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.

### **V. Testing Requirements**

**None**

### **VI. Miscellaneous Requirements**

**None**

## Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** P002 (P002)

**Activity Description:** Sponge production related equipment

### A. State and Federally Enforceable Section

#### 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.  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.
	OAC rule 3745-21-07(G)(2)	Exempt, see section A.I.2.d.
	40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	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.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	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

- 2.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.
- 2.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.)

## 2. Additional Terms and Conditions (continued)

**2.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.)

**2.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.

**2.e** All vent streams vented to a control device shall be routed through a closed-vent system.

**2.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.

**2.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.

**2.h** The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.

**2.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).

## 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]

## 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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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]

### 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)]

#### IV. Reporting Requirements (continued)

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]

#### IV. Reporting Requirements (continued)

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]

#### 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:

1.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)]

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)]

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)]

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)]

## V. Testing Requirements (continued)

### 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)]

### 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)]

### 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]

## V. Testing Requirements (continued)

### 1.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.

## **V. Testing Requirements (continued)**

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]

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**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**

None

**II. Operational Restrictions**

None

**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.

### III. Monitoring and/or Record Keeping Requirements (continued)

- 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.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

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.

### **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.

### **V. Testing Requirements**

**None**

### **VI. Miscellaneous Requirements**

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** P003 (P003)  
**Activity Description:** Sponge production equipment

#### A. State and Federally Enforceable Section

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

- 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)	See sections A.I.2.a through A.I.2.c. Exempt, see Section A.I.2.d.
	40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	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

- 2.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.
- 2.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.)
- 2.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.)
- 2.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.

- 2.e** All vent streams vented to a control device shall be routed through a closed-vent system.
- 2.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.
- 2.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.
- 2.h** The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- 2.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)..

## 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]

### 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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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]

#### 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]

#### IV. Reporting Requirements (continued)

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]

#### 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:

- 1.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)]

- 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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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)]

**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)]

**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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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)]

## V. Testing Requirements (continued)

### 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]

### 1.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.

## **V. Testing Requirements (continued)**

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]

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**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**

None

**II. Operational Restrictions**

None

**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.

### III. Monitoring and/or Record Keeping Requirements (continued)

- 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/m<sup>3</sup>) 31.14

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

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 69.86

MAGLC (ug/m<sup>3</sup>): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m<sup>3</sup>) 13.91

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

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 3.13

MAGLC (ug/m<sup>3</sup>): 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.).

### III. Monitoring and/or Record Keeping Requirements (continued)

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.

### 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.

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** P004 (P004)

**Activity Description:** Sponge production equipment

#### A. State and Federally Enforceable Section

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

- 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.
	OAC rule 3745-21-07(G)(2)	Emissions of hydrogen sulfide (H <sub>2</sub> S) shall not exceed 0.76 pound per hour and 3.33 tons per year.  Combined facility emissions of H <sub>2</sub> S 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.  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

- 2.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.
- 2.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.)
- 2.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.)
- 2.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.

- 2.e** All vent streams vented to a control device shall be routed through a closed-vent system.
- 2.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.
- 2.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.
- 2.h** The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- 2.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)..

## 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]

### 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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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]

#### 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]

#### IV. Reporting Requirements (continued)

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]

#### 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:

- 1.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)]

- 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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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)]

**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)]

**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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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)]

## V. Testing Requirements (continued)

### 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]

### 1.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.

## **V. Testing Requirements (continued)**

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]

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**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**

None

**II. Operational Restrictions**

None

**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.

### III. Monitoring and/or Record Keeping Requirements (continued)

- 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/m<sup>3</sup>) 31.14

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

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 69.86

MAGLC (ug/m<sup>3</sup>): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m<sup>3</sup>): 13.91

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

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 3.13

MAGLC (ug/m<sup>3</sup>): 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.).

### III. Monitoring and/or Record Keeping Requirements (continued)

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.

### 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.

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** P005 (P005)  
**Activity Description:** Sponge production equipment

#### A. State and Federally Enforceable Section

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

- 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

- 2.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.
- 2.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.)
- 2.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.)
- 2.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.

- 2.e** All vent streams vented to a control device shall be routed through a closed-vent system.
- 2.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.
- 2.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.
- 2.h** The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- 2.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)..

## 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]

### 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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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]

#### 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]

#### IV. Reporting Requirements (continued)

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]

#### 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:
- 1.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)]
- 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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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)]

**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)]

**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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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)]

## V. Testing Requirements (continued)

### 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]

### 1.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.

## **V. Testing Requirements (continued)**

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]

## **VI. Miscellaneous Requirements**

**None**

## B. State Enforceable Section

### 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 3745-114-01	

### 2. Additional Terms and Conditions

None

### II. Operational Restrictions

None

### 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.

### III. Monitoring and/or Record Keeping Requirements (continued)

- 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/m<sup>3</sup>) 31.14

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

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 69.86

MAGLC (ug/m<sup>3</sup>): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m<sup>3</sup>): 13.91

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

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 3.13

MAGLC (ug/m<sup>3</sup>): 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.).

### III. Monitoring and/or Record Keeping Requirements (continued)

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.

### 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.

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** P007 (P007)  
**Activity Description:** Sponge production equipment

#### A. State and Federally Enforceable Section

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

- 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

- 2.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.
- 2.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.)
- 2.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.)
- 2.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.

- 2.e** All vent streams vented to a control device shall be routed through a closed-vent system.
- 2.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.
- 2.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.
- 2.h** The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- 2.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)..

## 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]

### 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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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]

#### 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]

#### IV. Reporting Requirements (continued)

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]

#### 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:

- 1.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)]

- 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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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)]

**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)]

**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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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)]

## V. Testing Requirements (continued)

### 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]

### 1.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.

## **V. Testing Requirements (continued)**

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]

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**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**

None

**II. Operational Restrictions**

None

**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.

### III. Monitoring and/or Record Keeping Requirements (continued)

- 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/m<sup>3</sup>) 31.14

Maximum Hourly Emission Rate (lbs/hr):  
Emissions unit - 25.88; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 69.86

MAGLC (ug/m<sup>3</sup>): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m<sup>3</sup>): 13.91

Maximum Hourly Emission Rate (lbs/hr):  
Emissions unit - 0.12; Facility - 2.27

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 3.13

MAGLC (ug/m<sup>3</sup>): 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.).

### III. Monitoring and/or Record Keeping Requirements (continued)

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.

### 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.

### V. Testing Requirements

None

### VI. Miscellaneous Requirements

None

## Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** P008 (P008)

**Activity Description:** Sponge production related equipment

### A. State and Federally Enforceable Section

#### 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.  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.
	OAC rule 3745-21-07(G)(2)	Exempt, see section A.I.2.d.
	40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	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.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	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

- 2.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.
- 2.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.)

## 2. Additional Terms and Conditions (continued)

**2.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.)

**2.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.

**2.e** All vent streams vented to a control device shall be routed through a closed-vent system.

**2.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.

**2.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.

**2.h** The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.

**2.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).

## 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]

## 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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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]

### 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)]

#### IV. Reporting Requirements (continued)

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]

#### IV. Reporting Requirements (continued)

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]

#### 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:

1.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)]

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)]

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)]

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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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]

## V. Testing Requirements (continued)

### 1.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.

## **V. Testing Requirements (continued)**

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]

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**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**

None

**II. Operational Restrictions**

None

**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.

### III. Monitoring and/or Record Keeping Requirements (continued)

- 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/m<sup>3</sup>) 31.14

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

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 69.86

MAGLC (ug/m<sup>3</sup>): 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.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

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.

### **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.

### **V. Testing Requirements**

**None**

### **VI. Miscellaneous Requirements**

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** P009 (P009)

**Activity Description:** Sponge production related equipment

#### A. State and Federally Enforceable Section

##### 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.  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.
	OAC rule 3745-21-07(G)(2)	Exempt, see section A.I.2.d.
	40 CFR Part 63, Subpart UUUU (40 CFR 63.5480 - 5610)	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.
	40 CFR 63.1 - 15 (40 CFR Part 63, Subpart UUUU Table 10)	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

- 2.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.
- 2.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.)

## 2. Additional Terms and Conditions (continued)

**2.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.)

**2.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.

**2.e** All vent streams vented to a control device shall be routed through a closed-vent system.

**2.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.

**2.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.

**2.h** The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.

**2.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).

## 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]

## 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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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]

### 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)]

#### IV. Reporting Requirements (continued)

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]

#### **IV. Reporting Requirements (continued)**

- 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]

#### **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:

**1.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)]

**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)]

**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)]

**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)]

## V. Testing Requirements (continued)

### 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)]

### 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)]

### 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]

## V. Testing Requirements (continued)

### 1.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.

## **V. Testing Requirements (continued)**

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]

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**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**

None

**II. Operational Restrictions**

None

**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.

### III. Monitoring and/or Record Keeping Requirements (continued)

- 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/m<sup>3</sup>) 31.14

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

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 69.86

MAGLC (ug/m<sup>3</sup>): 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.

### **III. Monitoring and/or Record Keeping Requirements (continued)**

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.

### **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.

### **V. Testing Requirements**

**None**

### **VI. Miscellaneous Requirements**

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** P010 (P010)  
**Activity Description:** Sponge production equipment

#### A. State and Federally Enforceable Section

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

- 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

- 2.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.
- 2.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.)
- 2.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.)
- 2.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.

- 2.e** All vent streams vented to a control device shall be routed through a closed-vent system.
- 2.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.
- 2.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.
- 2.h** The permittee shall remain in compliance at all times, except during startup, shutdown, and malfunctions.
- 2.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)..

## 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]

### 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)]

### III. Monitoring and/or Record Keeping Requirements (continued)

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]

#### 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]

#### IV. Reporting Requirements (continued)

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]

#### 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:
- 1.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)]
- 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)]

**V. Testing Requirements (continued)**

**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)]

**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)]

**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)]

**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)]

**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)]

## V. Testing Requirements (continued)

### 1.h Emissions Limitation:

Combined facility emissions of H<sub>2</sub>S shall not exceed 9.95 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable H<sub>2</sub>S 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)]

### 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)]

### 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)]

## V. Testing Requirements (continued)

### 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]

### 1.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.

## **V. Testing Requirements (continued)**

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]

## **VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

**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 3745-114-01	

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**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.

### III. Monitoring and/or Record Keeping Requirements (continued)

- 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/m<sup>3</sup>) 31.14

Maximum Hourly Emission Rate (lbs/hr):  
Emissions unit - 4.16; Facility - 50.8

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 69.86

MAGLC (ug/m<sup>3</sup>): 741.43

Toxic Contaminant: Hydrogen Sulfide

TLV (mg/m<sup>3</sup>): 13.91

Maximum Hourly Emission Rate (lbs/hr):  
Emissions unit - 0.38; Facility - 2.27

Predicted 1-Hour Maximum Ground Level Concentration (ug/m<sup>3</sup>):  
Facility - 3.13

MAGLC (ug/m<sup>3</sup>): 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.).

### III. Monitoring and/or Record Keeping Requirements (continued)

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.

### 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.

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

\*\*\*\*\*

**THIS IS THE LAST PAGE OF THE PERMIT**

\*\*\*\*\*

# Statement of Basis For Title V Permit

Part I - General	
Company Name	3M
Premise Number	02-47-04-0822
What makes this facility a Title V facility?	Volatile Organic Compounds and HAP
Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01 (U)?	Yes
Were there any "common control" issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them.	Yes, all of the emissions units are vented to a common header before going to the control system.
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a minor permit modification per OAC rule 3745-77-08(C)(1)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a significant permit modification per OAC rule 3745-77-08(C)(3)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)	N/A

Part II (State and Federally Enforceable Requirements)			
Term and Condition (paragraph)	Basis		Comments
	SIP (3745-)	Other	
A.1		40 CFR Part 63, Subpart UUUU	Applicability of the subpart to this facility.
A.2	77-07(A)(13)		identification of IEU with applicable requirements

**C Instructions for Part II:**

Each paragraph in Part II must be identified and the remainder of the table completed. If the SIP (not including 31-05) is the basis for the term and condition, identify the specific rule. If the SIP is not the basis for the term and condition, place an "N" in the column under "SIP." If the basis for the term and condition is something other than the SIP, including 3745-31-05, NSPS or MACT, a "Y" should be noted in the "Other" column, and if not, an "N" should be noted. Whether the basis for the term and condition is the "SIP" or "Other," an explanation of each term and condition in Part II must be provided in the "Comments" section.

Part III (Requirements Within the State and Federally Enforceable Section)															
Any unusual requirements or aspects of the terms and conditions in Part III that are not self-explanatory should be explained in the appropriate comment field or in a paragraph following the table for Part III.															
EU(s)	Limitation	Basis		ND	OR	M	St	ENF	R	St	Rp	St	ET	Misc	Comments
		SIP (3745-)	Other												
P001	0.25 lb/hr of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P001	1.1 TPY of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P001	Combined Facility OC emissions shall not exceed 50.8 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P001	Combined facility emissions of OC shall not exceed 222.5 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P001	The sum of all uncontrolled sulfide emissions shall be reduced by at least 75 percent based on a six-month rolling average.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P001	APC equipment shall remove at least 80 percent of OC vented to it.	N	40 CFR Part 63 Subpart UUUU Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P001	APC shall capture at least 85 percent of all facility OC emissions and H2S emissions	N	Y 40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P001	Negative pressure within manufacturing area	N	40 CFR Part 63 Subpart UUUU Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - If required
P001	All vent streams vented to a control device shall be routed through a closed-vent system	N	Y 40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P001	Bypass lines shall be secured with a lock	N	Y 40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P002	0.25 lb/hr of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P002	1.1 TPY of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P002	Combined Facility OC emissions shall not exceed 50.8 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P002	Combined facility OC emissions shall not exceed 222.5 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P002	The sum of all uncontrolled sulfide emissions shall be reduced by at least 75 percent based on a six-month rolling average.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P002	APC equipment shall remove at least 80 percent of OC vented to it.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P002	APC shall capture at least 85 percent of all facility OC emissions and H2S emissions	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P002	Negative pressure within manufacturing area	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - If required

P002	All vent streams vented to a control device shall be routed through a closed-vent system	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P002	Bypass lines shall be secured with a lock	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P003	8.5 lb/hr of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P003	37.22 TPY of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P003	Combined Facility OC emissions shall not exceed 50.8 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P003	Combined facility OC emissions shall not exceed 222.5 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P003	0.76 lb/hr of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P003	3.33 TPY of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P003	Combined facility H <sub>2</sub> S emissions shall not exceed 2.27 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P003	Combined facility emissions of H <sub>2</sub> S shall not exceed 9.95 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P003	The sum of all uncontrolled sulfide emissions shall be reduced by at least 75 percent based on a six-month rolling average.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P003	APC equipment shall remove at least 80 percent of OC vented to it.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P003	APC shall capture at least 85 percent of all facility OC emissions and H <sub>2</sub> S emissions	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P003	Negative pressure within manufacturing area	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - If required
P003	All vent streams vented to a control device shall be routed through a closed-vent system	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P003	Bypass lines shall be secured with a lock	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P004	8.5 lb/hr of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P004	37.22 TPY of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P004	Combined Facility OC emissions shall not exceed 50.8 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P004	Combined facility OC emissions shall not exceed 222.5 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P004	0.76 lb/hr of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P004	3.33 TPY of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P004	Combined facility H <sub>2</sub> S emissions shall not exceed 2.27 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P004	Combined facility emissions of H <sub>2</sub> S shall not exceed 9.95 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P004	The sum of all uncontrolled sulfide emissions shall be reduced by at least 75 percent based on a six-month rolling average.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P004	APC equipment shall remove at least 80 percent of OC vented to it.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P004	APC shall capture at least 85 percent of all facility OC emissions and H <sub>2</sub> S emissions	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P004	Negative pressure within manufacturing area	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - If required
P004	All vent streams vented to a control device shall be routed through a closed-vent system	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P004	Bypass lines shall be secured with a lock	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P005	2.76 lb/hr of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P005	12.1 TPY of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P005	Combined Facility OC emissions shall not exceed 50.8 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P005	Combined facility OC emissions shall not exceed 222.5 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P005	0.25 lb/hr of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P005	1.10 TPY of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P005	Combined facility H <sub>2</sub> S emissions shall not exceed 2.27 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P005	Combined facility H <sub>2</sub> S emissions shall not exceed 9.95 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P005	The sum of all uncontrolled sulfide emissions shall be reduced by at least 75 percent based on a six-month rolling average.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P005	APC equipment shall remove at least 80 percent of OC vented to it.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P005	APC shall capture at least 85 percent of all facility OC emissions and H2S emissions	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P005	Negative pressure within manufacturing area	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - If required

P005	All vent streams vented to a control device shall be routed through a closed-vent system	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P005	Bypass lines shall be secured with a lock	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P007	25.88 lb/hr of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P007	113.34 TPY of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P007	Combined Facility OC emissions shall not exceed 50.8 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P007	Combined facility OC emissions shall not exceed 222.5 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P007	0.12 lb/hr of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P007	0.53 TPY of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P007	Combined facility H <sub>2</sub> S emissions shall not exceed 2.27 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P007	Combined facility H <sub>2</sub> S emissions shall not exceed 9.95 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P007	The sum of all uncontrolled sulfide emissions shall be reduced by at least 75 percent based on a six-month rolling average.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P007	APC equipment shall remove at least 80 percent of OC vented to it.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P007	APC shall capture at least 85 percent of all facility OC emissions and H <sub>2</sub> S emissions	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P007	Negative pressure within manufacturing area	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - If required
P007	All vent streams vented to a control device shall be routed through a closed-vent system	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P007	Bypass lines shall be secured with a lock	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P008	0.25 lb/hr of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P008	1.1 TPY of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P008	Combined Facility OC emissions shall not exceed 50.8 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P008	Combined facility emissions of OC shall not exceed 222.5 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P008	The sum of all uncontrolled sulfide emissions shall be reduced by at least 75 percent based on a six-month rolling average.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P008	APC equipment shall remove at least 80 percent of OC vented to it.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P008	APC shall capture at least 85 percent of all facility OC emissions and H2S emissions	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P008	Negative pressure within manufacturing area	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - If required

P008	All vent streams vented to a control device shall be routed through a closed-vent system	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P008	Bypass lines shall be secured with a lock	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P009	0.25 llb/hr of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P009	1.1 TPY of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P009	Combined Facility OC emissions shall not exceed 50.8 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P009	Combined facility emissions of OC shall not exceed 222.5 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P009	The sum of all uncontrolled sulfide emissions shall be reduced by at least 75 percent based on a six-month rolling average.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P009	APC equipment shall remove at least 80 percent of OC vented to it.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P009	APC shall capture at least 85 percent of all facility OC emissions and H2S emissions	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P009	Negative pressure within manufacturing area	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - If required

P009	All vent streams vented to a control device shall be routed through a closed-vent system	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P009	Bypass lines shall be secured with a lock	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P010	4.16 llb/hr of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P010	18.24 TPY of OC	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P010	Combined Facility OC emissions shall not exceed 50.8 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P010	Combined facility OC emissions shall not exceed 222.5 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P010	0.38 lb/hr of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P010	1.66 TPY of H <sub>2</sub> S	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P010	Combined facility H <sub>2</sub> S emissions shall not exceed 2.27 lbs/hr	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P010	Combined facility H <sub>2</sub> S emissions shall not exceed 9.95 TPY	31-05	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P010	The sum of all uncontrolled sulfide emissions shall be reduced by at least 75 percent based on a six-month rolling average.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P010	APC equipment shall remove at least 80 percent of OC vented to it.	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required
P010	APC shall capture at least 85 percent of all facility OC emissions and H <sub>2</sub> S emissions	N	Y	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Method 15, if required

P010	Negative pressure within manufacturing area	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - If required
P010	All vent streams vented to a control device shall be routed through a closed-vent system	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.
P010	Bypass lines shall be secured with a lock	N	40 CFR Part 63 Subpart UUUU	N	Y	Y	N	N	Y	N	Y	N	N	N	Other - 40 CFR, Part 63, Subpart UUUU OR - Pressure drop across APC, Temp. restriction, sulfate conc., pH restriction ET - Compliance is demonstrated with monitoring and record keeping.

EU = emissions unit ID

ND = negative declaration (i.e., term that indicates that a particular rule(s) is (are) not applicable to a specific emissions unit)

OR = operational restriction

M = monitoring requirements

St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement

ENF = did noncompliance issues drive the monitoring requirements?

R = record keeping requirements

Rp = reporting requirements

ET = emission testing requirements (not including compliance method terms)

Misc = miscellaneous requirements

**C Instructions for Part III:**

C All non-insignificant EUs must be included in this table. For each EU, or group of similar EUs, each emission limitation and control requirement specified in section A.I.1 and A.I.2 of the

permit must be identified and the remainder of the table completed.

- C If the SIP (not including OAC rule 3745-31-05) is the basis for the term and condition, identify the specific rule. If the SIP is not the basis for the term and condition, place an "N" in the column under "SIP." If the basis for the term and condition is something other than the SIP, including OAC rule 3745-31-05, NSPS or MACT, a "Y" should be noted in the "Other" column, and if not, an "N" should be noted. If the basis for the term and condition is "Other," an explanation of the basis must be provided in the "Comments" section. If OAC rule 3745-31-05 is cited in the "Other" column, please indicate in the "Comments" section whether or not all of the requirements have been transferred from the permit to install.
- To complete the remainder of the table after "Basis," except for the "Comments" section, simply specify a "Y" for yes or an "N" for no. For the "M," "R," "Rp," and "ET" columns, if "N" is specified, there should be a brief explanation in the "Comments" section as to why there are no requirements. If a brief explanation is provided in the "Comments" section, please do not simply indicate that monitoring or testing requirements are not necessary. An explanation of why a requirement is not necessary should be specified.

When periodic monitoring requirements are established to satisfy the provisions of OAC rule 3745-77-07(A)(3)(a)(ii), the basis for the requirements must be explained. Whenever Engineering Guides have been used to establish the periodic monitoring requirements, the applicable Engineering Guide may be referenced in the "Comments" section. An example that should be clarified would be the situation where it has been determined that control equipment parametric monitoring will be used to evaluate ongoing compliance in lieu of performing frequent emission tests. In this situation, Engineering Guide #65 would be referenced along with the fact that the parametric monitoring range (or minimum value) corresponded to the range (or minimum value) documented during the most recent emission tests that demonstrated that the emissions unit was in compliance. If streamlining language is included in the "Monitoring," "Record Keeping," or "Reporting" requirements sections of the permit, explain which requirements are being streamlined (mark appropriate column above) and provide a brief explanation of why the streamlined term is equal to or more stringent than the "Monitoring," "Record Keeping," or "Reporting" requirements specified in the permit to install. If Engineering Guide #16 was used as the basis for establishing an emission test frequency, a simple note referencing the Engineering Guide in the "Comments" section would be sufficient.

Also, if a "Y" is noted under "OR," "Misc.," "St.," "ND," or "ENF" an explanation of the requirements must be provided in the "Comments" section. In addition to a general explanation of the "OR," "Misc.," "St.," "ND," and/or "ENF" the following must be provided:

1. For an operational restriction, clarify if appropriate monitoring, record keeping, and reporting requirements have been specified for the operational restriction and indicate whether or not CAM is currently applicable.
2. If a control plan and schedule is included in the "Miscellaneous Requirements" section of the permit, provide an explanation in the "Comments" section of the violation, basis for the violation, and the company's proposed control plan and schedule.
3. If the "ND" column above is marked, please identify the particular rule(s) that is (are) not applicable to the specified emissions unit.
2. If the "ENF" column above is marked, please provide a brief explanation of the noncompliance issue(s) which prompted the use of the specified monitoring requirement.

An explanation is not required if an "N" is noted in the "OR," "Misc.," "St.," "ND," or "ENF" columns.

- C **Additional information for modifications** - Several types of modifications, as defined by rule, may be processed concurrently. Please provide enough of a description for someone wishing to review the changes to the permit language to be able to identify where the change is made in the permit document. This brief description should be identified in the appropriate row in the first table of this form by replacing the "N/A" in the applicable row(s). Please also indicate if the modification is being initiated by an appeal by including the ERAC case number in the "Comments" area. Please update the term-specific text in the SOB as warranted (full insertion or replacement is acceptable; bold italic and strike out is not needed). Note all modification/reopening rows should remain "N/A" when developing the SOB during the initial permit development. Note: APA's and Off-permit changes do not need to be noted in the SOB.