



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

12/12/2012

Mr. Paul Francis
Thermoseal Inc.
2350 Campbell Road
Sidney, OH 45365-9573

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0575010161
Permit Number: P0110284
Permit Type: OAC Chapter 3745-31 Modification
County: Shelby

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

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

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

If you have any questions, please contact Ohio EPA DAPC, Southwest District Office at (937)2856357 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
Ohio EPA-SWDO; Indiana



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
Thermoseal Inc.**

Facility ID:	0575010161
Permit Number:	P0110284
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	12/12/2012
Effective:	12/12/2012



Division of Air Pollution Control
Permit-to-Install
for
Thermoseal Inc.

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. Federally Enforceable Standard Terms and Conditions	4
2. Severability Clause	4
3. General Requirements	4
4. Monitoring and Related Record Keeping and Reporting Requirements.....	5
5. Scheduled Maintenance/Malfunction Reporting	6
6. Compliance Requirements	6
7. Best Available Technology	7
8. Air Pollution Nuisance	7
9. Reporting Requirements	7
10. Applicability	8
11. Construction of New Sources(s) and Authorization to Install	8
12. Permit-To-Operate Application	9
13. Construction Compliance Certification	9
14. Public Disclosure	9
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations	10
16. Fees.....	10
17. Permit Transfers	10
18. Risk Management Plans	10
19. Title IV Provisions	10
B. Facility-Wide Terms and Conditions.....	11
C. Emissions Unit Terms and Conditions	13
1. P013, Ethanol Distillation	14
2. P015, Calender #5	21
3. P018, Vulcan Toluene Decanting.....	28
4. P020, Planetary Mixer #1	35
5. Emissions Unit Group -Mixers: P008,P009,	44



Final Permit-to-Install
Thermoseal Inc.
Permit Number: P0110284
Facility ID: 0575010161
Effective Date: 12/12/2012

Authorization

Facility ID: 0575010161
Facility Description: Manufacturer of gaskets, packing and sealing devices
Application Number(s): A0044528
Permit Number: P0110284
Permit Description: Chapter 31 Modification permit to reduce the OC recovery efficiency from 90.6%, based upon a 30-day rolling average period, to 85%, based on a rolling 200 production day period.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$1,200.00
Issue Date: 12/12/2012
Effective Date: 12/12/2012

This document constitutes issuance to:

Thermoseal Inc.
2350 Campbell Road
Sidney, OH 45365-9573

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

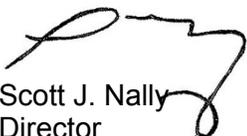
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southwest District Office
401 East Fifth Street
Dayton, OH 45402
(937)285-6357

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0110284

Permit Description: Chapter 31 Modification permit to reduce the OC recovery efficiency from 90.6%, based upon a 30-day rolling average period, to 85%, based on a rolling 200 production day period.

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

Emissions Unit ID:	P013
Company Equipment ID:	Ethanol Distillation
Superseded Permit Number:	05-08246
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P015
Company Equipment ID:	Calender #5
Superseded Permit Number:	05-14280
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P018
Company Equipment ID:	Vulcan Toluene Decantering
Superseded Permit Number:	05-08246
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P020
Company Equipment ID:	Planetary Mixer #1
Superseded Permit Number:	05-14280
General Permit Category and Type:	Not Applicable

Group Name: Mixers

Emissions Unit ID:	P008
Company Equipment ID:	Mixer #3
Superseded Permit Number:	05-14280
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P009
Company Equipment ID:	Mixer #4
Superseded Permit Number:	05-14280
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
Thermoseal Inc.
Permit Number: P0110284
Facility ID: 0575010161
Effective Date: 12/12/2012

A. Standard Terms and Conditions



1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they 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 and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. 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 re-issuance, or modification.



- 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, revoked, or revoked and reissued, for cause. 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 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.

4. 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, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- 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, 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.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Southwest District Office.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Southwest District Office. The written 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. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Southwest District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. 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 are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. 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, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Southwest District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this 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.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Southwest District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Southwest District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have



been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Southwest District Office. 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.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized 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 authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.



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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. 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. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to 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"), the permittee shall comply with the requirement to register such a plan.

19. 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.



Final Permit-to-Install
Thermoseal Inc.
Permit Number: P0110284
Facility ID: 0575010161
Effective Date: 12/12/2012

B. Facility-Wide Terms and Conditions



Final Permit-to-Install
Thermoseal Inc.
Permit Number: P0110284
Facility ID: 0575010161
Effective Date: 12/12/2012

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.



Final Permit-to-Install
Thermoseal Inc.
Permit Number: P0110284
Facility ID: 0575010161
Effective Date: 12/12/2012

C. Emissions Unit Terms and Conditions



1. P013, Ethanol Distillation

Operations, Property and/or Equipment Description:

Ethanol distillation

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) b)(1)d., d)(1), d)(2), d)(3), d)(4), and e)(2), below.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	The hourly organic compound (OC) emissions from this emissions unit shall not exceed 0.12 pounds. See sections b)(2)a. and b)(2)b., below.
b.	OAC paragraph 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See section b)(2)c., below.
c.	OAC rule 3745-21-07(M)(2)	Use of a control device. See section c)(1), below.
d.	OAC rule 3745-114-01	Ohio Toxic Rule See sections d)(1), d)(2), d)(3), d)(4), and e)(2), below.
e.	OAC rule 3745-31-05(D) (to avoid PSD thresholds)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 113 tons per rolling 365 day period.
f.	OAC rule 3745-31-05(F) (voluntary limit to account for accurate measuring of solvent usage and recovery)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 62 tons per rolling 200 operational day period.



(2) Additional Terms and Conditions

- a. The hourly emission limitation of 0.12 pounds of organic compound (OC), from this emissions unit, is established to reflect the potential emissions from this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.
- b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to the OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006, version of 3745-31-05, then these emission limits/control measures no longer apply.
- c. This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, as part of the State Implementation Plan, (SIP).

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound (OC) emissions from this emissions unit since the "controlled" potential to emit is less than ten tons per year.

c) Operational Restrictions

- (1) This emissions unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the organic compound emissions by an overall control efficiency of at least eighty-five per cent (85%), by weight. If the reductions are achieved by incineration, ninety per cent (90%) or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

d) Monitoring and/or Recordkeeping Requirements

- (1) The application for emissions units, P008, P009, P013, P015, P018, and P020, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:



- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "9" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Toluene

TLV (mg/m3): 75.36 (worst case)

Maximum Hourly Emission Rate (lbs. /hr.): 27.12 (for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5,190

MAGLC (ug/m3): 6,699



The permittee, has demonstrated that combined emissions of Toluene, from emissions units P008, P009, P013, P015, P018, and P020, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (2) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (5) The permittee shall maintain the following daily records; based on a rolling 200 operational days:
 - a. The date of operations;
 - b. The amount of organic materials processed*, in pounds;
 - c. The amount of organic materials employed*, in tons, based on a rolling 200 operational day period;
 - d. The amount of organic materials recovered*, in tons , based on a rolling 200 operational day period;
 - e. The overall control efficiency, in percent of organic materials recovered*, (the summation of: ("d"/"c")); and
 - f. The overall OC emission, in tons, based on a rolling 200 operational day period, (the summation of: ("c" x (1-"e"))).

Since the permittee already has sufficient record to assure compliance there is no need to establish initial record keeping requirement to assure federal enforceability of the control efficiency as established in section c) of this permit.



* The above items shall be calculated in accordance with methods and formulas as established in the April 3, 1998 Mass Balance Protocol Agreement between Thermoseal and the Ohio EPA and the June 7, 1999, Ohio EPA letter of approval of the Mass Balance Protocol.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 62 tons per rolling 200 operational day period;
 - b. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 113 tons per rolling 365 day period; and
 - c. All failures to achieve at least an 85% control efficiency of OC materials employed, as based on a rolling 200 operational day period.

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

- (2) The permittee shall submit annual reports by April 30th of each year that include any changes to any 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 concentration. The report should include:
 - a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s); and
 - d. a summary of the results of the updated modeling, including the input changes; and
 - e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

f) Testing Requirements

- (1) Compliance with the emission limitation(s) and operational restrictions in sections b)(1) of this permit shall be determined in accordance with the following methods:



a. Emission Limitation:

0.12 pounds of organic compound (OC) per hour

The allowable emissions are based on the following equation:

$$\text{HER} = [(\text{Mp} \times 3.3) + (\text{Mp}/2000 \times 0.00024)] \times (1 - \text{Ce})$$

Where:

HER = hourly emission rate, in pounds; and

Mp = maximum hourly capacity, in tons, (482 lb/hr/ 2000 = 0.241 tons/hr);

Emission factors are from AP-42 Table 4.7-1 (February 1980):

- i. 3.3 pounds of OC emitted per ton, condenser vent; and
- ii. 0.00024 pounds of OC emitted per ton, fugitive loading; and

Ce = Control efficiency, in percent of OC controlled, (85%, (0.85)).

Applicable Compliance Method:

Compliance shall be assumed based on the maximum hourly capacity of this emissions unit not exceeding 0.241 tons. Prior to modifying this emissions unit that would increase hourly capacity of this unit, the type of pollutant being emitted, and/or cause an increase in the hourly potential emissions; the permittee shall apply for and obtain all appropriate air pollution permits.

g) Miscellaneous Requirements

- (1) None.



2. P015, Calender #5

Operations, Property and/or Equipment Description:

Calender 5

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

(1) b)(1)d., d)(2), d)(3), d)(4), d)(5), and e)(2), below.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	53.4 lbs of organic compound (OC) per hour.
b.	OAC rule 3745-31-05(D) (To avoid PSD requirements)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 113 tons per rolling 365 day period.
c.	OAC rule 3745-21-07(M)(2)	Use of a control device. See section c)(2), below.
d.	OAC rule 3745-114-01	Ohio Toxic Rule See sections d)(2), d)(3), d)(4), d)(5), and e)(2), below.
e.	OAC rule 3745-31-05(F) (voluntary limit to account for accurate measuring of solvent usage and recovery)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 62 tons per rolling 200 operational day period.

(2) Additional Terms and Conditions

a. The hourly emission limitation of 53.4 pounds of organic compound (OC), from this emissions unit, is established to reflect the potential emissions from this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.



c) Operational Restrictions

- (1) The materials processed through this emissions unit shall not exceed the following:
 - a. 50%, by weight OC content per batch.
- (2) This emissions unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the organic compound emissions by an overall control efficiency of at least eighty-five per cent (85%), by weight. If the reductions are achieved by incineration, ninety per cent (90%) or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following monthly records:
 - a. The amount of material processed, in pounds;
 - b. The amount of organic compound material processed, in pounds; and
 - c. The OC content of the material processed, in percent by weight*.

* Based on quality control considerations, the facility does not add solvent in the calendaring process to the mash produced by the mixers. Therefore, the record keeping requirements for emissions units P020, P008, and P009, Planetary Mixer 1, and Mixers 3 and 4, as established in sections C.4.d) and C.5.d) of this permit will suffice to demonstrate compliance with the 50% by weight OC content for all in house manufactured mash materials.

- (2) The application for emissions units, P008, P009, P013, P015, P018, and P020, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "9" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Toluene

TLV (mg/m³): 75.36 (worst case)

Maximum Hourly Emission Rate (lbs/hr): 27.12 (for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 5,190

MAGLC (ug/m³): 6,699

The permittee, has demonstrated that combined emissions of Toluene, from emissions units P008, P009, P013, P015, P018, and P020, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]



- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (4) 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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (5) 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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (6) The permittee shall maintain the following daily records; based on a rolling 200 operational days:
 - a. The date of operations;
 - b. The amount of organic materials processed*, in pounds;
 - c. The amount of organic materials employed*, in tons, based on a rolling 200 operational day period;
 - d. The amount of organic materials recovered*, in tons, based on a rolling 200 operational day period;
 - e. The overall control efficiency, in percent of organic materials recovered* (the summation of: ("d"/"c")); and
 - f. The overall OC emission, in tons, based on a rolling 200 operational day period, (the summation of: ("c" x (1-"e"))).

Since the permittee already has sufficient record to assure compliance there is no need to establish initial record keeping requirement to assure federal enforceability of the control efficiency as established in section c) of this permit.

* The above items shall be calculated in accordance with methods and formulas as established in the April 3, 1998 Mass Balance Protocol Agreement between Thermoseal and the Ohio EPA and the June 7, 1999, Ohio EPA letter of approval of the Mass Balance Protocol.



e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 62 tons per rolling 200 operational day period;
 - b. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 113 tons per rolling 365 day period; and
 - c. All failures to achieve at least an 85% control efficiency of OC materials employed, as based on a rolling 200 operational day period.

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

- (2) The permittee shall submit annual reports by April 30th of each year that include any changes to any 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 concentration. The report should include:
 - a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s); and
 - d. a summary of the results of the updated modeling, including the input changes; and
 - e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

f) Testing Requirements

- (1) Compliance with the emission limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission limitation:

53.4 lbs of organic compound (OC) per hour

The above limitation is based on the following equation:

$$HER = \{[(M_p \times M_{oc}) - (M_p \times M_{oc} \times 0.3\%*)] \times (1 - C_f)\}$$



where:

HER = Hourly emission rate, in pounds;

Mp= maximum hourly capacity, in pounds (714 lbs/hr);

Moc= maximum organic compound content, in percent by weight (50%);

Cf= the overall capture and control efficiency (0.85); and

0.3% = amount of solvent retained in gasket material.

Applicable Compliance Method:

Compliance shall be assumed based on the maximum hourly capacity of this emissions unit not exceeding 714 pounds. Prior to modifying this emissions unit that would increase hourly capacity of this unit, the type of pollutant being emitted, and/or cause an increase in the hourly potential emissions; the permittee shall apply for and obtain all appropriate air pollution permits.

g) Miscellaneous Requirements

- (1) None.



3. P018, Vulcan Toluene Decantering

Operations, Property and/or Equipment Description:

Vulcan toluene decantering

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) b)(1)d., d(1), d(2), d(3), d(4), and e)(2), below.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	The hourly organic compound (OC) emissions from this emissions unit shall not exceed 0.31 pounds. See sections b)(2)a. and b)(2)b., below.
b.	OAC paragraph 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See section b)(2)c., below.
c.	OAC rule 3745-21-07(M)(2)	Use of a control device. See section c)(1), below.
d.	OAC rule 3745-114-01	Ohio Toxic Rule See sections d(1), d(2), d(3), d(4), and e)(2), below.
e.	OAC rule 3745-31-05(D) (to avoid PSD thresholds)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 113 tons per rolling 365 day period.
f.	OAC rule 3745-31-05(F) (voluntary limit to account for accurate measuring of solvent usage and recovery)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 62 tons per rolling 200 operational day period.



(2) Additional Terms and Conditions

- a. The hourly emission limitation of 0.31 pounds of organic compound (OC), from this emissions unit, is established to reflect the potential emissions from this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.
- b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to the OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006, version of 3745-31-05, then these emission limits/control measures no longer apply.
- c. This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, as part of the State Implementation Plan, (SIP).

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound (OC) emissions from this emissions unit since the "controlled" potential to emit is less than ten tons per year.

c) Operational Restrictions

- (1) This emissions unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the organic compound emissions by an overall control efficiency of at least eighty-five per cent (85%), by weight. If the reductions are achieved by incineration, ninety per cent (90%) or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

d) Monitoring and/or Recordkeeping Requirements

- (1) The application for emissions units, P008, P009, P013, P015, P018, and P020, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:



- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "9" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Toluene

TLV (mg/m3): 75.36 (worst case)

Maximum Hourly Emission Rate (lbs/hr): 27.12 (for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5,190

MAGLC (ug/m3): 6,699



The permittee, has demonstrated that combined emissions of Toluene, from emissions units P008, P009, P013, P015, P018, and P020, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (2) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (5) The permittee shall maintain the following daily records; based on a rolling 200 operational days:
 - a. The date of operations;
 - b. The amount of organic materials processed*, in pounds;
 - c. The amount of organic materials employed*, in tons, based on a rolling 200 operational day period;
 - d. The amount of organic materials recovered*, in tons , based on a rolling 200 operational day period;
 - e. The overall control efficiency, in percent of organic materials recovered*, (the summation of: ("d"/"c")); and
 - f. The overall OC emission, in tons, based on a rolling 200 operational day period, (the summation of: ("c" x (1-"e"))).

Since the permittee already has sufficient record to assure compliance there is no need to establish initial record keeping requirement to assure federal enforceability of the control efficiency as established in section c) of this permit.



* The above items shall be calculated in accordance with methods and formulas as established in the April 3, 1998 Mass Balance Protocol Agreement between Thermoseal and the Ohio EPA and the June 7, 1999, Ohio EPA letter of approval of the Mass Balance Protocol.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 62 tons per rolling 200 operational day period;
 - b. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 113 tons per rolling 365 day period; and
 - c. All failures to achieve at least an 85% control efficiency of OC materials employed, as based on a rolling 200 operational day period.

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

- (2) The permittee shall submit annual reports by April 30th of each year that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:
 - a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s); and
 - d. a summary of the results of the updated modeling, including the input changes; and
 - e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

f) Testing Requirements

- (1) Compliance with the emission limitation(s) and operational restrictions in sections b)(1) of this permit shall be determined in accordance with the following methods:



a. Emission Limitation:

0.31 pounds of organic compound (OC) per hour

The allowable emissions are based on the following equation:

$$\text{HER} = [(\text{Mp} \times 3.3) + (\text{Mp} \times 0.00024)] \times (1 - \text{Ce})$$

Where:

HER = hourly emission rate, in pounds; and

Mp = maximum hourly capacity, in tons, (1,246 lb/hr/ 2000 = 0.63 tons/hr);

Emission factors are from AP-42 Table 4.7-1 (February 1980):

- i. 3.3 pounds of OC emitted per ton, condenser vent; and
- ii. 0.00024 pounds of OC emitted per ton, fugitive loading; and

Ce = Control efficiency, in percent of OC controlled, (85%, (0.85)).

Applicable Compliance Method:

Compliance shall be assumed based on the maximum hourly capacity of this emissions unit not exceeding 0.63 tons. Prior to modifying this emissions unit that would increase hourly capacity of this unit, the type of pollutant being emitted, and/or cause an increase in the hourly potential emissions; the permittee shall apply for and obtain all appropriate air pollution permits.

g) Miscellaneous Requirements

- (1) None.



4. P020, Planetary Mixer #1

Operations, Property and/or Equipment Description:

Planetary Mixing System

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

(1) b)(1)e., d)(2), d)(3), d)(4), d)(5), and e)(2), below.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	The hourly organic compound (OC) emissions from this emissions unit shall not exceed 0.41 pounds The hourly particulate emissions (PE) from this emissions unit shall not exceed 0.11 pounds See section b)(2)a., and b)(2)b., below.
b.	OAC paragraph 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See section b)(2)c., below.
c.	OAC rule 3745-31-05(D) (to avoid PSD thresholds)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 113 tons per rolling 365 day period.
d.	OAC rule 3745-21-07(M)(2)	Use of a control device. See section c)(2), below.
e.	OAC rule 3745-114-01	Ohio Toxic Rule See sections d)(2), d)(3), d)(4), d)(5), and e)(2), below
f.	OAC rule 3745-31-05(F) (voluntary limit to account for accurate measuring of solvent usage and recovery)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 62 tons per rolling 200 operational day period.



(2) Additional Terms and Conditions

- a. The hourly emission limitations of 0.41 pounds of organic compound (OC) and 0.11 pounds of particulate emissions (PE), from this emissions unit, are established to reflect the potential emissions from this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.
- b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to the OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006, version of 3745-31-05, then these emission limits/control measures no longer apply.
- c. This paragraph applies once U.S. EPA approves the December ,. 2006 version of OAC rule 3745-31-05, as part of the State Implementation Plan, (SIP).

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) emissions and organic compound (OC) emissions from this emissions unit since the "controlled" potential to emit is less than ten tons per year.

c) Operational Restrictions

- (1) The combined amount of organic compound (OC) material being employed in emissions units P008, P009, and P020 shall not exceed 413.3 tons per rolling 200 operational days.
- (2) This emissions unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the organic compound emissions by an overall control efficiency of at least eighty-five per cent (85%), by weight. If the reductions are achieved by incineration, ninety per cent (90%) or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.
- (3) The permittee shall take steps during cleanup operations to minimize and/or eliminate the loss of liquid organic cleanup solvents and the work space shall be vented to control system that meets the requirements of section "c)(2), of this permit.
- (4) The materials processed through this emissions unit shall not exceed the following:
 - a. 50%, by weight OC content per batch.



d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain the following daily records; based on a rolling 200 operational days:
 - a. The date of operations;
 - b. The amount of organic materials processed*, in pounds;
 - c. The amount of organic materials employed*, in tons, based on a rolling 200 operational day period;
 - d. The amount of organic materials recovered*, in tons , based on a rolling 200 operational day period;
 - e. The overall control efficiency, in percent of organic materials recovered*, (the summation of: (“d”/”c”)); and
 - f. The overall OC emission, in tons, based on a rolling 200 operational day period, (the summation of: (“c” x (1-“e”))).

Since the permittee already has sufficient record to assure compliance there is no need to establish initial record keeping requirement to assure federal enforceability of the control efficiency as established in section c) of this permit.

* The above items shall be calculated in accordance with methods and formulas as established in the April 3, 1998 Mass Balance Protocol Agreement between Thermoseal and the Ohio EPA and the June 7, 1999, Ohio EPA letter of approval of the Mass Balance Protocol.

- (2) The application for emissions units, P008, P009, P013, P015, P018, and P020, was evaluated based on the actual materials and the design parameters of the emissions units’ exhaust system, as specified by the permittee. The “Toxic Air Contaminant Statute”, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled “Review of New Sources of Air Toxic Emissions, Option A”, as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "9" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Toluene

TLV (mg/m³): 75.36 (worst case)

Maximum Hourly Emission Rate (lbs/hr): 27.12 (for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 5,190

MAGLC (ug/m³): 6,699

The permittee, has demonstrated that combined emissions of Toluene, from emissions units P008, P009, P013, P015, P018, and P020, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]



- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (4) 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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (5) 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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (6) The permittee shall collect and record the following monthly records:
 - a. The amount of material processed, in pounds;
 - b. The amount of organic compound material processed, in pounds; and
 - c. The OC content of the material processed, in percent by weight.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 62 tons per rolling 200 operational day period;
 - b. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 113 tons per rolling 365 day period;
 - c. All exceedances of 50% OC content of materials processed, as based on a monthly weighted average;
 - d. All failures to achieve at least an 85% control efficiency of OC materials employed, as based on a rolling 200 operational day period; and
 - e. The combined amount of organic compound (OC) material being employed in emissions units P008, P009, and P020 exceeds 413.3 tons per rolling 200 operational days.



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

- (2) The permittee shall submit annual reports by April 30th of each year that include any changes to any 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 concentration. The report should include:
- a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s); and
 - d. a summary of the results of the updated modeling, including the input changes; and
 - e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

f) Testing Requirements

- (1) Compliance with the emission limitation(s) and operational restrictions in sections b)(1) of this permit shall be determined in accordance with the following methods:
- a. Emission Limitation:
0.41 pounds of organic compound (OC) per hour
The allowable emissions are based on the following equation:
$$HER = (MASPH) \times UVOC \times (1-CE) + (HSU) \times (CVOC) \times (EF) \times (1-CE)$$
where:
HER = Hourly emission rate, in pounds;
MASPH = maximum amount of material per batch per hour (2092 lbs/batch/hr);
UVOC = uncontrolled VOC [assume 4.44 E -4 lbs VOC/lb of rubber]*;
HSU = Hourly Solvent Usage, in gallons, (2.53);
CVOC = VOC content of the cleaning solvent, in pound per gallon, (7.2);
EF = 10% Cleanup emission rate; and



CE = control efficiency (0.85).

* Reference: Maximum value from the November 2008 draft AP-42 Section 4.12, Internal Mixing and Milling Emission Factors for Manufacture of Rubber Products.

Applicable Compliance Method:

Compliance shall be assumed based on the maximum hourly capacity of this emissions unit not exceeding 2092 pounds of material and 2.53 gallons of cleanup. Prior to modifying this emissions unit that would increase hourly capacity of this unit, the type of pollutant being emitted, and/or cause an increase in the hourly potential emissions; the permittee shall apply for and obtain all appropriate air pollution permits.

b. Emission Limitation:

62 tons of organic compound (OC) per 200 operational day rolling period for emissions units P008, P009, P013, P015, P018, and P020 combined.

The allowable emissions are based on the following equation:

$$ER = (OCu) \times (1-CE)$$

Where:

ER = Emission rate, in tons;

OCu = Organic compound material usage, in tons per 200 operational day period, in tons, (413.3); and

CE = control efficiency (0.85).

Applicable Compliance Method:

Compliance shall be assumed based on the recordkeeping requirements as established in section d) of this permit. Compliance with the rolling 365 (annual) 113 tons limitations shall be assumed based on maintaining compliance with the 62 tons rolling 200 operational day limitation.

$$113 \text{ tons}/365 \text{ day period} = 62 \text{ tons} \times (365 \text{ annual days}/200 \text{ operational days}).$$

c. Emission limitation:

0.11 lb of particulate/PM₁₀ per hour

The allowable emissions are based on the following equation:

$$HER = (MASPH) \times (UPE)$$

Where,



HER = Hourly emission rate, in pounds;

MASPH = maximum amount of material per batch per hour (2,092 lbs/batch/hr):
and

UPE = uncontrolled PE [assume 4.92×10^{-5} lbs/lb of rubber]* **

* Reference: Maximum value from the November 2008 draft AP-42 Section 4.12, Internal Mixing and Milling Emission Factors for Manufacture of Rubber Products.

** Engineering estimate to use 4.92×10^{-5} lbs/lb of rubber due to lack of milling and the solids are added by hand from bag into a mix of liquids. Expected minimal particulate loss.

Applicable compliance method:

Compliance shall be assumed based on the maximum hourly capacity of this emissions unit not exceeding 2092 pounds of material. Prior to modifying this emissions unit that would increase hourly capacity of this unit, the type of pollutant being emitted, and/or cause an increase in the hourly potential emissions; the permittee shall apply for and obtain all appropriate air pollution permits.

g) Miscellaneous Requirements

- (1) None.



5. Emissions Unit Group -Mixers: P008,P009,

EU ID	Operations, Property and/or Equipment Description
P008	Mixer 3
P009	Mixer 4

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
- (1) b)(1)e., d)(2), d)(3), d)(4), d(5), and e)(2), below.
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	The hourly organic compound (OC) emissions from each emissions unit shall not exceed 0.14 pounds The hourly particulate emissions (PE) from each emissions unit shall not exceed 0.10 pounds See section b)(2)a. and b)(2)b., below
b.	OAC paragraph 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See section b)(2)c., below.
c.	OAC rule 3745-31-05(D) (to avoid PSD thresholds)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 113 tons per rolling 365 day period.
d.	OAC rule 3745-21-07(M)(2)	Use of a control device. See section c)(2), below.
e.	OAC rule 3745-114-01	Ohio Toxic Rule See sections d)(2), d(3), d)(4) d)(5), and e)(2), below.
f.	OAC rule 3745-31-05(F) (voluntary limit to account for accurate measuring of solvent usage and recovery)	The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 shall not exceed 62 tons per rolling 200 operational day period.



(2) Additional Terms and Conditions

- a. The hourly emission limitations of 0.14 pounds of organic compound (OC) and 0.10 pounds of particulate emissions (PE), from this emissions unit, are established to reflect the potential emissions from this emissions unit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with these limitations.
- b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to the OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006, version of 3745-31-05, then these emission limits/control measures no longer apply.
- c. This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, as part of the State Implementation Plan, (SIP).

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions (PE) emissions and organic compound (OC) emissions from this emissions unit since the "controlled" potential to emit is less than ten tons per year.

c) Operational Restrictions

- (1) The combined amount of organic compound (OC) material being employed in emissions units P008, P009, and P020 shall not exceed 413.3 tons per rolling 200 operational days.
- (2) This emissions unit shall be equipped with a control system (i.e., capture and control equipment) that reduces the organic compound emissions by an overall control efficiency of at least eighty-five per cent (85%), by weight. If the reductions are achieved by incineration, ninety per cent (90%) or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.
- (3) The materials processed through these emissions units shall not exceed the following:
 - a. 50%, by weight OC content per batch.



d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain the following daily records; based on a rolling 200 operational days:
 - a. The date of operations;
 - b. The amount of organic materials processed*, in pounds;
 - c. The amount of organic materials employed*, in tons, based on a rolling 200 operational day period;
 - d. The amount of organic materials recovered*, in tons , based on a rolling 200 operational day period;
 - e. The overall control efficiency, in percent of organic materials recovered*, (the summation of: (“d”/”c”)); and
 - f. The overall OC emission, in tons, based on a rolling 200 operational day period, (the summation of: (“c” x (1-“e”))).

Since the permittee already has sufficient record to assure compliance there is no need to establish initial record keeping requirement to assure federal enforceability of the control efficiency as established in section c) of this permit.

* The above items shall be calculated in accordance with methods and formulas as established in the April 3, 1998 Mass Balance Protocol Agreement between Thermoseal and the Ohio EPA and the June 7, 1999, Ohio EPA letter of approval of the Mass Balance Protocol.

- (2) The application for emissions units, P008, P009, P013, P015, P018, and P020, was evaluated based on the actual materials and the design parameters of the emissions units’ exhaust system, as specified by the permittee. The “Toxic Air Contaminant Statute”, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled “Review of New Sources of Air Toxic Emissions, Option A”, as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):



- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "9" hours per day and "5" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Toluene

TLV (mg/m³): 75.36 (worst case)

Maximum Hourly Emission Rate (lbs/hr): 27.12 (for which toxic, if using worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 5,190

MAGLC (ug/m³): 6,699

The permittee, has demonstrated that combined emissions of Toluene, from emissions units P008, P009, P013, P015, P018, and P020, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)] [OAC rule 3745-114-01]



- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (4) 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.

[ORC 3704.03(F)(3)(c) and F(4)] [OAC rule 3745-114-01]

- (5) 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.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

- (6) The permittee shall collect and record the following monthly records:
 - a. The amount of material processed, in pounds;
 - b. The amount of organic compound material processed, in pounds; and
 - c. The OC content of the material processed, in percent by weight.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. All failures to achieve at least an 85% control efficiency of OC materials employed, as based on a rolling 200 operational day period;
 - b. The combined amount of organic compound (OC) material being employed in emissions units P008, P009, and P020 exceeds 413.3 tons per rolling 200 operational days;
 - c. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 62 tons per rolling 200 operational day period;
 - d. The combined OC emissions from emissions units P008, P009, P013, P015, P018, and P020 exceed 113 tons per rolling 365 day period; and
 - e. All exceedances of 50% OC content of materials processed, as based on a monthly weighted average.



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

- (2) The permittee shall submit annual reports by April 30th of each year that include any changes to any 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 concentration. The report should include:
 - a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s); and
 - d. a summary of the results of the updated modeling, including the input changes; and
 - e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01]

f) Testing Requirements

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

0.14 pounds of organic compound (OC) per hour

The allowable emissions are based on the following equation:

$$HER = (MASPH \times UVOC) \times (1-CE)$$

Where:

HER = Hourly emission rate, in pounds;

MASPH = maximum amount of material per batch per hour (2092 lbs/batch/hr);

UVOC = uncontrolled VOC [assume 4.44 E -4 lbs VOC/lb of rubber]*; and

CE = control efficiency (0.85).

* Reference: Maximum value from the November 2008 draft AP-42 Section 4.12, Internal Mixing and Milling Emission Factors for Manufacture of Rubber Products.



Applicable Compliance Method:

Compliance shall be assumed based on the maximum hourly capacity of this emissions unit not exceeding 2092 pounds of material. Prior to modifying this emissions unit that would increase hourly capacity of this unit, the type of pollutant being emitted, and/or cause an increase in the hourly potential emissions; the permittee shall apply for and obtain all appropriate air pollution permits.

b. Emission Limitation:

62 tons of organic compound (OC) per 200 operational day rolling period for emissions units P008, P009, P013, P015, P018, and P020, combined.

The allowable emissions are based on the following equation:

$$ER = (OCu) \times (1-CE)$$

Where:

ER = Emission rate, in tons;

OCu = Organic compound material usage, in tons per 200 operational day period, in tons, (413.3); and

CE = control efficiency (0.85).

Applicable Compliance Method:

Compliance shall be assumed based on the recordkeeping requirements as established in section d) of this permit. Compliance with the rolling 365 (annual) 113 tons limitations shall be assumed based on maintaining compliance with the 62 tons rolling 200 operational day limitation.

$$113 \text{ tons}/365 \text{ day period} = 62 \text{ tons} \times (365 \text{ annual days}/200 \text{ operational days}).$$

c. Emission limitation:

0.1 lb of particulate/PM₁₀ per hour

The allowable emissions are based on the following equation:

$$HER = (MASPH \times UPE) \times (1-Ce)$$

where,

HER = Hourly emission rate, in pounds;

MASPH = maximum amount of material per batch per hour (2,092 lbs/batch/hr);

UPE = uncontrolled PE [9.25 E -4 lbs/lb of rubber]*: and



Ce = control efficiency (0.95).

*Reference: Maximum value from November 2008 draft AP-42 Section 4.12, Internal Mixing and Milling emission factors for Manufacture of Rubber Products.

Applicable compliance method:

Compliance shall be assumed based on the maximum hourly capacity of this emissions unit not exceeding 2092 pounds of material and the baghouse is maintained in good operating condition. Prior to modifying this emissions unit that would increase hourly capacity of this unit, the type of pollutant being emitted, and/or cause an increase in the hourly potential emissions; the permittee shall apply for and obtain all appropriate air pollution permits.

g) Miscellaneous Requirements

(1) None.