

State of Ohio Environmental Protection Agency

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P.O. Box 1049
Columbus, OH 43216-1049

06/29/01

CERTIFIED MAIL

RE: Draft Title V Chapter 3745-77 permit

08-19-07-0134
BASF Corporation
Angela Ferneau
BASF Corporation
1175 Martin Street
Greenville, OH 45331

Dear Angela Ferneau:

You are hereby notified that the Ohio Environmental Protection Agency has prepared the enclosed draft of the Title V permit for the facility referenced above. The purpose of this draft is to solicit public comments. A public notice concerning the draft will appear in the Ohio EPA Weekly Review and the major newspaper in the county where the facility is located. Comments and/or a request for a public hearing from the public and any affected parties will be accepted by RAPCA within 30 days of the date of publication in the newspaper. You will be notified in writing if a public hearing is scheduled.

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

If you have any questions or comments concerning this draft Title V permit, please contact RAPCA.

Very truly yours,



Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA (electronically submitted)
Michael Ahern, DAPC PMU
RAPCA
Indiana



State of Ohio Environmental Protection Agency

DRAFT TITLE V PERMIT

Issue Date: 06/29/01

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

This document constitutes issuance of a Title V permit for Facility ID: 08-19-07-0134 to:
BASF Corporation
1175 Martin Street
Greenville, OH 45331

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

Table with 3 columns: Emissions Unit ID (Company ID), Emissions Unit Activity Description, and Emissions Unit Activity Description. Rows include units B007, B010, P001, P008, P009, P010, P011, P013, P014, P015, P016, P021, P022, P023, P024, P025, P027, P028, P029, P030, P031, T001, and T029.

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above.

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

RAPCA
451 West Third Street
PO Box 972

Dayton, OH 45422
(937) 225-4435

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Recordkeeping 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:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- 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:
 - i. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. 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 promptly made to the appropriate Ohio EPA District Office or local air agency. These quarterly written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations except malfunctions, which shall be reported in accordance with OAC rule 3745-15-06. The written reports shall be submitted quarterly, i.e., 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.) See B.8 below if no deviations occurred during the quarter.
 - iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to

the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, recordkeeping, and reporting requirements. 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.

- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. 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 appropriate Ohio EPA District Office or local air agency 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 submitted pursuant to OAC rule 3745-15-06 shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of deviations caused by malfunctions or upsets.

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).

3. 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.

4. Title IV Provisions

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

5. Severability Clause

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

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

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

8. Marketable Permit Programs

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

9. Reasonably Anticipated Operating Scenarios

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

10. Reopening for Cause

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

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

11. Federal and State Enforceability

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

12. Compliance Requirements

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

- ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the appropriate Ohio EPA District Office or local air agency in the following manner and with the following content:
- i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - ii. Compliance certifications shall include the following:
 - (a) An identification of each term or condition of this permit that is the basis of the certification.
 - (b) The permittee's current compliance status.
 - (c) Whether compliance was continuous or intermittent.
 - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
 - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
 - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

13. Permit Shield

- a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but

excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

- b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

14. Operational Flexibility

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

15. Emergencies

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

16. Off Permit Changes

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

- a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition;
- b. The permittee provides contemporaneous written notice of the change to the director and the administrator, except that no such notice shall be required for changes that qualify as insignificant emission levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change;

- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F);
- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes; and
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

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

(For further clarification, the permittee can refer to Engineering Guide #63 that is available in their STARSHIP software package.)

17. Compliance Method Requirements

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

18. Insignificant Activity

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

B. State Only Enforceable Section

1. Permit to Install Requirement

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from 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 appropriate Ohio EPA District Office or local air agency. 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., 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.)

3. Records Retention Requirements

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

4. Inspections and Information Requests

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

this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

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

6. Permit Transfers

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

7. 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.

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

If no 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., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforcable Section

None

B. State Only Enforceable Section

1. The following insignificant emissions units are located at this facility:

B001: Boiler B-807A
B002: Boiler B-807B
B003: Hot Oil Heater E-819
B008: Hot Oil Heater E-801
B009: Firewater Pumps P-862A & P862B
B011: Generator MG - 815
P005: Resin Solid Crusher/Handling
P012: Reactor Train J
T002: Caustic Tank
Z002: Plant Roadways and Parking Areas
Z004: QA Laboratories
Z005: Cooling Tower Resin I

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a Permit to Install for the emissions unit.

The following insignificant emissions units are located at this facility:

B001: Boiler B-807A
B002: Boiler B-807B
B003: Hot Oil Heater E-819
B008: Hot Oil Heater E-801
B009: Firewater Pumps P-862A & P862B
B011: Generator MG - 815
P005: Resin Solid Crusher/Handling
P012: Reactor Train J
T002: Caustic Tank
Z002: Plant Roadways and Parking Areas
Z004: QA Laboratories
Z005: Cooling Tower Resin I

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a Permit to Install for the emissions unit.

2. The permittee is hereby notified that this permit and all Agency records concerning these permitted emissions units are subject to public disclosure in accordance with OAC rule 3745-49-03.

The permittee is hereby notified that this permit and all Agency records concerning these permitted emissions units are subject to public disclosure in accordance with OAC rule 3745-49-03.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Boiler B-803A (B007)

Activity Description: Boiler: Capable of firing natural gas at 60.3 MMBtu/hr or no. 2 fuel oil at 56.1 MMBtu/hr

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
natural gas/no. 2 distillate fuel oil-fired RRP boiler no. 1; 60.3 mmBtu/hr	OAC rule 3745-31-05 (A)(3) (PTI 08-4175)	2.6 tons of particulate emissions (PE)/year
		0.05 lb of sulfur dioxide (SO ₂)/mmBtu of actual heat input, 4.40 TPY SO ₂
		0.08 lb of carbon monoxide (CO)/mmBtu of actual heat input, 10.42 TPY CO
		0.005 lb of organic compounds (OC)/mmBtu of actual heat input, 0.68 TPY OC
		Visible emissions shall not exceed 5% opacity, as a 6-minute average, except during periods of startup and shutdown.
	OAC rule 3745-17-07(A) OAC rule 3745-18-06 (D) 40 CFR, Part 60, Subpart Dc	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-10 (B)(1) and 3745-31-05 (D). The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-17-10(B)(1)	0.020 pound of PE per mmBtu of actual heat input
	OAC rule 3745-31-05 (D) (PTI 08-4175)	0.14 lb of nitrogen oxides (NO _x)/mmBtu of actual heat input
		12.40 TPY of NO _x , as a rolling, 12-month summation

2. Additional Terms and Conditions

- 2.a** This emissions unit also serves as an alternative OC emissions control device to the resin II thermal oxidizer which, in turn, serves emissions units P022, P023, P024, P025 and the specific tanks identified in emissions units T029 and T030. Therefore, additional monitoring, record keeping and reporting requirements have been established for this emissions unit to ensure compliance with the OC emission limitations and the 98% destruction efficiency requirement for OC for emissions units P022 through P025, and the specific tanks identified in emissions units T029 and T030.

II. Operational Restrictions

1. The permittee shall burn only natural gas and/or no. 2 distillate fuel oil in this emissions unit. However, during times when this emissions unit is functioning as an OC emissions control device, as described in Section A.I.2.a., these fuels may be supplemented with OC vapors.
2. When burning fuel oil in this emissions unit, the permittee shall only use distillate oil (fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396-78, "Standard Specification for Fuel Oils") in this emissions unit. The sulfur content of the distillate oil shall not exceed 0.05 percent sulfur, by weight, based upon a monthly, volume-weighted average.

If neither natural gas nor distillate fuel oil with a maximum 0.05 percent sulfur content is available, the permittee shall shut down this emissions unit until such time that one or the other fuel is available.

3. The maximum natural gas usage in this emissions unit shall not exceed 248 million cubic feet (mm cu. ft)/year, as a rolling, 12-month summation.
4. When this emissions unit is functioning as an OC emissions control device, it shall be operated such that it provides a minimum destruction efficiency of 98%, by weight, for OC.
5. When the OC emissions from emissions units P022 through P025, and the specific tanks identified in emissions units T029 and T030 are vented to this emissions unit, the average temperature of the combustion chamber within this boiler (emissions unit B007), for any 3-hour block of time while this emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated emissions units P022 through P025 and the specific tanks identified in emissions units T029 and T030 were in compliance.

III. Monitoring and/or Record Keeping Requirements

1. For each shipment of oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content. A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier. When a shipment of oil is received with a sulfur content higher than 0.05 percent by weight, the permittee shall maintain monthly records of the calculated sulfur content based upon a volume-weighted average of the sulfur contents for all shipments of oil, for only those months when oil is combusted in this emissions unit.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294, D6010), or equivalent methods as approved by the Director.

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

2. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. The total amount of fuel burned in this emissions unit, in mm cu. ft of natural gas and in gallons of distillate fuel oil.
 - b. The PE, in tons, calculated as follows:
 - i. multiply the amount of natural gas employed (from Section 2.a) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 1.9 lbs PE (filterable)/mm cu. ft of natural gas, and then divide by 2000;
 - ii. multiply the amount of distillate fuel oil employed (from Section 2.a) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2.0 lbs PE (filterable)/1000 gallons of distillate fuel oil, and then divide by 2000; and
 - iii. add 2.b.i + 2.b.ii.
 - c. The NO_x emissions, in tons, calculated as follows:
 - i. multiply the amount of natural gas employed (from Section 2.a) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs NO_x/mm cu. ft of natural gas, and then divide by 2000;
 - ii. multiply the amount of distillate fuel oil employed (from Section 2.a) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs NO_x/1000 gallons of distillate fuel oil, and then divide by 2000; and
 - iii. add 2.c.i + 2.c.ii.

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

d. The SO₂ emissions, in tons, calculated as follows:

i. multiply the amount of natural gas employed (from Section 2.a) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 0.6 lb SO₂/mm cu. ft of natural gas, and then divide by 2000;

ii. multiply the amount of distillate fuel oil employed (from Section 2.a) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 142 x S* lbs SO₂/1000 gallons of distillate fuel oil, and then divide by 2000; and

iii. add 2.d.i + 2.d.ii.

* S is the monthly, volume-weighted average of the weight percent of sulfur in the oil received during the month. For example, if the fuel oil is 1% sulfur, then S = 1.

e. The CO emissions, in tons, calculated as follows:

i. multiply the amount of natural gas employed (from Section 2.a) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 84 lbs CO/mm cu. ft of natural gas, and then divide by 2000;

ii. multiply the amount of distillate fuel oil employed (from Section 2.a) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs CO/1000 gallons of distillate fuel oil, and then divide by 2000; and

iii. add 2.e.i + 2.e.ii.

f. The OC emissions, in tons, calculated as follows:

i. multiply the amount of natural gas employed (from section 2.a) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 5.5 lbs OC/mm cu. ft of natural gas, and then divide by 2000;

ii. multiply the amount of distillate fuel oil employed (from section 2.a) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.2 lb OC/1000 gallons of distillate fuel oil, and then divide by 2000; and

iii. add 2.f.i + 2.f.ii.

g. The rolling, 12-month summation of the monthly natural gas usage rates, in mm cu. ft.

h. The rolling, 12-month summation of the monthly NO_x emission rates, in tons.

3. For each day during which the permittee burns a fuel other than natural gas and/or no. 2 distillate fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

4. The permittee shall calculate and maintain each year the following information for this emissions unit:

a. the annual SO₂ emissions, in tons, calculated by summing the 12 monthly SO₂ emission rates (from Section 2.d) for the calendar year;

b. the annual CO emissions, in tons, calculated by summing the 12 monthly CO emission rates (from Section 2.e) for the calendar year;

c. the annual OC emissions, in tons, calculated by summing the 12 monthly OC emission rates (from Section 2.f) for the calendar year; and

d. the annual PE, in tons, calculated by summing the 12 monthly PE rates (from Section 2.b) for the calendar year.

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

5. When this emissions unit is used as an OC control device for emissions units P022 through P025 and the specific tanks identified in emissions units T029 and T030, the permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the boiler (emissions unit B007). Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

When this emissions unit is used as an OC control device, the permittee shall collect and record the following information each day for this emissions unit:

- a. A log of the downtime for the capture (collection) system, this emissions unit and monitoring equipment when any of the associated emissions units (emissions units P022 through P025 , and the specific tanks identified in emissions units T029 and T030) was in operation.
 - b. All 3-hour blocks of time during which the average combustion temperature within the combustion chamber of this emissions unit, when it was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated emissions units P022 through P025 and the specific tanks identified in emissions units T029 and T030 were in compliance.
6. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-4175 issued on January 4, 2001: A.III.1 through A.III.5. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following information:
 - a. all exceedances of the sulfur content restriction of 0.05 percent, by weight;
 - b. all exceedances of the rolling, 12-month natural gas usage restriction of 248 mm cu. ft;
 - c. all exceedances of the rolling, 12-month NO_x emission limitation of 12.4 tons; and
 - d. all 3-hour blocks of time during which the combustion temperature within this emissions unit did not comply with the temperature limitation specified above.

All of the deviation reports shall be submitted in accordance with paragraph A.1.c. of the General Terms and Conditions of this Title V permit.

2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas and/or no. 2 fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
3. The permittee shall submit annual reports that specify the total emissions of NO_x, CO, SO₂, OC, and particulates from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
4. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, this emissions unit and the monitoring equipment when any of the associated emissions units (emissions units P022 through P025 , and the specific tanks identified in emissions units T029 and T030) was in operation.
5. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-4175 issued on January 4, 2001: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-4175 issued on January 4, 2001: A.V.1 through A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation-
0.020 lb of PE/mmBtu of actual heat input

Applicable Compliance Method-

For the use of natural gas, compliance may be determined by multiplying the maximum hourly natural gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 1.9 lbs filterable PE/mm cu. ft, and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

For the use of distillate fuel oil, compliance may be determined by multiplying the maximum fuel oil capacity of the emissions unit (gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2.0 lbs filterable PE/1000 gallons, and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance with the emission limit above pursuant to OAC rule 3745-17-03(B)(9).

- 1.b Emission Limitation-
0.05 lb of SO₂/mmBtu of actual heat input

Applicable Compliance Method-

For the use of natural gas, compliance may be determined by multiplying the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 9/98) emission factor of 0.6 lb SO₂/mm cu. ft by the maximum hourly natural gas usage rate (mm cu. ft/hr), and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

For the use of distillate fuel oil, compliance may be determined by multiplying the maximum fuel oil capacity of the emissions unit (gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of $142 \times S^*$ lbs SO₂/1000 gallons, and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance in accordance with Method 6, 40 CFR, Part 60, Appendix A.

* S is the monthly, volume-weighted average of the weight percent of sulfur in the oil received during the month. For example, if the fuel oil is 1% sulfur, then $S = 1$.

V. Testing Requirements (continued)

- 1.c** Emission Limitation-
0.14 lb of NO_x/mmBtu of actual heat input

Applicable Compliance Method-

The permittee shall determine compliance with the limitation above based on the results of emission testing conducted in accordance with Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A.

For the use of natural gas, compliance may also be determined by multiplying the maximum hourly gas burning capacity of the emissions unit (mm cu.ft/hr) by the AP-42, Fifth Edition, Section 1.4, Table 1.4-1 (revised 7/98) emission factor of 100 lbs NO_x/mm cu. ft of natural gas, and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

For the use of distillate fuel oil, compliance may also be determined by multiplying the maximum fuel oil capacity of the emissions unit (gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 20 lbs NO_x/1000 gallons of fuel oil, and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

- 1.d** Emission Limitation
0.08 lb of CO/mmBtu of actual heat input

Applicable Compliance Method-

For the use of natural gas, compliance may be determined by multiplying the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 84 lbs CO/mm cu. ft by the maximum hourly natural gas usage (mm cu. ft/hr), and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

For the use of distillate fuel oil, compliance may be determined by multiplying the maximum fuel oil capacity of the emissions unit (gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 5 lbs CO/1000 gallons of fuel oil, and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

If required, the permittee shall demonstrate compliance in accordance with Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A.

- 1.e** Emission Limitation-
0.005 lb of OC/mmBtu of actual heat input

Applicable Compliance Method-

For the use of natural gas, compliance may be determined by multiplying the AP-42, Fifth Edition, Section 1.4, Table 1.4-2 (revised 7/98) emission factor of 5.5 lbs OC/mm cu. ft by the maximum hourly natural gas usage rate (mm cu. ft/hr), and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

For the use of distillate fuel oil, compliance may be determined by multiplying the maximum fuel oil capacity of the emissions unit (gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-3 (revised 9/98) emission factor of 0.2 lb OC/1000 gallons of fuel oil, and then dividing by the maximum hourly heat input capacity of the emissions unit (mmBtu/hr).

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

- 1.f** Emission Limitation-
5% opacity, as a 6-minute average

Applicable Compliance Method-

If required, visible emission evaluations shall be performed in accordance with OAC rule 3745-17-03 (B)(1).

V. Testing Requirements (continued)

- 1.g** Emission Limitations-
4.40 TPY of SO₂
2.6 TPY of PE
10.42 TPY of CO
0.68 TPY of OC
12.40 TPY of NO_x, as a rolling, 12-month summation

Applicable Compliance Method-
Compliance with the limitations above shall be based upon the record keeping requirements specified in Sections A.III.1, 2 and 4 of the terms and conditions of this permit.

- 1.h** Usage Restriction-
248 mm cu. ft of natural gas/rolling, 12-month summation

Applicable Compliance Method-
Compliance with the restriction above shall be based upon the record keeping requirements specified in Section A.III.2 of the terms and conditions of this permit.

- 1.i** Sulfur Content Restriction-
0.05%, by weight, sulfur in oil

Applicable Compliance Method-
Compliance with the restriction above shall be based upon the record keeping requirements specified in Section A.III.1 of the terms and conditions of this permit.

- 2.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- The emissions testing shall be conducted within twelve months of issuance of the permit and within six months prior to permit expiration.
 - The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for NO_x.
 - The test method employed to demonstrate compliance with the allowable mass emission rate for NO_x shall be Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A.
 - The tests shall be conducted while emissions units P022 through P025 and the specific tanks identified in emissions units T029 and T030 are operating at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

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

Facility Name: **BASF Corporation**
Facility ID: **08-19-07-0134**
Emissions Unit: **Boiler B-803A (B007)**

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Generator MG-840 (B010)

Activity Description: Generator: Rated heat input capacity 17.6 MMBtu/hr, firing no. 2 fuel oil

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
17.6 mmBtu/hr, distillate fuel oil, emergency diesel generator	OAC rule 3745-31-05 (A)(3) PTI 08-4175	0.18 TPY particulate emissions (PE) 0.05 lb/mmBtu sulfur dioxide (SO ₂), 0.14 TPY SO ₂ 0.85 lb/mmBtu carbon monoxide (CO), 2.43 TPY CO 0.09 lb/mmBtu organic compounds (OC), 0.26 TPY OC Visible emissions shall not exceed 5% opacity, as a 6-minute average, except during periods of startup and shutdown. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-11 (B)(5)(b) and 3745-31-05 (D).
	OAC rule 3745-17-07 (A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-31-05 (D) PTI 08-4175	3.5 lbs/mmBtu nitrogen oxides (NO _x) 10 TPY NO _x , as a rolling, 12-month summation
	OAC rule 3745-17-11 (B)(5)(b)	0.062 lb particulate emissions (PE)/mmBtu of actual heat input (See A.I.2.a.) 0.35 lb PE/mmBtu of actual heat input (See A.I.2.b.)

2. Additional Terms and Conditions

- 2.a This PE limitation shall be effective and federally enforceable on the date the U.S. EPA approves this PE as a revision to the Ohio SIP for particulate matter.
- 2.b The requirement to comply with this PE limitation shall terminate on the date the U.S. EPA approves the 0.062 lb/mmBtu actual heat input emission limitation as a revision to the Ohio SIP for particulate matter.

II. Operational Restrictions

- 1. The permittee shall burn only distillate fuel oil in this emissions unit.
- 2. The maximum distillate fuel oil usage in this emissions unit shall not exceed 41,710 gallons/year, as a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

- 1. For each day during which the permittee burns a fuel other than distillate fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
 - 2. The permittee shall maintain monthly records of the following information:
 - a. The total amount of distillate fuel oil burned in this emissions unit, in gallons.
 - b. The rolling, 12-month summation of the monthly distillate fuel oil usage rates, in gallons.
 - c. The total emission rate of NO_x, in tons, calculated as follows:
 - i. multiply the amount of distillate oil used (gallons) by the heat content of distillate oil (137 mmBtu/1000 gallons); and
 - ii. multiply the result from 2.c.i above by the emission factor of 3.5 lbs NO_x/mmBtu* and divide by 2000.
- * provided by the manufacturer of the generator
- d. The rolling, 12-month summation of the monthly NO_x emission rates, in tons.
- 3. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-4175 issued on January 4, 2001: A.III.1 and A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

IV. Reporting Requirements

- 1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the rolling, 12-month distillate fuel oil usage restriction of 41,710 gallons; and
 - b. all exceedances of the rolling, 12-month NO_x emission limitation of 10 tons.

All of the deviation reports shall be submitted in accordance with paragraph A.1.c. of the General Terms and Conditions of this permit.

- 2. The permittee shall submit annual reports that specify the total NO_x emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
- 3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than distillate fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

IV. Reporting Requirements (continued)

4. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-4175 issued on January 4, 2001: A.IV.1 through A.IV.3. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-4175 issued on January 4, 2001: A.V.1 through A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitations:
0.35 lb PE/mmBtu of actual heat input
0.062 lb PE/mmBtu of actual heat input

Applicable Compliance Method-

Compliance may be based upon the emission factor for diesel fuel engines [from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-2 (revised 10/96)] of 0.062 lb PE/mmBtu.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods specified in OAC rule 3745-17-03 (B)(10).

- 1.b Emission Limitation-
0.18 TPY PE

Applicable Compliance Method-

Compliance shall be determined by multiplying the distillate fuel oil usage rate (gallons/year), from Section A.III.2, by the heat content of the fuel oil (137 mmBtu/1000 gallons of distillate oil) and by the emission factor for diesel fuel engines [from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-2 (revised 10/96)] of 0.062 lb PE/mmBtu, and then dividing by 2000.

- 1.c Emission Limitation-
0.05 lb/mmBtu SO₂

Applicable Compliance Method-

Compliance may be based upon the emission factor for diesel fuel engines [from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-1 (revised 10/96)] of 0.05 lb SO₂/mmBtu*.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Method 6 of 40 CFR, Part 60, Appendix A.

* $1.01 \times S$, where $S = 0.05\%$

- 1.d Emission Limitation-
0.14 TPY SO₂

Applicable Compliance Method-

Compliance shall be determined by multiplying the distillate fuel oil usage rate (gallons/year), from Section A.III.2., by the heat content of the fuel (137mmBtu/1000 gallons) and by the emission factor for diesel fuel engines [from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-1 (revised 10/96)] of 0.05 lb SO₂/mmBtu*, and then dividing by 2000.

* $1.01 \times S$, where $S = 0.05\%$

V. Testing Requirements (continued)

- 1.e** Emission Limitation-
0.85 lb/mmBtu CO

Applicable Compliance Method-

Compliance shall be based upon the emission factor for diesel fuel engines [from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-1 (revised 10/96)] of 0.85 lb CO/mmBtu.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A.

- 1.f** Emission Limitation-
2.43 TPY CO

Applicable Compliance Method-

Compliance shall be determined by multiplying the distillate fuel oil usage, from Section A.III.2., by the heat content of the fuel (137 mmBtu/1000 gallons) and by the emission factor for diesel fuel engines given [from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-1 (revised 10/96)] of 0.85 lb CO/mmBtu, and then dividing by 2000 .

- 1.g** Emission Limitation-
0.09 lb/mmBtu OC

Applicable Compliance Method-

Compliance shall be based upon the emission factor for diesel fuel engines [from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-1 (revised 10/96)] of 0.09 lb OC/mmBtu.

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

- 1.h** Emission Limitation-
0.26 TPY OC

Applicable Compliance Method-

Compliance shall be determined by multiplying the distillate fuel oil usage rate (gallons/year), from Section A.III.2., by the heat content of the fuel (137 mmBtu/gallons) and by the emission factor for diesel fuel engines [from AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-1 (revised 10/96)] of 0.09 lb OC/mmBtu, and then dividing by 2000.

- 1.i** Emission Limitation-
3.5 lbs/mmBtu NOx

Applicable Compliance Method-

The permittee shall determine compliance with the limitation above based on the results of emission testing conducted in accordance with Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A.

Compliance may also be based upon the emission factor of 3.5 lbs NOx/mmBtu provided by the manufacturer.

- 1.j** Emission Limitation-
10 TPY NOx, as a rolling 12-month summation

Applicable Compliance Method-

Compliance shall be determined based upon the record keeping requirements in Section A.III.2 of the terms and conditions of this permit.

- 1.k** Emission Limitation-
5% opacity, as a 6-minute average

Applicable Compliance Method-

If required, visible emission evaluations shall be performed in accordance with OAC rule 3745-17-03 (B)(1).

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emissions testing shall be conducted within twelve months of issuance of this permit and within 6 months of permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for NO_x.
 - c. The test method employed to demonstrate compliance with the allowable mass emission rate for NO_x shall be Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train A (P001)

Activity Description: Reactor Train A: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor system A, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-370	3.66 lbs of organic compounds (OC)/hr, 10.98 TPY of OC 32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined)
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.III.2, A.III.3 and A.III.4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$$
 - e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$$
 - f. The average hourly controlled OC emission rate [(d/c) x 2000], in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit [(e/c) x 2000], in pounds/hour (average).
 - h. The total hourly (average) OC emission rate (f + g), in pounds/hour.
 - i. The total OC emission rate (d + e), in tons.

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

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

4. The permittee shall collect and record each month the total OC emissions for emissions units P001, P008, P009, P010 and P029, combined, in tons (this is calculated by adding the monthly OC emission rates for emissions units P001, P008, P009, P010 and P029).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.IV.2 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following:
 - a. an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. an identification of all exceedances of the hourly allowable OC emission rate of 3.66 pounds.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit and from emissions units P001, P008, P009, P010 and P029, combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
3.66 lbs of OC/hr

Applicable Compliance Method-

Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A and also on the record keeping requirements specified in Section A.III.3 of this permit.

V. Testing Requirements (continued)

2.b Emission Limitation-
10.98 TPY of OC

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

2.c Emission Limitation-
32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined)

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Sections A.III.3 and 4 of this permit and shall be the summation of the 12 monthly emission rates (for emissions units P001, P008, P009, P010 and P029, combined) for the calendar year.

2.d Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

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

a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train D (P008)

Activity Description: Reactor Train D: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor system D, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-370	3.66 lbs of organic compounds (OC)/hr, 10.98 TPY of OC 32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined)
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.III.2, A.III.3 and A.III.4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$$
 - e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$$
 - f. The average hourly controlled OC emission rate $[(d/c) \times 2000]$, in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit $[(e/c) \times 2000]$, in pounds/hour (average).
 - h. The total hourly (average) OC emission rate $(f + g)$, in pounds/hour.
 - i. The total OC emission rate $(d + e)$, in tons.

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

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

4. The permittee shall collect and record each month the total OC emissions for emissions units P001, P008, P009, P010 and P029, combined, in tons (this is calculated by adding the monthly OC emission rates for emissions units P001, P008, P009, P010 and P029).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.IV.2 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following:
 - a. an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. an identification of all exceedances of the hourly allowable OC emission rate of 3.66 pounds.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit and from emissions units P001, P008, P009, P010 and P029, combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
3.66 lbs of OC/hr

Applicable Compliance Method-

Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A and also on the record keeping requirements specified in Section A.III.3 of this permit.

V. Testing Requirements (continued)

2.b Emission Limitation-
10.98 TPY of OC

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

2.c Emission Limitation-
32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined)

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Sections A.III.3 and 4 of this permit and shall be the summation of the 12 monthly emission rates (for emissions units P001, P008, P009, P010 and P029, combined) for the calendar year.

2.d Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

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

a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train B (P009)

Activity Description: Reactor Train B: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor system B, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-370	3.66 lbs of organic compounds (OC)/hr, 10.98 TPY of OC 32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined)
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.III.2, A.III.3 and A.III.4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$$
 - e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$$
 - f. The average hourly controlled OC emission rate [(d/c) x 2000], in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit [(e/c) x 2000], in pounds/hour (average).
 - h. The total hourly (average) OC emission rate (f + g), in pounds/hour.
 - i. The total OC emission rate (d + e), in tons.

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

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

4. The permittee shall collect and record each month the total OC emissions for emissions units P001, P008, P009, P010 and P029, combined, in tons (this is calculated by adding the monthly OC emission rates for emissions units P001, P008, P009, P010 and P029).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.IV.2 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following:
 - a. an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. an identification of all exceedances of the hourly allowable OC emission rate of 3.66 pounds.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit and from emissions units P001, P008, P009, P010 and P029, combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
3.66 lbs of OC/hr

Applicable Compliance Method-

Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A and also on the record keeping requirements specified in Section A.III.3 of this permit.

V. Testing Requirements (continued)

2.b Emission Limitation-
10.98 TPY of OC

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

2.c Emission Limitation-
32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined)

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Sections A.III.3 and 4 of this permit and shall be the summation of the 12 monthly emission rates (for emissions units P001, P008, P009, P010 and P029, combined) for the calendar year.

2.d Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

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

a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train C (P010)

Activity Description: Reactor Train C: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor system C, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-370	3.66 lbs of organic compounds (OC)/hr, 10.98 TPY of OC 32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined)
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.III.2, A.III.3 and A.III.4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$$
 - e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$$
 - f. The average hourly controlled OC emission rate [(d/c) x 2000], in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit [(e/c) x 2000], in pounds/hour (average).
 - h. The total hourly (average) OC emission rate (f + g), in pounds/hour.
 - i. The total OC emission rate (d + e), in tons.

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

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

4. The permittee shall collect and record each month the total OC emissions for emissions units P001, P008, P009, P010 and P029, combined, in tons (this is calculated by adding the monthly OC emission rates for emissions units P001, P008, P009, P010 and P029).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.IV.2 - A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following:
 - a. an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. an identification of all exceedances of the hourly allowable OC emission rate of 3.66 pounds.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit and from emissions units P001, P008, P009, P010 and P029, combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-370 issued on June 17, 1981: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
3.66 lbs of OC/hr

Applicable Compliance Method-

Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A and also on the record keeping requirements specified in Section A.III.3 of this permit.

V. Testing Requirements (continued)

2.b Emission Limitation-
10.98 TPY of OC

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

2.c Emission Limitation-
32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined)

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Sections A.III.3 and 4 of this permit and shall be the summation of the 12 monthly emission rates (for emissions units P001, P008, P009, P010 and P029, combined) for the calendar year.

2.d Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

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

a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train E (P011)

Activity Description: Train E: Manufacture of coatings through blending.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor system E, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-1124	0.34 lb of organic compounds (OC)/hr, 1.5 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-1124 issued on February 19, 1987: A.III.2 and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

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

2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

3. The permittee shall collect and record the following information each month for this emissions unit.

- a. The company identification of each material manufactured.
- b. The amount of all the materials manufactured, in pounds.
- c. The number of hours the emissions unit was in operation.
- d. The controlled OC emission rate, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$

- e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$

- f. The average hourly controlled OC emission rate $[(d/c) \times 2000]$, in pounds/hour (average).
- g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit $[(e/c) \times 2000]$, in pounds/hour (average).
- h. The total hourly (average) OC emission rate $(f + g)$, in pounds/hour.
- i. The total OC emission rate $(d + e)$, in tons.

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-1124 issued on February 19, 1987: A.IV.2, A.IV.3 and A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

IV. Reporting Requirements (continued)

2. The permittee shall submit quarterly deviation (excursion) reports that include the following:
 - a. an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. an identification of all exceedances of the hourly allowable OC emission rate of 0.34 pound.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-1124 issued on February 19, 1987: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- 2.a Emission Limitation-
0.34 lb of OC/hr

Applicable Compliance Method-

Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A and also on the record keeping requirements specified in Section A.III.3 of this permit.

- 2.b Emission Limitation-
1.5 TPY of OC

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

- 2.c Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

V. Testing Requirements (continued)

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.
 - The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train F (P013)

Activity Description: Reactor Train F: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor system F, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-1752	1.8 lbs of organic compounds (OC)/hr, 5.4 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.III.2 and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$$
 - e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$$
 - f. The average hourly controlled OC emission rate [(d/c) x 2000], in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit [(e/c) x 2000], in pounds/hour (average).
 - h. The total hourly (average) OC emission rate (f + g), in pounds/hour.
 - i. The total OC emission rate (d + e), in tons.

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

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.IV.2, A.IV.3 and A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following:
 - a. an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. an identification of all exceedances of the hourly allowable OC emission rate of 1.8 pounds.All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.
3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
1.8 lbs of OC/hr

Applicable Compliance Method-
Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A and also on the record keeping requirements specified in Section A.III.3 of this permit.
 - 2.b Emission Limitation-
5.4 TPY of OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

V. Testing Requirements (continued)

- 2.c** Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

- 3.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train G (P014)
Activity Description: Reactor Train G: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor system G, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-1752	6.0 lbs of organic compounds (OC)/hr, 18 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.III.2 and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$$
 - e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$$
 - f. The average hourly controlled OC emission rate $[(d/c) \times 2000]$, in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit $[(e/c) \times 2000]$, in pounds/hour (average).
 - h. The total hourly (average) OC emission rate $(f + g)$, in pounds/hour.
 - i. The total OC emission rate $(d + e)$, in tons.

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

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.IV.2, A.IV.3 and A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following:
 - a. an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. an identification of all exceedances of the hourly allowable OC emission rate of 6.0 pounds.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
6.0 lbs of OC/hr

Applicable Compliance Method-
Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A and also on the record keeping requirements specified in Section A.III.3 of this permit.
 - 2.b Emission Limitation-
18 TPY of OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

V. Testing Requirements (continued)

- 2.c** Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

- 3.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train H (P015)
Activity Description: Reactor Train H: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor system H, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-1752	3.6 lbs of organic compounds (OC)/hr, 10.8 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.III.2 and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$$
 - e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$$
 - f. The average hourly controlled OC emission rate $[(d/c) \times 2000]$, in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit $[(e/c) \times 2000]$, in pounds/hour (average).
 - h. The total hourly (average) OC emission rate $(f + g)$, in pounds/hour.
 - i. The total OC emission rate $(d + e)$, in tons.

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

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.IV.2, A.IV.3 and A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

2. The permittee shall submit quarterly deviation (excursion) reports that include the following:

a. an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and

b. an identification of all exceedances of the hourly allowable OC emission rate of 3.6 pounds.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

2.a Emission Limitation-
3.6 lbs of OC/hr

Applicable Compliance Method-

Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A and also on the record keeping requirements specified in Section A.III.3 of this permit.

2.b Emission Limitation-
10.8 TPY of OC

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

V. Testing Requirements (continued)

- 2.c** Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

- 3.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train I (P016)

Activity Description: Reactor Train I: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor system I, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-1752	6.0 lbs of organic compounds (OC)/hr, 18 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.III.2 and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$$
 - e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:
$$\text{OC emissions (tons/month)} = [b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$$
 - f. The average hourly controlled OC emission rate [(d/c) x 2000], in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit [(e/c) x 2000], in pounds/hour (average).
 - h. The total hourly (average) OC emission rate (f + g), in pounds/hour.
 - i. The total OC emission rate (d + e), in tons.

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

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.IV.2, A.IV.3 and A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following:
 - a. an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. an identification of all exceedances of the hourly allowable OC emission rate of 6.0 pounds.All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.
3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
6.0 lbs of OC/hr

Applicable Compliance Method-
Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A and also on the record keeping requirements specified in Section A.III.3 of this permit.
 - 2.b Emission Limitation-
18 TPY of OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

V. Testing Requirements (continued)

- 2.c** Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

- 3.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Water Stripping (P021)

Activity Description: Stripping column for removing organics from process water

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
water stripping column, with condenser and resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-2065	0.3 lb of organic compounds (OC)/hr, 0.7 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The 0.3 lb/hr OC limitation was established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.IV.2 and A.IV.3. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance. All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.
3. The permittee shall submit quarterly summaries which include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-1752 issued on July 14, 1998: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

2.a Emission Limitation- 0.3 lb of OC/hr

Applicable Compliance Method-

Compliance with the hourly allowable OC emission limitation shall be determined by multiplying the maximum uncontrolled OC emission rate (150 lbs OC/hr)* by (1-.93)**, and then multiplying by (1-.97)***. Compliance shall also be based upon the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A.

* This was determined based upon sampling and analysis of the dirty water feed into the water stripping column.

** It is assumed that 93% of the solvent is recovered.

*** The destruction efficiency of the thermal oxidizer is assumed to be 97%.

2.b Emission Limitation- 0.7 TPY of OC

Applicable Compliance Method-

Compliance with annual allowable OC emission limitation shall be determined based on the following:

annual emissions (tons/year) = [28,000 lbs material recovered x (1 - 0.95)*]/2000 = 0.7

* a 95% destruction efficiency, for OCs, was assumed for BAT purposes. However, this was later (in 1991) modified to a 97% destruction efficiency requirement for OCs.

2.c Emission Limitation- 97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency requirement above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

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

a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train 1 (P022)

Activity Description: Reactor Train 1: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor train 1, with resin II thermal oxidizer (or emissions unit B007)	OAC rule 3745-31-05 (A)(3) PTI No. 08-2256	1.12 lbs of organic compounds (OC)/hr, 4.9 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC. [The resin II thermal oxidizer is a common OC control device for emissions units P022, P023, P024, P025, and the specific tanks identified in emissions units T029 and T030.]

[Note that emissions unit B007 is identified as an alternative organic compound emission control device to the Resin II thermal oxidizer. When emissions unit is functioning as an organic compound emission control device, it shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.
- 2.c When emissions unit B007 is functioning as an OC emissions control device for the OC emissions from this emissions units, it is not necessary to establish monitoring, record keeping and reporting requirements for this emissions unit to ensure compliance with the emission limitations above. [The monitoring , record keeping and reporting requirements are established for emissions unit B007.]

II. Operational Restrictions

1. When the OC emissions are vented to the resin II thermal oxidizer, the average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 15, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-2256 issued on July 1, 1992: A.III.2 and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. When the OC emissions are vented to the resin II thermal oxidizer, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

When the OC emissions are vented to the resin II thermal oxidizer, the permittee shall collect and record the following information for each day for the thermal oxidizer:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

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

3. The permittee shall collect and record the following information each month for this emissions unit.
- The company identification of each material manufactured.
 - The amount of all the materials manufactured, in pounds.
 - The number of hours the emissions unit was in operation.
 - The controlled OC emission rate, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$

- The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$

- The average hourly controlled OC emission rate $[(d/c) \times 2000]$, in pounds/hour (average).
- The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit $[(e/c) \times 2000]$, in pounds/hour (average).
- The total hourly (average) OC emission rate (f + g), in pounds/hour.
- The total OC emission rate (d + e), in tons.

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

IV. Reporting Requirements

- Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-2256 issued on July 1, 1992: A.IV.2, A.IV.3 and A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
- For all periods of time during which the OC emissions were vented to the resin II thermal oxidizer*, the permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - all exceedances of the hourly allowable OC emission limitation of 1.12 lbs.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

* for all periods of time during which emissions unit B007 was used as the control device for OC emissions from emissions units P022, P023, P024 and/or P025, See Section IV. of the terms and conditions of the permit for emissions unit B007.

IV. Reporting Requirements (continued)

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-2256 issued on July 1, 1992: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
1.12 lbs of OC/hr

Applicable Compliance Method-
Compliance with this emission limitation shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and also on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A.
 - 2.b Emission Limitation-
4.90 TPY of OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.
 - 2.c Emission Limitation-
98% destruction efficiency, by weight, for OC

Applicable Compliance Method-
Compliance with the destruction efficiency requirement above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 98%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train 2 (P023)

Activity Description: Reactor Train 2: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor train 2, with resin II thermal oxidizer (or emissions unit B007)	OAC rule 3745-31-05 (A)(3) PTI No. 08-4244	3.80 lbs of organic compounds (OC)/hr, 9.8 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC. [The resin II thermal oxidizer is a common OC control device for emissions units P022, P023, P024, P025, and the specific tanks identified in emissions units T029 and T030.]

[Note that emissions unit B007 is identified as an alternative organic compound emission control device to the Resin II thermal oxidizer. When emissions unit is functioning as an organic compound emission control device, it shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.
- 2.c When emissions unit B007 is functioning as an OC emissions control device for the OC emissions from this emissions units, it is not necessary to establish monitoring, record keeping and reporting requirements for this emissions unit to ensure compliance with the emission limitations above. [The monitoring , record keeping and reporting requirements are established for emissions unit B007.]

II. Operational Restrictions

1. When the OC emissions are vented to the resin II thermal oxidizer, the average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 15, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-4244 issued on PENDING: A.III.2., A.III.3. and A.III.4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. When the OC emissions are vented to the resin II thermal oxidizer, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

When the OC emissions are vented to the resin II thermal oxidizer, the permittee shall collect and record the following information for each day for the thermal oxidizer:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

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

3. The permittee shall collect and record the following information each month for this emissions unit.
- The company identification of each material manufactured.
 - The amount of all the materials manufactured, in pounds.
 - The number of hours the emissions unit was in operation.
 - The controlled OC emission rate, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$

- The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$

- The average hourly controlled OC emission rate $[(d/c) \times 2000]$, in pounds/hour (average).
- The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit $[(e/c) \times 2000]$, in pounds/hour (average).
- The total hourly (average) OC emission rate (f + g), in pounds/hour.
- The total OC emission rate (d + e), in tons.

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

IV. Reporting Requirements

- Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-4244 issued on PENDING: A.IV.2., A.IV.3. and A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
- For all periods of time during which the OC emissions were vented to the resin II thermal oxidizer*, the permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - all exceedances of the hourly allowable OC emission limitation of 3.8 lbs.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

* for all periods of time during which emissions unit B007 was used as the control device for OC emissions from emissions units P022, P023, P024 and/or P025, See Section IV. of the terms and conditions of the permit for emissions unit B007.

IV. Reporting Requirements (continued)

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-4244 issued on PENDING: A.V.1.a., A.V.1.b., A.V.1.c., and A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 - 2.a Emission Limitation-
3.80 lbs of OC/hr

Applicable Compliance Method-
Compliance with this emission limitation shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and also on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A.
 - 2.b Emission Limitation-
9.80 TPY of OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.
 - 2.c Emission Limitation-
98% destruction efficiency, by weight, for OC

Applicable Compliance Method-
Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 98%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor train 2, with resin II thermal oxidizer (or emissions unit B007)	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- The permit to install 08-04244 for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethylene Glycol

TLV (mg/m3): 18.4

Maximum Hourly Emission Rate (lbs/hr): 5.03

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 345.4

MAGLC (ug/m3): 438.8

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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
- changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV) than the pollutant modeled and emissions exceeding 1 TPY, as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to th

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy.":
- a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train 3 (P024)

Activity Description: Reactor Train 3: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor train 3, with resin II thermal oxidizer (or emissions unit B007)	OAC rule 3745-31-05 (A)(3) PTI No. 08-2256	1.12 lbs of organic compounds (OC)/hr, 4.9 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC. [The resin II thermal oxidizer is a common OC control device for emissions units P022, P023, P024, P025, and the specific tanks identified in emissions units T029 and T030.]

[Note that emissions unit B007 is identified as an alternative organic compound emission control device to the Resin II thermal oxidizer. When emissions unit is functioning as an organic compound emission control device, it shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.
- 2.c When emissions unit B007 is functioning as an OC emissions control device for the OC emissions from this emissions units, it is not necessary to establish monitoring, record keeping and reporting requirements for this emissions unit to ensure compliance with the emission limitations above. [The monitoring , record keeping and reporting requirements are established for emissions unit B007.]

II. Operational Restrictions

1. When the OC emissions are vented to the resin II thermal oxidizer, the average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 15, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-2256 issued on July 1, 1992: A.III.2 and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. When the OC emissions are vented to the resin II thermal oxidizer, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

When the OC emissions are vented to the resin II thermal oxidizer, the permittee shall collect and record the following information for each day for the thermal oxidizer:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

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

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$

- e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$

- f. The average hourly controlled OC emission rate $[(d/c) \times 2000]$, in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit $[(e/c) \times 2000]$, in pounds/hour (average).
 - h. The total hourly (average) OC emission rate (f + g), in pounds/hour.
 - i. The total OC emission rate (d + e), in tons.

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled).

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-2256 issued on July 1, 1992: A.IV.2, A.IV.3 and A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. For all periods of time during which the OC emissions were vented to the resin II thermal oxidizer*, the permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. all exceedances of the hourly allowable OC emission limitation of 1.12 lbs.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

* for all periods of time during which emissions unit B007 was used as the control device for OC emissions from emissions units P022, P023, P024 and/or P025, see Section IV. of the terms and conditions of the permit for emissions unit B007.

IV. Reporting Requirements (continued)

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-2256 issued on July 1, 1992: A.V.2 and A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
1.12 lbs of OC/hr

Applicable Compliance Method-
Compliance with this emission limitation shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and also on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A.
 - 2.b Emission Limitation-
4.90 TPY of OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.
 - 2.c Emission Limitation-
98% destruction efficiency, by weight, for OC

Applicable Compliance Method-
Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 98%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Reactor Train 4 (P025)

Activity Description: Reactor Train 4: Manufacture of resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor train 4, with resin II thermal oxidizer (or emissions unit B007)	OAC rule 3745-31-05 (A)(3) PTI No. 08-4244	1.23 lbs of organic compounds (OC)/hr, 2.80 TPY of OC
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	See A.I.2.a. The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC. [The resin II thermal oxidizer is a common OC control device for emissions units P022, P023, P024, P025, and the specific tanks identified in emissions units T029 and T030.]

[Note that emissions unit B007 is identified as an alternative organic compound emission control device to the Resin II thermal oxidizer. When emissions unit is functioning as an organic compound emission control device, it shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC.]
- 2.b The OC emission limitations established pursuant to OAC rule 3745-31-05 (A)(3) include all OC emissions from the following operations that are associated with this emissions unit:
 - i. reaction;
 - ii. blending;
 - ii. monomer feed; and
 - iv. vessel cleaning.
- 2.c When emissions unit B007 is functioning as an OC emissions control device for the OC emissions from this emissions units, it is not necessary to establish monitoring, record keeping and reporting requirements for this emissions unit to ensure compliance with the emission limitations above. [The monitoring , record keeping and reporting requirements are established for emissions unit B007.]

II. Operational Restrictions

1. When the OC emissions are vented to the resin II thermal oxidizer, the average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 15, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-4244 issued on 3/8/2001: A.III.2., A.III.3. and A.III.4. The monitoring and record keeping requirements contained in the above referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.
2. When the OC emissions are vented to the resin II thermal oxidizer, the permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

When the OC emissions are vented to the resin II thermal oxidizer, the permittee shall collect and record the following information for each day for the thermal oxidizer:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

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

3. The permittee shall collect and record the following information each month for this emissions unit.
 - a. The company identification of each material manufactured.
 - b. The amount of all the materials manufactured, in pounds.
 - c. The number of hours the emissions unit was in operation.
 - d. The controlled OC emission rate, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (0.0151 \text{ lb of OC/lb material manufactured}^*)/2000] \times [1 - \text{destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance}]$

- e. The uncontrolled OC emission rate for the initiator tank associated with this emissions unit, in tons, calculated as follows:

OC emissions (tons/month) = $[b \times (1.44 \text{ E-5 lb OC/lb material manufactured}^{**})/2000]$

- f. The average hourly controlled OC emission rate $[(d/c) \times 2000]$, in pounds/hour (average).
 - g. The average hourly uncontrolled OC emission rate for the initiator tank associated with this emissions unit $[(e/c) \times 2000]$, in pounds/hour (average).
 - h. The total hourly (average) OC emission rate (f + g), in pounds/hour.
 - i. The total OC emission rate (d + e), in tons.

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

** This emission factor was developed by the permittee by determining the loading losses from the initiator tank. This factor is used in calculating the OC emission rate from the initiator tank (the initiator tank OC emissions are not controlled)

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-4244 issued on 3/8/2001: A.IV.2., A.IV.3. and A.IV.4. The reporting requirements contained in the above referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.
2. For all periods of time during which the OC emissions were vented to the resin II thermal oxidizer*, the permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. all exceedances of the hourly allowable OC emission limitation of 1.23 lbs.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

* for all periods of time during which emissions unit B007 was used as the control device for OC emissions from emissions units P022, P023, P024 and/or P025, see Section IV. of the terms and conditions of the permit for emissions unit B007.

IV. Reporting Requirements (continued)

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-4244 issued on 3/8/2001: A.V.1.a., A.V.1.b., A.V.1.c., and A.V.2. The testing requirements contained in the above referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 2.a Emission Limitation-
1.23 lbs of OC/hr

Applicable Compliance Method-
Compliance with this emission limitation shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and also on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A.
 - 2.b Emission Limitation-
2.80 TPY of OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements specified in Section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.
 - 2.c Emission Limitation-
98% destruction efficiency, by weight, for OC

Applicable Compliance Method-
Compliance with destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 98%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
reactor train 4, with resin II thermal oxidizer (or emissions unit B007)	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- The permit to install 08-04244 for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethylene Glycol

TLV (mg/m3): 18.4

Maximum Hourly Emission Rate (lbs/hr): 5.03

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 345.4

MAGLC (ug/m3): 438.8

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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV) than the pollutant modeled and emissions exceeding 1 TPY, as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to th

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy.":
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: OEM Clearcoat Spray Booth (P027)

Activity Description: Coating Spray Booth: Quality assurance testing of manufactured coatings and related products.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
clearcoat train, QA/QC, electrostatic spray booth #1	OAC rule 3745-31-05 (A)(3) PTI 08-3835	45.8 lbs of volatile organic compounds (VOC)/day, excluding cleanup 9.99 TPY of VOC, including cleanup The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-11(B), 3745-21-09 (U)(2)(e) and 3745-17-07 (A).
	OAC rule 3745-17-11(B)	0.551 lb of particulate emissions (PE)/hr
	OAC rule 3745-17-07 (A)	Opacity shall not exceed 20%, as a six-minute average, except as provided by rule.
	OAC rule 3745-21-09 (U)(2)(e)	less than or equal to 10 gallons/day of coatings usage

2. Additional Terms and Conditions

None

II. Operational Restrictions

- The permittee shall operate the dry filtration system whenever this emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. The name and identification number of each coating employed.
 - b. The VOC content of each coating employed, in pounds per gallon, as applied,.
 - c. The volume, in gallons, of each coating employed.
 - d. The VOC emissions for all the coatings employed [summation of (b x c) for all coatings], in pounds.
 - e. The total volume, in gallons, for all the coatings employed [summation of c for all coatings].
2. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The name and identification of each cleanup material employed.
 - b. The number of gallons of each cleanup material employed.
 - c. The VOC content of each cleanup material employed, in pounds per gallon.
 - d. The total VOC emissions for all the cleanup materials employed [summation of (b x c) for all cleanup materials, divided by 2000], in tons.
 - e. The total VOC emissions for all the coatings employed [this is calculated by summing the daily VOC emission rates (from Section 1.d) for the calendar month, and then dividing by 2000], in tons.
 - f. The total VOC emissions for all the coatings and cleanup materials employed (d + e), in tons.
3. The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.
4. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-3835 issued on May 28, 1998: A.III.1 through A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

IV. Reporting Requirements

1. The permittee shall submit annual reports that specify the total VOC emissions, the total coatings usage and the total cleanup materials usage for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
2. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing that the dry filtration system was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days after the event occurs.
3. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing that the coating line employed more than the applicable maximum daily coating usage limit of 10 gallons. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.
4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the daily VOC emission limitation of 45.8 pounds. These reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

IV. Reporting Requirements (continued)

5. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-3835 issued on May 28, 1998: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-3835 issued on May 28, 1998: A.V.1 through A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- 2.a Usage Restriction -
less than or equal to 10 gallons/day of coatings usage

Applicable Compliance Method -

Compliance shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.

- 2.b Emission Limitation -
0.551 lb of PE/hour

Applicable Compliance Method -

To determine the actual worst case emissions rate for particulates, the following equation may be used:

$$E = \text{maximum coating solids usage rate, in pounds per hour} \times (1 - TE) \times (1 - CE)$$

$$E = \text{particulate matter emission rate (lbs/hour)}$$

TE = transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids used

CE = control efficiency of the control equipment

If required, compliance shall be determined in accordance with OAC rule 3745-17-03(B)(10).

- 2.c Emission Limitation -
20% opacity, as a six-minute average

Applicable Compliance Method -

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

- 2.d Emission Limitation -
45.8 lbs of VOC/day

Applicable Compliance Method -

Compliance shall be based upon the record keeping requirements specified in Section A.III.1 of this permit.

- 2.e Emission Limitation -
9.99 TPY of VOC

Applicable Compliance Method -

Compliance shall be based upon the record keeping requirements specified in Sections A.III.1 and 2 of this permit and shall be the sum of the 12 monthly VOC emission rates (from Section 2.f) for the calendar year.

3. Formulation data or USEPA Method 24 shall be employed to determine the VOC contents for all coatings and cleanup materials.

Facility Name: **BASF Corporation**
Facility ID: **08-19-07-0134**
Emissions Unit: **OEM Clearcoat Spray Booth (P027)**

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: OEM Clearcoat Train (P028)
Activity Description: OEM Clearcoat Train: Manufacture of coatings.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
original equipment manufacture (OEM) clearcoat production train, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI 08-3908	0.90 lb of organic compounds (OC)/hr 22 lbs of OC/day 3.94 TPY of OC
	OAC rule 3745-21-07 (G)(2)	See A.I.2.a. The limitations specified by this rule are less stringent than the limitations established pursuant to OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]

II. Operational Restrictions

- The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]
- The production rate of OEM clearcoat shall not exceed 2,910 pounds per hour, 69,840 pounds per day and 25,500,000 pounds per year.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The amount of each clearcoat material produced, in pounds.
 - b. The total amount of all the clearcoat materials produced, in pounds.
 - c. The calculated, controlled organic compound emission rate, in pounds (the controlled organic compound emission rate shall be determined by multiplying the amount of all the clearcoat materials produced, from Section 1.b above, by a loss factor of 0.103*, and then multiplying by a control factor of (1 - the destruction efficiency of the Resin I thermal oxidizer, as determined during the most recent emission testing that demonstrated the emissions unit was in compliance).**

* This is based on information supplied by the permittee.

**The most recent emission testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average destruction efficiency determined, during the emission testing, was 99.7 percent.

- d. The total number of days the emissions unit was in operation.
 - e. The average daily organic compound emission rate, i.e., (b)/(c), in pounds per day (average).
 - f. The average daily amount of clearcoat materials produced, i.e., (b/d), in pounds (average).
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
 - b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
- * The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.
3. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-3908 issued on November 18, 1998: A.III.1 through A.III.2. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. An identification of each month during which the average daily controlled OC emissions from this emissions unit exceeded 22 pounds per day, and the actual averagedaily controlled organic compound emissions for each such month.
 - b. An identification of each month during which the average daily coatings production rate exceeded 69,840 pounds per day, and the actual average daily coatings production rate for each such month.
 - c. An identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c. of the General Terms and Conditions of this permit.

2. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
3. The permittee shall submit annual reports that summarize the actual annual OC emissions (in tons) and the coatings production (in pounds) for this emissions unit for the previous calendar year. These reports shall be due by January 31 of each year.
4. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-3908 issued on November 18, 1998: A.IV.1 through A.IV.3. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-3908 issued on November 18, 1998: A.V.1 through A.V.4. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

4. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- 4.a Emission Limitation-
0.90 lb of OC/hr

Applicable Compliance Method-

Compliance shall be demonstrated based upon the results of emission testing conducted in accordance with Method 25 of 40 CFR, Part 60, Appendix A.

Compliance may also be determined by multiplying the maximum hourly production rate of OEM clearcoat (pounds/hr) by a loss factor of 0.103*, and then multiplying by a control factor of (1 - the destruction efficiency of the Resin I thermal oxidizer, as determined during the most recent emission testing that demonstrated the emissions unit was in compliance).**

* This is based on information supplied by the permittee.

**The most recent emission testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average destruction efficiency determined, during the emission testing, was 99.7 percent.

- 4.b Emission Limitation-
22.0 lbs of OC/day

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements in Section A.III.1 of this permit.

- 4.c Emission Limitation-
3.94 TPY of OC

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements in Section A.III.1 of this permit and shall be the sum of the twelve monthly OC emission rates for the calendar year.

- 4.d Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency limitation above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Buflovak Stripping Operation (P029)

Activity Description: Buflovak Stripping: Manufacture of electrocoat resins and related products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
buflovak stripping operation, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI No. 08-3284	32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined) See A.I.2.a.
	OAC rule 3745-21-07 (G)(2) OAC rule 3745-21-07 (G)(6)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

2. The permittee shall collect and record the following information each month for this emissions unit.

- a. The company identification of each material manufactured.
- b. The amount of all the materials manufactured, in pounds.
- c. The controlled OC emission rate, in tons, calculated as follows:

OC emissions (tons/month) = [b x (0.0151 lb of OC/lb material manufactured*)/2000] x [1 - destruction efficiency of the thermal oxidizer, as determined from the most recent performance testing that demonstrated the emissions unit was in compliance]

* This emission factor was developed by the permittee based upon the results of the emission testing conducted for the resin I and resin II thermal oxidizers in July, 1998. The emission factor is used in calculating the OC emission rate from the reactor, the monomer tank, the decanter and the thindown tank.

3. The permittee shall collect and record each month the total OC emissions for emissions units P001, P008, P009, P010 and P029, combined, in tons (this is calculated by adding the monthly OC emission rates for emissions units P001, P008, P009, P010 and P029).
4. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-3284 issued on June 28, 1995: A.III.1 through A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-3284 issued on June 28, 1995: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

IV. Reporting Requirements (continued)

2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall submit annual reports that specify the total OC emissions from emissions units P001, P008, P009, P010 and P029, combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-3284 issued on June 28, 1995: A.V.1 through A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

2. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

- 2.a Emission Limitation-
32.94 TPY of OC (for emissions units P001, P008, P009, P010 and P029, combined)

Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements specified in Sections A.III.2 and 3 of this permit and shall be the summation of the 12 monthly emission rates (for emissions units P001, P008, P009, P010 and P029, combined) for the calendar year.

- 2.b Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency limitation above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.3 of this permit.

V. Testing Requirements (continued)

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: OEM Clearcoat Spray Booth (P030)

Activity Description: Coating Spray Booth: Quality assurance testing of manufactured coatings and related products.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
clearcoat train, QA/QC, electrostatic spray booth #2	OAC rule 3745-31-05 (A)(3) PTI 08-3835	45.8 lbs of volatile organic compounds (VOC)/day, excluding cleanup 9.99 TPY of VOC, including cleanup The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-11(B), 3745-21-09 (U)(2)(e) and 3745-17-07 (A).
	OAC rule 3745-17-11(B)	0.551 lb of particulate emissions (PE)/hr
	OAC rule 3745-17-07 (A)	Opacity shall not exceed 20%, as a six-minute average, except as provided by rule.
	OAC rule 3745-21-09 (U)(2)(e)	less than or equal to 10 gallons/day of coatings usage

2. Additional Terms and Conditions

None

II. Operational Restrictions

- The permittee shall operate the dry filtration system whenever this emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. The name and identification number of each coating employed.
 - b. The VOC content of each coating employed, in pounds per gallon, as applied,.
 - c. The volume, in gallons, of each coating employed.
 - d. The VOC emissions for all the coatings employed [summation of (b x c) for all coatings], in pounds.
 - e. The total volume, in gallons, for all the coatings employed [summation of c for all coatings].
2. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The name and identification of each cleanup material employed.
 - b. The number of gallons of each cleanup material employed.
 - c. The VOC content of each cleanup material employed, in pounds per gallon.
 - d. The total VOC emissions for all the cleanup materials employed [summation of (b x c) for all cleanup materials, divided by 2000], in tons.
 - e. The total VOC emissions for all the coatings employed [this is calculated by summing the daily VOC emission rates (from Section 1.d) for the calendar month, and then dividing by 2000], in tons.
 - f. The total VOC emissions for all the coatings and cleanup materials employed (d + e), in tons.
3. The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.
4. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-3835 issued on May 28, 1998: A.III.1 through A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

IV. Reporting Requirements

1. The permittee shall submit annual reports that specify the total VOC emissions, the total coatings usage and the total cleanup materials usage for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
2. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing that the dry filtration system was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days after the event occurs.
3. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing that the coating line employed more than the applicable maximum daily coating usage limit of 10 gallons. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.
4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the daily VOC emission limitation of 45.8 pounds. These reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

IV. Reporting Requirements (continued)

5. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-3835 issued on May 28, 1998: A.IV.1 through A.IV.4. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-3835 issued on May 28, 1998: A.V.1 through A.V.3. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

2. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- 2.a Usage Restriction -
less than or equal to 10 gallons/day of coatings usage

Applicable Compliance Method -
Compliance shall be based upon the record keeping requirements specified in Section A.III.1. of this permit.

- 2.b Emission Limitation -
0.551 lb of PE/hour

Applicable Compliance Method -
To determine the actual worst case emissions rate for particulates, the following equation may be used:

$$E = \text{maximum coating solids usage rate, in pounds per hour} \times (1 - TE) \times (1 - CE)$$

$$E = \text{particulate matter emission rate (lbs/hour)}$$

TE = transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids used

CE = control efficiency of the control equipment

If required, compliance shall be determined in accordance with OAC rule 3745-17-03(B)(10).

- 2.c Emission Limitation -
20% opacity, as a six-minute average

Applicable Compliance Method -
If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

- 2.d Emission Limitation -
45.8 lbs of VOC/day

Applicable Compliance Method -
Compliance shall be based upon the record keeping requirements specified in Section A.III.1 of this permit.

- 2.e Emission Limitation -
9.99 TPY of VOC

Applicable Compliance Method -
Compliance shall be based upon the record keeping requirements specified in Sections A.III.1 and 2 of this permit and shall be the sum of the 12 monthly VOC emission rates (from Section 2.f) for the calendar year.

3. Formulation data or USEPA Method 24 shall be employed to determine the VOC contents for all coatings and cleanup materials.

Facility Name: **BASF Corporation**
Facility ID: **08-19-07-0134**
Emissions Unit: **OEM Clearcoat Spray Booth (P030)**

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Solvent Recovery Fractionator (P031)

Activity Description: Solvent Recovery Fractionator; receiving tank D-846 vented to Resin I thermal Oxidizer

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
solvent recovery fractionator; receiving tank D-846 vented to resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI 08-3908	6.76 lbs of organic compounds (OC)/hr 13.76 lbs of OC/day 0.25 TPY of OC
	OAC rule 3745-21-07 (G)(2)	See A.I.2.a. The limitations specified by this rule are less stringent than the limitations established pursuant to OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from the reaction, blending, monomer feeding and vessel cleaning operations that are associated with this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The hourly and daily OC limitations are established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to establish record keeping, monitoring and reporting requirements to ensure compliance with these limitations.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

2. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-3908 issued on November 18, 1998: A.III.1. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

IV. Reporting Requirements

1. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
2. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-3908 issued on November 18, 1998: A.IV.1 and 2. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

The permittee shall submit quarterly deviation (excursion) reports that include an identification of all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.

All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-3908 issued on November 18, 1998: A.V.2 through A.V.4. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

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

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

4. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

- 4.a Emission Limitation-
6.76 lbs of OC/hr

Applicable Compliance Method-

Compliance with this emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A .

- 4.b Emission Limitation-
13.76 lbs of OC/day

Applicable Compliance Method-

Compliance with the daily allowable OC emission limitation shall be determined based upon the emissions unit's maximum daily solvent throughput and the emission factors from AP-42, Section 5.2 (revised 9/85) and a control factor of (1-0.97).*

* The control efficiency of the thermal oxidizer is assumed to be 97%.

V. Testing Requirements (continued)

4.c Emission Limitation-
0.25 TPY of OC

Applicable Compliance Method-

Compliance with the annual allowable OC emission limitation shall be determined based upon the emissions unit's maximum annual solvent throughput and the emission factors from AP-42, Section 5.2 (revised 9/85) and a control factor of (1-0.97).*

* The control efficiency of the thermal oxidizer is assumed to be 97%.

4.d Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency limitation above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.2 of this permit.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Dirty Water Tank (TK 901) (T001)
Activity Description: Storage tank for dirty water.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
20,000-gallon dirty water storage tank, with resin I thermal oxidizer	OAC rule 3745-31-05 (A)(3) PTI 08-2065	0.20 lb of organic compounds (OC)/hr
	OAC rule 3745-21-07 (D)(2)	0.11 TPY of OC The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a The permittee shall control all of the OC emissions from this emissions unit by the use of a thermal oxidizer. The thermal oxidizer shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 through P016, P021, T001, P028, P029, P031 and the specific tanks identified in emissions units T029 and T030.]
- 2.b The 0.20 lb/hr organic compound limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

II. Operational Restrictions

1. The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

2. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-2065 issued on December 5, 1990, and subsequently modified on November 2, 2000: A.III.1. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance. All of the quarterly reports required in this permit shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions in this permit.
2. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
3. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-2065 issued on December 5, 1990, and subsequently modified on November 2, 2000: A.IV.1 and A.IV.2. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-2065 issued on December 5, 1990, and subsequently modified on November 2, 2000: A.V.1 through A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitations-
0.2 lb/hr OC, 0.11 TPY OC

Applicable Compliance Method-

Compliance with the hourly allowable OC emission limitation shall be based upon on the results of emission testing conducted in accordance with Method 25A of 40 CFR, Part 60, Appendix A .

Compliance with the annual allowable OC emission limitation shall be based upon USEPA's Tanks program (ver. 4.1), the maximum annual throughput capacity, and an emission factor of (1-0.97).*

* The control efficiency of the thermal oxidizer is assumed to be 97%.

1.b Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.2 of this permit.

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

a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiency for the thermal oxidizer of 97%, by weight.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Material Transfer and Organic Liquid Storage Tanks (T029)

Activity Description: Material Transfer and Organic Liquid Storage Tanks - 115 Storage Tanks

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Material Transfer and Organic Liquid Storage Tanks - 115 Tanks (emissions unit T029) (See A.I.2.a.)	OAC rule 3745-31-05 (A)(3) PTI 08-4243	13.66 TPY of organic compounds (OC), combined total for T029 (115 tanks grouped) and T030
	40 CFR, Part 60, Subpart Kb	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-21-07(D) and 40 CFR, Part 60, Subpart kb.
	OAC rule 3745-21-07(D) (1) & (2)	none (See A.III.2 and 3.) See A.II.1.

2. Additional Terms and Conditions

- 2.a** There a total of 115 storage tanks grouped as emissions unit T029. The following identifies the tanks, the size of each, and their location.

Area 100: 109 - 28,000 gallons
104, 105 - 20,000 gallons
102, 103, 107 - 15,000 gallons
106 - 8,000 gallons

All tanks in area 100, are equipped with conservation vents.

Area 110: 122, 135, 136 - 30,000 gallons
120, 121, 125 thru 131, 137 - 20,000 gallons
111 thru 114, 123, 124 - 12,000 gallons

All tanks in area 110 are connected to Thermal Oxidizer II.

Area 140: 141 thru 147, 151 thru 157, 161 thru 167, 171 thru 177 - 20,000 gallons

All tanks in area 140, except tank #171, are equipped with conservation vents. Tank #171 is connected to Thermal Oxidizer II.

Area 400: 424, 445, 464 - 20,000 gallons
401 thru 406, 421 thru 423, 425, 426, 441 thru 444, 446, 461 thru 463, 465 thru 467 - 12,000 gallons

All tanks in area 400 are equipped with conservation vents.

Area 500: 500 thru 506, 520 thru 526, 540 thru 545, 565, 566 - 20,000 gallons
546, 564 - 15,000 gallons

Tanks 500 thru 506 are connected to Thermal Oxidizer I. All other tanks in area 500 (520 thru 526, 540 thru 545, 565, and 566 are equipped with conservation vents.

Area 700: 702, 703 - 30,000 gallons
700, 701, 704, 707 - 20,000 gallons

Tanks 700 thru 704 are connected to Thermal Oxidizer II. Tank 707 is vented to a carbon canister.

- 2.b** The permittee shall control all of the OC emissions from the specific tanks identified in A.I.2.a above by the use of a thermal oxidizer. The thermal oxidizer (resin I) shall be operated such that it meets a minimum destruction efficiency of 97%, by weight, for OC. [The resin I thermal oxidizer is a common OC control device for emissions units P001, P008 through P011, P013 thru P016, P021, T001, P028, P029, P031 and T029.]

- 2.c** The permittee shall control all of the OC emissions from the specific tanks identified in A.I.2.a above by the use of a thermal oxidizer. The thermal oxidizer (resin II) shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC. [The resin II thermal oxidizer is a common OC control device for emissions units P022, P023, P024, P025, T029 and T030.]

[Note that emissions unit B007 is identified as an alternative organic compound emission control device to the Resin II thermal oxidizer. When emissions unit B007 is functioning as an organic compound emission control device, it shall be operated such that it meets a minimum destruction efficiency of 98%, by weight, for OC.]

- 2.d** When emissions unit B007 is functioning as an OC emissions control device for the OC emissions from this emissions units, it is not necessary to establish monitoring, record keeping and reporting requirements for this emissions unit to ensure compliance with the emission limitations above. [The monitoring , record keeping and reporting requirements are established for emissions unit B007.]

II. Operational Restrictions

1. Any tank used to store a volatile photochemically reactive material, as defined in OAC rule 3745-21-01 (C)(7), shall be equipped with a submerged fill pipe, as defined in OAC rule 3745-21-01 (C)(6).
2. For those storage tanks vented to the Resin I thermal oxidizer:

The average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 14, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

For those storage tanks vented to the Resin II thermal oxidizer:

When the OC emissions are vented to the resin II thermal oxidizer, the average temperature of the combustion chamber within the thermal oxidizer, for any 3-hour block of time while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. [The most recent testing that demonstrated the emissions unit was in compliance was conducted on July 15, 1998. The average combustion chamber temperature measured, during the emission testing, was 1500 degrees Fahrenheit.]

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day for the control equipment:

- a. A log of the downtime* for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
- b. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.

* The control device downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the thermal oxidizer is not in operation. Monitoring equipment downtime is defined as any time when the emissions unit is in operation, employing organic compounds, and the temperature monitoring equipment is not functioning.

2. The permittee shall maintain readily accessible records showing the dimensions of each storage vessel and an analysis showing the storage capacity of each storage vessel.
3. The permittee shall maintain the following records for those tanks with a storage capacity greater than 19,812 gallons and store liquids with maximum true vapor pressures exceeding 2.18 psia:
 - a. The volatile organic liquids stored.
 - b. The period of storage of the volatile organic liquids.
 - c. The maximum true vapor pressure of the volatile organic liquids during that period.

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

4. The permittee shall record and maintain the following information for each storage vessel on a monthly basis:
 - a. The identification of the material being stored.
 - b. Whether the tank is equipped with a submerged fill pipe.
 - c. Whether the material being stored is defined as a volatile photochemically reactive material.
 - d. The throughput of the material, in pounds.
 - e. The true vapor pressure of the material, in psia.
 - f. The calculated organic compound emissions, in pounds.
5. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than that contained in Permit to Install 08-4243 issued on 4/10/2001: A.III.1 through A.III.4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements of the Permit to Install.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the resin I thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the resin II thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.
3. All of the quarterly reports required in this permit shall be submitted in accordance with paragraph A.1.c. of the General Terms and Conditions of this permit.
4. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
5. The permittee shall submit notification to the Director (the appropriate Ohio EPA District Office or local air agency) of any time when a volatile photochemically reactive material is stored in a tank that is not equipped with submerged fill. The notification shall be submitted within 30 days of the date of the occurrence.
6. The permittee shall submit annual reports that specify the actual OC emissions for the previous calendar year for emissions units T029 and T030, combined. These reports shall be submitted by January 31 of each year.
7. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following reporting requirements are as stringent as or more stringent than that contained in Permit to Install 08-4243 issued on 4/10/2001: A.IV.1 through A.IV.6. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements of the Permit to Install.

V. Testing Requirements

1. Pursuant to OAC rule 3745-77-07 (a)(3)(A)(ii), the following testing requirements are as stringent as or more stringent than that contained in Permit to Install 08-4243 issued on 4/10/2001: A.V.1 through A.V.2. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements of the Permit to Install.

Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

V. Testing Requirements (continued)

- 1.a** Emission Limitation-
13.66 TPY organic compounds, combined total for T029 and T030

Applicable Compliance Method-

Compliance with the annual allowable emission limitation above shall be determined as follows:

- i. Determine the monthly organic compound emissions from each tank based on the equations found in AP-42, Section 4.3 and material data on the compounds and mixtures, as extracted from the Material Safety Data Sheets (MSDS), in pounds.
- ii. Sum the 12 monthly OC emission rates for the year for each tank, and then divide 2000.
- iii. Sum the annual OC emissions, from 1.a.ii above, for all the tanks, combined, in tons.

- 1.b** Emission Limitation-
97% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.2 of this permit.

- 1.c** Emission Limitation-
98% destruction efficiency, by weight, for OC

Applicable Compliance Method-

Compliance with the destruction efficiency above shall be based upon the results of emission testing conducted in accordance with the methods and procedures outlined in Section V.2 of this permit.

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

- a. The emission testing shall be conducted approximately within 1 year after permit issuance and within 6 months prior to permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for OC and the OC destruction efficiencies for the resin I and resin II thermal oxidizers.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for OC, Method 25A of 40 CFR Part 60, Appendix A. The test methods that must be employed to demonstrate compliance with the control efficiency are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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