



State of Ohio Environmental Protection Agency

Street Address:

Mailing Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Lazarus Gov.
Center

**RE: DRAFT PERMIT TO INSTALL
LICKING COUNTY
Application No: 01-07993**

CERTIFIED MAIL

DATE: 5/17/00

Organic Technologies
Mark Westbrook
1780 Tamarack Rd
Newark, OH 43055

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$1100** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

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

CC: USEPA

CDO



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 01-07993

Application Number: 01-07993
APS Premise Number: 0145020280
Permit Fee: **To be entered upon final issuance**
Name of Facility: Organic Technologies
Person to Contact: Mark Westbrook
Address: 1780 Tamarack Rd
Newark, OH 43055

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1780 Tamarack Rd
Newark, Ohio**

Description of proposed emissions unit(s):
Chemical reactor.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

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

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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. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may

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lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities prove to be inadequate or cannot meet applicable standards.

10. Public Disclosure

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

11. Applicability

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

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	17.38
Chloroform	4.58
Ethyl Chloride	3.2

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
Chemical reactor (Corp. ID R3001), receiving vessel, 2 condensers, 2 vacuum traps, vacuum pump, and 2 scrubbers.	OAC rule 3745-31-05(A)(3)	Volatile organic compound emissions shall not exceed 15.6 tons per year.
		Chloroform emissions shall not exceed 0.5 pound per hour and 2.8 tons per year.
		Ethyl Chloride emissions shall not exceed 3.2 tons per year.
		See Part II.A.2.a-d below.
	OAC rule 3745-21-09 (DD)	See Part II.B.1, C.8 and D.4 below.

2. Additional Terms and Conditions

- 2.a The permittee shall install an Emergency Containment System for this reactor.
- 2.b The permittee shall operate the facility in accordance with a Preventive Maintenance and Malfunction Abatement Plan (PMMAP) which shall be approved by the Ohio EPA, Central District Office.
- 2.c The permittee shall vent the emissions from this emissions unit to two scrubbers in series during the Ethynyl Cyclopropane Process. This control equipment shall be operated and maintained in accordance with manufacturer's recommendations.

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2.d Potential to Emit (PTE)

This emission unit's PTE and the facility's PTE were determined, in part, through the use of the approved Synthetic Organic Chemical Manufacturers Association's methodology for determining PTE for batch chemical operations. The emissions from other emissions units at the facility, which are not directly associated with the batch chemical operations, were also incorporated into the facility's PTE. This approach for determining the emission unit and facility PTE incorporate a facility wide PTE analysis performed in accordance with U.S. EPA's August 29, 1996, guidance memorandum entitled "Clarification of Methodology for Calculating Potential to Emit for Batch Chemical Production Operations."

The methodology employed through the above referenced document enables the permittee to calculate and document the emissions (criteria and hazardous air pollutants) generated by each emissions unit directly associated with each batch chemical operation. The emissions generated by each emissions unit are determined on an average hourly basis. The emissions from each individual emissions unit are then combined to determine the total emissions associated with the batch operation. The records of the individual emissions for each emissions unit, for each batch operation that the permittee currently produces or knows they will produce, are retained within the original engineering analysis used to establish the "worst-case" PTE for this facility. The analysis shall address the emissions generated from each batch operation for each emissions unit at the facility. The records of the individual emissions for each emissions unit, for batch operations that were not included in the original engineering analysis, will be retained within any revised engineering analysis developed by the permittee.

B. Operational Restrictions

1. This emission unit's design capacity to produce as an intermediate or final product one or more of the organic chemicals identified in appendix A of OAC rule 3745-21-09 shall not exceed one thousand one hundred (1,100) tons per year or two million two hundred thousand (2,200,000) pounds per year.
2. The scrubber solution supply flow rate shall be maintained within the range of 0.4 - 2.0 gallons per minute for scrubber #1 and 1.5 - 10 gallons per minute for scrubber #2 at all times the scrubbers are in operation to control the emissions from the Ethynyl Cyclopropane process. In addition, the solution supply temperature shall not exceed 3 degrees Celsius. This control equipment shall be operated and maintained in accordance with manufacturer's recommendations.

C. Monitoring and/or Recordkeeping Requirements

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1. The permittee shall maintain documentation of the products, raw materials, equipment utilization rates, and individual emissions unit emission rates for each product and their relationship to one another used in the original engineering analysis which established the emission unit's PTE and the facility's PTE. The permittee shall also maintain the documentation (ISCST2 facility-wide dispersion modeling analysis for all of the chemicals with Threshold Limit Values (TLVs)) which was used to demonstrate compliance with the Ohio EPA Air Toxics Policy based on the products and their corresponding raw materials as identified in the PTI application for P007, P008, and T008.
2. If the permittee desires to produce a product which was not included in the original engineering analysis, then a revised engineering analysis shall be performed to evaluate the effect of the new product against the "worst-case" emission unit PTE for P007 and "worst case" facility PTE established by the original engineering analysis. If the new product does not affect the "worst-case" PTE calculation by increasing the calculated PTE to a level above that calculated in the original engineering analysis, and PTI application, then the permittee may produce the new product at this facility. The permittee shall maintain documentation of any revised engineering analysis which allows for the introduction of a new product without establishing a new emission unit, emissions unit PTE and/or facility PTE. The permittee shall also maintain documentation which confirms that the chemical substances emitted as a result of producing the new product or use of any new or modified raw materials will not exceed the maximum acceptable ground level concentration defined by the Ohio EPA Air Toxics Policy based upon modeling using SCREEN3 for units P007, P008, and T008.
3. If a revised engineering analysis for a new product does affect the "worst-case" emission unit or facility PTE calculation by increasing the calculated PTE to a level above that calculated in the original engineering analysis, then the permittee may not produce the new product in this emissions unit or facility without obtaining the appropriate permit(s) from the Ohio EPA. In addition, any change to the emissions units that would otherwise be considered a "modification" as defined in OAC rule 3745-31-01 would require prior notification to and approval from the Ohio EPA, including the possible issuance of modifications to this permit and/or operating permits.
4. The permittee shall monitor and record the solution supply flow rate and solution supply temperature to each scrubber during the Ethynyl Cyclopropane process for unit P007 on an hourly basis.
5. The permittee shall maintain the following information for each batch produced:
 - a. the identification of the product being produced;
 - b. the total batch emissions, in pounds;

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- c. the total batch time, in minutes
- d. the average hourly VOC emission rate, individual HAP, and combined HAP emission rate from P007 for each process step, in pounds; and
- e. the solution supply flow rate and solution temperature to each scrubber if necessary.

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6. The permittee shall maintain operation and maintenance records to demonstrate that the "Preventative Maintenance and Malfunction Abatement Plan" approved for this facility and the pollution control equipment associated with these emissions units is fully implemented as per OAC rule 3745-15-06 (D)(1).
7. The permittee shall maintain monthly records of the rolling 12-month total VOC, single HAP, and combined HAP emission rates for this emissions unit, in pounds and tons.
8. The permittee shall maintain an analysis demonstrating this emission unit's design capacity to produce as an intermediate or final product one or more of the organic chemicals identified in appendix A of OAC rule 3745-21-09.
9. The permit to install for this emissions unit P007 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit 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: Chloroform

TLV (ug/m3): 49,000

Maximum Hourly Emission Rate (lbs/hr): 0.57

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 93

MAGLC (ug/m3): 1167

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 still 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

Emissions Unit ID: **P007**

materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), 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 the change.

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.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include an identification of any period, when the emissions unit was in operation, during which the solution supply flow rate was not maintained within the range of 0.4-2.0 gallons per minute for scrubber #1 and 1.5-10 gallons per minute for scrubber #2 or the temperature exceeded 3 degrees Celsius. These reports are due by the date described in Part - 1 General Terms and Conditions of this permit under section (A)(1).
2. The permittee shall notify the Ohio EPA, Central District Office, in writing, of any new product

Emissions Unit ID: P007

that can be produced in this emissions unit or at this facility for which the revised engineering analysis demonstrates that the original calculated emission unit PTE and facility PTE will not be increased. The notification shall include a copy of the revised facility-wide engineering analysis along with documentation which confirms that the chemical substances emitted as a result of producing the new product or use of any new or modified raw materials will not exceed the maximum acceptable ground level concentration defined by the Ohio EPA Air Toxics Policy based upon modeling using SCREEN3 for units P007, P008, and T008 and shall be sent to the Ohio EPA, Central District Office at least 7 days prior to producing the new product at this facility.

3. The permittee shall also submit annual reports which specify the total organic compound emissions, individual HAP emissions and combined HAP emissions from this emissions unit for the preceding rolling, 12 month period. These reports shall be submitted by January 31 of each year.
4. The permittee shall notify the Director (CDO) if any engineering analysis demonstrates that this emission unit's design capacity to produce as an intermediate or final product one or more of the organic chemicals identified in appendix A of OAC rule 3745-21-09 exceeds one thousand one hundred (1100) tons per year or two million two hundred thousand (2,200,000) pounds per year. These reports shall be submitted to the Director (CDO) at least 30 (thirty) days prior to the operational change which will increase the design capacity as specified above.

E. Testing Requirements

1. 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):

- a. Emission Limitation:
Volatile organic compound emissions shall not exceed 15.6 tons per year.

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the original and/or revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements. Each month, the previous 12 month emission rate totals (for VOC) shall be added together. If required, the permittee shall demonstrate compliance with these emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A.

- b. Emission Limitation:
Chloroform emissions shall not exceed 0.5 pound per hour and 2.8 tons per year.

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Applicable Compliance Method:

Compliance with these emission limitations shall be determined based upon the original and/or revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements. Each month, the previous 12 month emission rate totals (for Chloroform) shall be added together.

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

The emission testing shall be conducted within 6 months issuance of this permit or the next time this unit operates the "Chloroform Process" identified in the PTI application.

The emission testing shall be conducted to demonstrate the validity of the emission factor used in the emission calculations for Step 1C of the "Chloroform Process".

The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): the appropriate method found in 40 CFR Part 60, Appendix A. 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 Ohio EPA, Central District Office.

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

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

Emissions Unit ID: **P007**

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

- c. Emission Limitation:
Ethyl Chloride emissions shall not exceed 3.2 tons per year.

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the original and/or revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements. Each month, the previous 12 month emission rate totals (for Ethyl Chloride) shall be added together.

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

The emission testing shall be conducted within 6 months issuance of this permit or the next time this unit operates the "Ethynyl Cyclopropane Process" identified in the PTI application.

The emission testing shall be conducted to demonstrate the validity of the emission factor used to estimate the amount of Ethyl Chloride into the first scrubber and to verify the amount of Ethyl Chloride emitted from the second scrubber during Step 1 "Ethynyl Cyclopropane Process".

The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): the appropriate method found in 40 CFR Part 60, Appendix A. 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 Ohio EPA, Central District Office.

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

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review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

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

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

F. Miscellaneous Requirements

None.

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
Chemical reactor (Corp. ID R3002), receiving vessel, column, vacuum pump, 2 condensers, and 2 vacuum traps	OAC rule 3745-31-05 (A)(3)	Volatile organic compound emissions shall not exceed 0.83 tons per year. Chloroform emissions shall not exceed 6.44 pounds per hour and 0.83 ton per year. See Part II.A.2.a-d below.
	OAC rule 3745-21-09 (DD)	See Part II.B.1, C.7, and D.3 below.

2. Additional Terms and Conditions

- 2.a The permittee shall install an Emergency Containment System for this reactor.
- 2.b The permittee shall operate the facility in accordance with a Preventive Maintenance and Malfunction Abatement Plan (PMMAP) which shall be approved by the Ohio EPA, Central District Office.
- 2.c The permittee shall vent the emissions from this emissions unit to two vacuum traps and two condensers during the Chloroform process. This control equipment shall be operated and maintained in accordance with manufacturer's recommendations.
- 2.d Potential to Emit (PTE)

This emission unit's PTE and the facility's PTE were determined, in part, through the use

Emissions Unit ID: **P008**

of the approved Synthetic Organic Chemical Manufacturers Association's methodology for determining PTE for batch chemical operations. The emissions from other emissions units at the facility, which are not directly associated with the batch chemical operations, were also incorporated into the facility's PTE. This approach for determining the emission unit and facility PTE incorporate a facility wide PTE analysis performed in accordance with U.S. EPA's August 29, 1996, guidance memorandum entitled "Clarification of Methodology for Calculating Potential to Emit for Batch Chemical Production Operations."

The methodology employed through the above referenced document enables the permittee to calculate and document the emissions (criteria and hazardous air pollutants) generated by each emissions unit directly associated with each batch chemical operation. The emissions generated by each emissions unit are determined on an average hourly basis. The emissions from each individual emissions unit are then combined to determine the total emissions associated with the batch operation. The records of the individual emissions for each emissions unit, for each batch operation that the permittee currently produces or knows they will produce, are retained within the original engineering analysis used to establish the "worst-case" PTE for this facility. The analysis shall address the emissions generated from each batch operation for each emissions unit at the facility. The records of the individual emissions for each emissions unit, for batch operations that were not included in the original engineering analysis, will be retained within any revised engineering analysis developed by the permittee.

B. Operational Restrictions

1. This emission unit's design capacity to produce as an intermediate or final product one or more of the organic chemicals identified in appendix A of OAC rule 3745-21-09 shall not exceed one thousand one hundred (1100) tons per year or two million two hundred thousand (2,200,000) pounds per year.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain documentation of the products, raw materials, equipment utilization rates, and individual emissions unit emission rates for each product and their relationship to one another used in the original engineering analysis which established the emission unit's PTE and facility's PTE. The permittee shall also maintain the documentation (ISCST2 facility-wide dispersion modeling analysis for all of the chemicals with Threshold Limit Values (TLVs)) which was used to demonstrate compliance with the Ohio EPA Air Toxics Policy based on the products and their corresponding raw materials as identified in the emission units P007, P008, and T008.
2. If the permittee desires to produce a product which was not included in the original engineering analysis, then a revised engineering analysis shall be performed to evaluate the effect of the new

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product against the "worst-case" emission unit PTE for P008 and "worst case" facility PTE established by the original engineering analysis. If the new product does not affect the "worst-case" PTE calculation by increasing the calculated PTE to a level above that calculated in the original engineering analysis and PTI application, then the permittee may produce the new product at this facility. The permittee shall maintain documentation of any revised engineering analysis which allows for the introduction of a new product without establishing a new emission unit, emission unit PTE, and facility PTE. The permittee shall also maintain documentation which confirms that the chemical substances emitted as a result of producing the new product or use of any new or modified raw materials will not exceed the maximum acceptable ground level concentration defined by the Ohio EPA Air Toxics Policy based upon modeling using SCREEN3 for units P007, P008, and T008.

3. If a revised engineering analysis for a new product does affect the "worst-case" emission unit or facility PTE calculation by increasing the calculated PTE to a level above that calculated in the original engineering analysis, then the permittee may not produce the new product in this emissions unit or facility without obtaining the appropriate permit(s) from the Ohio EPA. In addition, any change to the emissions units that would otherwise be considered a "modification" as defined in OAC rule 3745-31-01 would require prior notification to and approval from the Ohio EPA, including the possible issuance of modifications to this permit and/or operating permits.
4. The permittee shall maintain the following information for each batch produced:
 - a. the identification of the product being produced;
 - b. the total batch emissions, in pounds;
 - c. the total batch time, in minutes
 - d. the average hourly VOC emission rate, individual HAP, and combined HAP emission rate from P007 for each process step, in pounds; and
5. The permittee shall maintain operation and maintenance records to demonstrate that the "Preventative Maintenance and Malfunction Abatement Plan" approved for this facility and the pollution control equipment associated with these emissions units is fully implemented.
6. The permittee shall maintain monthly records of the rolling 12-month total VOC, individual HAP, and combined HAP emission rates for this emissions unit, in pounds and tons.
7. The permittee shall maintain an analysis demonstrating this emission unit's design capacity to

Emissions Unit ID: **P008**

produce as an intermediate or final product one or more of the organic chemicals identified in appendix A of OAC rule 3745-21-09.

8. The permit to install for this emissions unit P008 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit 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: Chloroform

TLV (ug/m3): 49,000

Maximum Hourly Emission Rate (lbs/hr): 6.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 721

MAGLC (ug/m3): 1167

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 still 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), 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

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- 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 the change.

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.

D. Reporting Requirements

1. The permittee shall notify the Ohio EPA, Central District Office, in writing, of any new product that can be produced in this emissions unit or at this facility for which the revised engineering analysis demonstrates that the original calculated emission unit PTE and facility PTE will not be increased. The notification shall include a copy of the revised facility-wide engineering analysis along with documentation which confirms that the chemical substances emitted as a result of producing the new product or use of any new or modified raw materials will not exceed the maximum acceptable ground level concentration defined by the Ohio EPA Air Toxics Policy based upon modeling using SCREEN3 for units P007, P008, and T008 and shall be sent to the Ohio EPA, Central District Office at least 7 days prior to producing the new product at this facility.
2. The permittee shall also submit annual reports which specify the total organic compound emissions, individual HAP emissions and combined HAP emissions from this emissions unit for the preceding rolling, 12 month period. These reports shall be submitted by January 31 of each year.

3. The permittee shall notify the Director (CDO) if any engineering analysis demonstrates that this emission unit's design capacity to produce as an intermediate or final product one or more of the organic chemicals identified in appendix A of OAC rule 3745-21-09 exceeds one thousand one hundred (1100) tons per year or two million two hundred thousand (2,200,000) pounds per year. These reports shall be submitted to the Director (CDO) at least 30 (thirty) days prior to the operational change which will increase the design capacity as specified above.

E. Testing Requirements

1. 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):

- a. Emission Limitation:
Volatile organic compound emissions shall not exceed 0.83 tons per year.

Applicable Compliance Method:

Compliance with this emission limitation shall be determined based upon the original and/or revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements. Each month, the previous 12 month emission rate totals (for VOC) shall be added together. If required, the permittee shall demonstrate compliance with these emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A.

- b. Emission Limitation:
Chloroform emissions shall not exceed 6.44 pounds per hour and 0.83 ton per year.

Applicable Compliance Method:

Compliance with these emission limitations shall be determined based upon the original and/or revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements. Each month, the previous 12 month emission rate totals (for Chloroform) shall be added together. If required, the permittee shall demonstrate compliance with these emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
T008 - 30,000 gallon above ground storage tank (Corp ID 4154)	OAC rule 3745-31-05 (A)(3) NSPS Subpart Kb	Chloroform emissions shall not exceed 2.09 pounds per hour and 0.95 tons per year. See Part II.C.1-2 and D.1

2. Additional Terms and Conditions

- 2.a** None

B. Operational Restrictions

None

C. Monitoring and/or Recordkeeping Requirements

1. In accordance with 40 CFR 60.116b (a) and 40 CFR 60.116b (b), the permittee shall keep readily accessible records showing the dimensions of T008 and an analysis showing the capacity for the life of T008.
2. The permittee shall maintain readily accessible records which identify the contents, maximum true vapor pressure, and the period of storage.
3. The permit to install for this emissions unit T008 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

Emissions Unit ID: T008

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: Chloroform

TLV (ug/m3): 49,000

Maximum Hourly Emission Rate (lbs/hr): 2.09

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 437

MAGLC (ug/m3): 1167

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 still 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), 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

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definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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.

D. Reporting Requirements

1. In accordance with 40 CFR 60.116b (a) and 40 CFR 60.116b (d), the permittee shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds 15 kPa or 2.176 psi.

E. Testing Requirements

1. 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):
 - a. Emission Limitation:
Chloroform emissions shall not exceed 2.09 pounds per hour and 0.95 tons per year.

Applicable Compliance Method:
VOC emissions due to standing and withdrawal losses from the storage tanks shall be determined using the most recent version of USEPA's "Tanks" program.

F. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 01-07993 Facility ID: 0145020280

FACILITY NAME Organic Technologies

FACILITY DESCRIPTION Chemical reactor CITY/TWP Newark

SIC CODE 2869 SCC CODE 30113299 EMISSIONS UNIT ID P007

EMISSIONS UNIT DESCRIPTION Chemical reactor (Corp. ID R3001), receiving vessel, 2 condensers, 2 vacuum traps, vacuum pump, and 2 scrubbers.

DATE INSTALLED 6/98

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds			15.6		15.6
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics		0.5 lb Chloroform/hr	2.8 Chloroform; 3.2 Ethyl Chloride	0.5 lb Chloroform/hr	2.8 Chloroform; 3.2 Ethyl Chloride

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

See terms and conditions

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: Chloroform

NEW SOURCE REVIEW FORM B

PTI Number: 01-07993

Facility ID: 0145020280

FACILITY NAME Organic Technologies

FACILITY DESCRIPTION Chemical reactor

CITY/TWP Newark

Emissions Unit ID: T008

SIC CODE 2869

SCC CODE 30113299

EMISSIONS UNIT ID P008

EMISSIONS UNIT DESCRIPTION Chemical reactor (Corp. ID R3002), receiving vessel, column, vacuum pump, 2 condensers, and 2 vacuum traps

DATE INSTALLED 6/98

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds			0.83		0.83
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics		6.44 lbs Chloroform/hr	0.83	6.44 lbs Chloroform/hr	0.83

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

See terms and conditions

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS: Chloroform

NEW SOURCE REVIEW FORM B

PTI Number: 01-07993

Facility ID: 0145020280

FACILITY NAME Organic TechnologiesFACILITY DESCRIPTION Chemical reactorCITY/TWP NewarkEmissions Unit ID: **T008**SIC CODE 2087

SCC CODE _____

EMISSIONS UNIT ID T008EMISSIONS UNIT DESCRIPTION 30,000 gallon above ground storage tank (Corp ID 4154)

DATE INSTALLED

97

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics		2.1 lbs Chloroform/hr	0.95 Chloroform	2.1 lbs Chloroform/hr	0.95 Chloroform

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP? **40 CFR 60**

PSD?

OFFSET POLICY?

Subpart Kb

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

See additional terms and conditionsIS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*?

X

YES

 NOIDENTIFY THE AIR CONTAMINANTS: chloroform

NEW SOURCE REVIEW FORM B

PTI Number: 01-07993

Facility ID: 0145020280

FACILITY NAME Organic Technologies

FACILITY DESCRIPTION Chemical reactor

CITY/TWP Newark

Emissions Unit ID: T008

Please describe any hard copy information is being submitted with this recommendation (Please send hard copy information to Pam McGraner, DAPC Central Office - Air Quality Modeling and Planning):

Modeling, calculations.

Please provide any additional permit specific notes as you deem necessary:

New Source Review Discussion

Organic Technologies is located at 1780 Tamarack Road in Newark, Licking County. The facility is a batch chemical plant that has requested PTIs for two modified chemical reactors and one existing storage tank. The facility is currently under review to determine Title V applicability and any compliance problems.

Mike Hopkins and I spoke recently and we concluded that this permit should be issued draft to allow for company and/or citizen comments.

The applicable rules to the sources at this facility are the following:

3745-31-05:BAT limits were the short term (lb/hr) limitations in order to comply with the Air Toxics Policy. The tons per year were specified as the units PTE based on PTE analysis of the units and facility. BAT was specified to be installation of an Emergency Containment system and use of an approved PM & MAP plan. These requirements were instituted because similar sources within the state have had these BAT requirements. In addition, Organic Technologies have had an explosion and enforcement case against them in the past.

3745-21-09(DD):This facility claims to be exempt from this rule because they have a design capacity to produce less than 1100 tons per year (2,200,000 pounds per year). (Their capacity is 2,100,000 lbs per year)

NSPS Subpart VV:This facility claims to be exempt from this rule because they have a design capacity to produce less than 2,200,000 pounds per year. (Their capacity is 2,100,000 lbs per year)

NSPS Subpart Kb:Organic Technologies previously installed a 30,000 gallon Chloroform tank.

The unique language used in this permit which addresses the PTE calculation and the USEPA guidance document for the reactors was based on a recent permit for ISP Fine Chemicals that was written by Bruce Weinburg. If there are any questions or if any clarification is needed for this language please give me a call.

Modeling was performed for these emissions units and indicate that the installations will not exceed the MAGLC. P007, P008, and T008 were each modeled at a rate of one gram per second (g/sec). Each unit's expected ground level concentration (at 1 g/sec) was then multiplied by each unit's maximum emissions rate in g/sec which resulted in the actual predicted ground level concentration. When these emission rates were compared to the MAGLC (TLV divided by 42) the aggregate of the three did not pass modeling at specific distances. Therefore, a more detailed analysis was

The equation identified in an July 3, 1999, email from Dana Thomson to Bill Spires was used to predict the specific ground level concentrations for multiple units with varying MAGLCs. As explained in "Option A - Review of New Sources of Air Toxic Emissions" P007 and T008 derived their MAGLC by dividing the TLV by 42 and P008's MAGLC was derived by divided the TLV by 10 because P008's hours of operation were less than the other units. The guidance explains that since the modeling is linear, we can divide each units emission rate in g/sec by it's respective MAGLC. This fraction can be modeled in place of each units emission rate. The resultant predicted ground level concentrations when summed together at the peak distance can not exceed unity (1). These units pass modeling because the output at the peak distance did not exceed unity. New modeling language has been used.

The calculations for modeling are as follows:

$$P0070.0631 \text{ g/sec}/1167 \text{ ug/m}^3=0.00005407$$

$$P0080.8121 \text{ g/sec}/4900 \text{ ug/m}^3=0.00016573$$

$$T0080.2648 \text{ g/sec}/1167 \text{ ug/m}^3=0.00022691$$

The distance with the peak concentrations were:

$$P00751 \text{ m } 0.0851$$

$$P00877 \text{ m } 0.1591$$

$$T00839 \text{ m } 0.3939$$

$$\begin{array}{r} + \\ \hline 0.6381 \end{array}$$

This total is less than unity, therefore the installation of the three units pass modeling. The maximum emission rates for these units are the short term emission limits in the permit. This ensures that the units will not violate Ohio's Air Toxic Policy in the future.

This facility has had multiple compliance problems in the past such as modifying many emission units without proper permits, they have had an explosion, and an enforcement case initiated against them. The operational limits, recordkeeping, and reporting requirements are written to assure that this facility does not violate any state or federal regulations in the future. In addition, the permit is written to assure that the company does not exceed the PTE analysis that they submitted for these emission units and the facility.

If you have any questions about this permit please give me a call at 8-3811.

32 **NEW SOURCE REVIEW FORM B**

PTI Number: 01-07993

Facility ID: 0145020280

FACILITY NAME Organic Technologies

FACILITY DESCRIPTION Chemical reactor

CITY/TWP Newark

Emissions Unit ID: **T008**

Thanks,

Adam

Permit To Install Synthetic Minor Write-Up

NONE

Please fill in the following for this permit:

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	17.38
Chloroform	4.58
Ethyl Chloride	3.2