Synthetic Minor Determination and/or □ Netting Determination
Permit To Install: 13-04695

A. Source Description

Research Organics is a large facility that manufactures a broad range of biochemical products. This permit is for modifications to reactor line nos. 7 (P005), 12 (P006), 13 (P007), 22 (P047), and 23 (P048).

B. Facility Emissions and Attainment Status

The facility's current uncontrolled Potential to Emit OC is at 65.41 tons/year and uncontrolled Potential to Emit HAPs is at 63.96 tons/year. The facility's current controlled Potential to Emit OC is at 10.66 tons/year and controlled Potential to Emit combined HAPs is at 10.32 tons/year with methanol at 9.7 tons/year. The facility's actual OC emissions are at 4.89 tons/year, while actual combined HAP emissions are at 4.15 tons/year with methanol at 2.732 tons/year. The facility will be restricted to HAP emissions below 10 tons/year any single HAP and 25 tons/year any combination of HAPs to avoid MACT and Title V implications. The facility has applied for a FESOP in 2000 and has since submitted a revised application which will be processed. The FESOP will restrict emissions of OC and HAPs. Cuyahoga County is designated as nonattainment for ozone.

C. Source Emissions

Each reactor line in this permit has a controlled Potential to Emit of 0.053 tons OC/year. The rule allowable from OAC rule 3745-21-07(G)(2) is cited in the permit. Single HAP emissions have been restricted to less than 10 tons/year, and combined HAP emissions to less than 25 tons/year. These HAP restrictions are for the total facility HAP emissions.

D. Conclusion

The facility controlled Potential to Emit and actual emissions are below the Title V thresholds. This permit will restrict facility-wide HAPs to less than 10 tons/year any single HAP, and 25 tons/year any combination of HAPs. Due to these restrictions, Title V will not apply to this facility as the facility will be kept below the major source thresholds. In addition due to these restrictions, provided this permit is issued draft and final, Research Organics will not be subject to this MACT subpart FFFF for Miscellaneous Organic Chemical Manufacturing.

State of Ohio Environmental Protection Agency

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

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

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

CERTIFIED MAIL

RE: DRAFT PERMIT TO INSTALL
CUYAHOGA COUNTY
Application No: 13-04695
Fac ID: 1318172081

	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 5/22/2007

Research Organics, Inc.
Michael McCormick
4353 East 49th Street
Cuyahoga Heights, OH 44125

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, 43216-1049.

A Permit to Install may be issued in proposed of 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 **$2500** 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.

Sincerely,

Michael W. Ahern

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

CC: **USEPA** **CLAA** **PA**

CUYAHOGA COUNTY

PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL **13-04695** FOR AN AIR CONTAMINANT SOURCE
FOR **Research Organics, Inc.**

On 5/22/2007 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Research Organics, Inc.**, located at **4353 East 49th Street, Cuyahoga Heights**, Ohio.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 13-04695:

Reactor numbers 7, 12, 13, 22, and 23.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

David Hearne, Cleveland City Health Department, Division of the Environment, 1925 St. Clair Avenue, Cleveland, OH 44114 [(216)664-2324]

DRAFT PERMIT TO INSTALL 13-04695

Application Number:	13-04695
Facility ID:	1318172081
Permit Fee:	**To be entered upon final issuance**
Name of Facility:	Research Organics, Inc.
Person to Contact:	Michael McCormick
Address:	4353 East 49th Street Cuyahoga Heights, OH 44125

Location of proposed air contaminant source(s) [emissions unit(s)]:
4353 East 49th Street
Cuyahoga Heights, Ohio

Description of proposed emissions unit(s):
Reactor numbers 7, 12, 13, 22, and 23.

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

_____

Chris Korleski
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

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 (i.e., postmarked) quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

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. 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 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 cannot meet the requirements of this permit 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 cannot meet the requirements of this permit 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 Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

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 ninety (90) 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

Pollutant	Tons Per Year
Single HAP*	9.9
Combined HAPs*	24.9

*Total for all emissions units at the facility.

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.

Operations, Property, and/or Equipment - (P005) - Reactor No. 7 Process Line - Hot oil reactor, crystallizer, centrifuge and filter press

The Terms in this permit supercede those identified in PTI No. 13-02513 issued final on 8/4/1993.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V and MACT	See A.2.a below.
ORC 3704.03(T)(4)	See A.2.c below.

2. Additional Terms and Conditions

2.a The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility (listed in A.2.b below) shall not exceed 9.9 tons/year for any individual HAP and 24.9 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation of emissions for this emissions unit plus the annual HAP contribution from all other emissions units at this facility (listed in A.2.b below).

2.b The current list of emissions units at this facility are P005, P006, P007, P008, P009, P010, P011, P012, P013, P014, P016, P017, P019, P024, P026, P027, P028, P029, P030, P031, P033, P034, P035, P036, P037, P038, P039, P040, P041, P042, P043, P044, P047, P048, P049, P050, P051, T001, T002, T003, T004, T005, T006, T010, T011, T013, B001, B002, F001, Z001, and Z002.

2.c The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the OC emissions from this air contaminant source since the calculated annual emission

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rate for OC is less than 10.0 tons/year taking into account the federally enforceable rule limit of 8.00 lbs/hr and 40.0 lbs/day under OAC rule 3745-21-07(G)(2).

B. Operational Restrictions

1. The scrubber No. 5 shall be operating at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor of the scrubber on a daily basis.

2. Whenever the monitored value for the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

3. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges and values specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pressure drop reading, water flow rate, and pH reading immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

4. The acceptable ranges for the pressure drop across the scrubber, the flow rate range for the scrubber, and the pH range for the scrubber shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

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a. The acceptable ranges from the manufacturer's specifications are 10.5 to 14.0 inches of water for the pressure drop across the scrubber, 90-110 gallons per minute for the scrubber flow rate range, and 6.0 to 9.5 for the pH range of the scrubber.

5. These ranges and values are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (CDAQ). The permittee may request revisions to the ranges and values based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the ranges and values will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

6. The permittee shall collect and record the following information each month for P005:

a. the name and identification of each product;
b. number of batches;
c. number of days in operation;
d. number of hours in operation;
e. the calculated amount of OC emissions for the month using the formula provided below:

(lbs OC emissions/batch) x (number of batches/month) = lbs OC emissions/month

f. the calculated amount of OC emissions for each day [e divided by c]; and
g. the average hourly OC emissions rate, in lbs/hr (average) [e divided by d].

7. The permittee shall collect and record the following information each month on a facility-wide basis, for emissions units referenced in A.2.b:

a. the name and identification number of each HAP containing material employed;

b. the total individual and combined HAPs material usage and emissions, in pounds per month; and

c. beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of individual HAPs and combined HAPs material usage and emissions, in tons.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative HAP usage and emissions rate for each calendar month.

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* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your CDAQ contact. This information does not have to be kept on an individual emissions unit basis.

D. Reporting Requirements

1. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time during which the static pressure across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH were outside the range specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH into compliance with the acceptable range, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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

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

   a. an identification of each day during which the average hourly OC emissions from the reactor line exceeded 8.00 pounds per hour, and the actual average hourly OC emissions for each such day; and

   b. an identification of each day during which the OC emissions from the reactor line exceeded 40.0 pounds per day, and the actual OC emissions for each such day.

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

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3. The permittee shall submit deviation (excursion) reports in accordance with Part I of the General Terms and Conditions, Section A of this permit, which include the following information for the list of emissions units referenced in A.2.b:

   a. an identification of each month during which the rolling, 12-month individual HAP material usage and emissions exceed 9.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month individual HAP emissions for each such month;

   b. an identification of each month during which the rolling, 12-month combined HAP material usage and emissions exceeds 24.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month combined HAP emissions for each such month;

   And, for the first 12 calendar months of operation following the issuance of this permit, reports shall be submitted identifying all exceedances of the maximum allowable cumulative HAP usage and emissions rate.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitation:
   OC emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.

   Applicable Compliance Method:
   Compliance with these emission limitations may be demonstrated based upon the records required pursuant to Section C.6. If required by CDAQ or Ohio EPA, compliance with the OC emission limitation shall be determined through emission testing conducted in accordance with Methods 1 through 4 and 25 or 25A, as applicable, of 40 CFR Part 60, Appendix A, or any approved alternative testing method.

   b. Emission Limitation:
   9.9 tons individual HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

   Applicable Compliance Method:
   Compliance shall be determined based upon the record keeping specified in Section C.7.

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c. Emission Limitation:

24.9 tons combined HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in Section C.7.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Toxic Air Contaminant Statute," ORC 3704.03(F) was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1.0 ton per year of each toxic pollutant that is listed under OAC rule 3745-114-01(A).

2. The following terms are federally enforceable: A, B, C, D, and E.

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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.

Operations, Property, and/or Equipment - (P006) - Reactor No. 12 Process Line - Hot oil reactor, crystallizer, centrifuge and filter press

The Terms in this permit supercede those identified in PTI No. 13-02513 issued final on 8/4/1993.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V and MACT	See A.2.a below.
ORC 3704.03(T)(4)	See A.2.c below.

2. Additional Terms and Conditions

2.a The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility (listed in A.2.b below) shall not exceed 9.9 tons/year for any individual HAP and 24.9 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation of emissions for this emissions unit plus the annual HAP contribution from all other emissions units at this facility (listed in A.2.b below).

2.b The current list of emissions units at this facility are P005, P006, P007, P008, P009, P010, P011, P012, P013, P014, P016, P017, P019, P024, P026, P027, P028, P029, P030, P031, P033, P034, P035, P036, P037, P038, P039, P040, P041, P042, P043, P044, P047, P048, P049, P050, P051, T001, T002, T003, T004, T005, T006, T010, T011, T013, B001, B002, F001, Z001, and Z002.

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2.c The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the OC emissions from this air contaminant source since the calculated annual emission rate for OC is less than 10.0 tons/year taking into account the federally enforceable rule limit of 8.00 lbs/hr and 40.0 lbs/day under OAC rule 3745-21-07(G)(2).

B. Operational Restrictions

1. The scrubber No. 5 shall be operating at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor of the scrubber on a daily basis.

2. Whenever the monitored value for the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

3. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges and values specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pressure drop reading, water flow rate, and pH reading immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

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4. The acceptable ranges for the pressure drop across the scrubber, the flow rate range for the scrubber, and the pH range for the scrubber shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

   a. The acceptable ranges from the manufacturer's specifications are 10.5 to 14.0 inches of water for the pressure drop across the scrubber, 90-110 gallons per minute for the scrubber flow rate range, and 6.0 to 9.5 for the pH range of the scrubber.

5. These ranges and values are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (CDAQ). The permittee may request revisions to the ranges and values based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the ranges and values will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

6. The permittee shall collect and record the following information each month for P006:

   a. the name and identification of each product;
   b. number of batches;
   c. number of days in operation;
   d. number of hours in operation;
   e. the calculated amount of OC emissions for the month using the formula provided below:

      (lbs OC emissions/batch) x (number of batches/month) = lbs OC emissions/month

   f. the calculated amount of OC emissions for each day [e divided by c]; and
   g. the average hourly OC emissions rate, in lbs/hr (average) [e divided by d].

7. The permittee shall collect and record the following information each month on a facility-wide basis, for emissions units referenced in A.2.b:

   a. the name and identification number of each HAP containing material employed;

   b. the total individual and combined HAPs material usage and emissions, in pounds per month; and

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c. beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of individual HAPs and combined HAPs material usage and emissions, in tons.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative HAP usage and emissions rate for each calendar month.

***** A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your CDAQ contact. This information does not have to be kept on an individual emissions unit basis.

D. Reporting Requirements

1. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time during which the static pressure across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH were outside the range specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH into compliance with the acceptable range, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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

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

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a. an identification of each day during which the average hourly OC emissions from the reactor line exceeded 8.00 pounds per hour, and the actual average hourly OC emissions for each such day; and

b. an identification of each day during which the OC emissions from the reactor line exceeded 40.0 pounds per day, and the actual OC emissions for each such day.

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

3. The permittee shall submit deviation (excursion) reports in accordance with Part I of the General Terms and Conditions, Section A of this permit, which include the following information for the list of emissions units referenced in A.2.b:

a. an identification of each month during which the rolling, 12-month individual HAP material usage and emissions exceed 9.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month individual HAP emissions for each such month;

b. an identification of each month during which the rolling, 12-month combined HAP material usage and emissions exceeds 24.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month combined HAP emissions for each such month;

And, for the first 12 calendar months of operation following the issuance of this permit, reports shall be submitted identifying all exceedances of the maximum allowable cumulative HAP usage and emissions rate.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.

Applicable Compliance Method:
Compliance with these emission limitations may be demonstrated based upon the records required pursuant to Section C.6. If required by CDAQ or Ohio EPA, compliance with the OC emission limitation shall be determined through emission testing conducted in accordance with Methods 1 through 4 and 25 or 25A, as

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applicable, of 40 CFR Part 60, Appendix A, or any approved alternative testing method.

b. Emission Limitation:
9.9 tons individual HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in Section C.7.

c. Emission Limitation:
24.9 tons combined HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in Section C.7.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Toxic Air Contaminant Statute," ORC 3704.03(F) was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1.0 ton per year of each toxic pollutant that is listed under OAC rule 3745-114-01(A).

2. The following terms are federally enforceable: A, B, C, D, and E.

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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.

Operations, Property, and/or Equipment - (P007) - Reactor No. 13 Process Line - Hot oil reactor, crystallizer, centrifuge and filter press

The Terms in this permit supercede those identified in PTI No. 13-03679 issued final on 9/21/2000.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V and MACT	See A.2.a below.
ORC 3704.03(T)(4)	See A.2.c below.

2. Additional Terms and Conditions

2.a The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility (listed in A.2.b below) shall not exceed 9.9 tons/year for any individual HAP and 24.9 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation of emissions for this emissions unit plus the annual HAP contribution from all other emissions units at this facility (listed in A.2.b below).

2.b The current list of emissions units at this facility are P005, P006, P007, P008, P009, P010, P011, P012, P013, P014, P016, P017, P019, P024, P026, P027, P028, P029, P030, P031, P033, P034, P035, P036, P037, P038, P039, P040, P041, P042, P043, P044, P047, P048, P049, P050, P051, T001, T002, T003, T004, T005, T006, T010, T011, T013, B001, B002, F001, Z001, and Z002.

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2.c The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the OC emissions from this air contaminant source since the calculated annual emission rate for OC is less than 10.0 tons/year taking into account the federally enforceable rule limit of 8.00 lbs/hr and 40.0 lbs/day under OAC rule 3745-21-07(G)(2).

B. Operational Restrictions

1. The scrubber No. 5 shall be operating at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor of the scrubber on a daily basis.

2. Whenever the monitored value for the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

3. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges and values specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pressure drop reading, water flow rate, and pH reading immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

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4. The acceptable ranges for the pressure drop across the scrubber, the flow rate range for the scrubber, and the pH range for the scrubber shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

   a. The acceptable ranges from the manufacturer's specifications are 10.5 to 14.0 inches of water for the pressure drop across the scrubber, 90-110 gallons per minute for the scrubber flow rate range, and 6.0 to 9.5 for the pH range of the scrubber.

5. These ranges and values are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (CDAQ). The permittee may request revisions to the ranges and values based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the ranges and values will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

6. The permittee shall collect and record the following information each month for P007:

   a. the name and identification of each product;
   b. number of batches;
   c. number of days in operation;
   d. number of hours in operation;
   e. the calculated amount of OC emissions for the month using the formula provided below:

      (lbs OC emissions/batch) x (number of batches/month) = lbs OC emissions/month

   f. the calculated amount of OC emissions for each day [e divided by c]; and
   g. the average hourly OC emissions rate, in lbs/hr (average) [e divided by d].

7. The permittee shall collect and record the following information each month on a facility-wide basis, for emissions units referenced in A.2.b:

   a. the name and identification number of each HAP containing material employed;

   b. the total individual and combined HAPs material usage and emissions, in pounds per month; and

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c. beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of individual HAPs and combined HAPs material usage and emissions, in tons.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative HAP usage and emissions rate for each calendar month.

***** A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your CDAQ contact. This information does not have to be kept on an individual emissions unit basis.

D. Reporting Requirements

1. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time during which the static pressure across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH were outside the range specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH into compliance with the acceptable range, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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

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

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a. an identification of each day during which the average hourly OC emissions from the reactor line exceeded 8.00 pounds per hour, and the actual average hourly OC emissions for each such day; and

b. an identification of each day during which the OC emissions from the reactor line exceeded 40.0 pounds per day, and the actual OC emissions for each such day.

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

3. The permittee shall submit deviation (excursion) reports in accordance with Part I of the General Terms and Conditions, Section A of this permit, which include the following information for the list of emissions units referenced in A.2.b:

a. an identification of each month during which the rolling, 12-month individual HAP material usage and emissions exceed 9.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month individual HAP emissions for each such month;

b. an identification of each month during which the rolling, 12-month combined HAP material usage and emissions exceeds 24.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month combined HAP emissions for each such month;

And, for the first 12 calendar months of operation following the issuance of this permit, reports shall be submitted identifying all exceedances of the maximum allowable cumulative HAP usage and emissions rate.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.

Applicable Compliance Method:
Compliance with these emission limitations may be demonstrated based upon the records required pursuant to Section C.6. If required by CDAQ or Ohio EPA, compliance with the OC emission limitation shall be determined through emission testing conducted in accordance with Methods 1 through 4 and 25 or 25A, as

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applicable, of 40 CFR Part 60, Appendix A, or any approved alternative testing method.

b. Emission Limitation:
9.9 tons individual HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in Section C.7.

c. Emission Limitation:
24.9 tons combined HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in Section C.7.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Toxic Air Contaminant Statute," ORC 3704.03(F) was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1.0 ton per year of each toxic pollutant that is listed under OAC rule 3745-114-01(A).

2. The following terms are federally enforceable: A, B, C, D, and E.

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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.

Operations, Property, and/or Equipment - (P047) - Reactor No. 22 Process Line - Hot oil reactor, crystallizer, centrifuge and filter press

The Terms in this permit supercede those identified in PTI No. 13-04434 issued final on 5/17/2005.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V and MACT	See A.2.a below.
ORC 3704.03(T)(4)	See A.2.c below.

2. Additional Terms and Conditions

2.a The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility (listed in A.2.b below) shall not exceed 9.9 tons/year for any individual HAP and 24.9 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation of emissions for this emissions unit plus the annual HAP contribution from all other emissions units at this facility (listed in A.2.b below).

2.b The current list of emissions units at this facility are P005, P006, P007, P008, P009, P010, P011, P012, P013, P014, P016, P017, P019, P024, P026, P027, P028, P029, P030, P031, P033, P034, P035, P036, P037, P038, P039, P040, P041, P042, P043, P044, P047, P048, P049, P050, P051, T001, T002, T003, T004, T005, T006, T010, T011, T013, B001, B002, F001, Z001, and Z002.

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2.c The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the OC emissions from this air contaminant source since the calculated annual emission rate for OC is less than 10.0 tons/year taking into account the federally enforceable rule limit of 8.00 lbs/hr and 40.0 lbs/day under OAC rule 3745-21-07(G)(2).

B. Operational Restrictions

1. The scrubber No. 5 shall be operating at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor of the scrubber on a daily basis.

2. Whenever the monitored value for the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

3. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges and values specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pressure drop reading, water flow rate, and pH reading immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

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4. The acceptable ranges for the pressure drop across the scrubber, the flow rate range for the scrubber, and the pH range for the scrubber shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

   a. The acceptable ranges from the manufacturer's specifications are 10.5 to 14.0 inches of water for the pressure drop across the scrubber, 90-110 gallons per minute for the scrubber flow rate range, and 6.0 to 9.5 for the pH range of the scrubber.

5. These ranges and values are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (CDAQ). The permittee may request revisions to the ranges and values based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the ranges and values will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

6. The permittee shall collect and record the following information each month for P047:

   a. the name and identification of each product;
   b. number of batches;
   c. number of days in operation;
   d. number of hours in operation;
   e. the calculated amount of OC emissions for the month using the formula provided below:

      (lbs OC emissions/batch) x (number of batches/month) = lbs OC emissions/month

   f. the calculated amount of OC emissions for each day [e divided by c]; and
   g. the average hourly OC emissions rate, in lbs/hr (average) [e divided by d].

7. The permittee shall collect and record the following information each month on a facility-wide basis, for emissions units referenced in A.2.b:

   a. the name and identification number of each HAP containing material employed;

   b. the total individual and combined HAPs material usage and emissions, in pounds per month; and

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c. beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of individual HAPs and combined HAPs material usage and emissions, in tons.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative HAP usage and emissions rate for each calendar month.

***** A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your CDAQ contact. This information does not have to be kept on an individual emissions unit basis.

D. Reporting Requirements

1. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time during which the static pressure across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH were outside the range specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH into compliance with the acceptable range, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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

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

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a. an identification of each day during which the average hourly OC emissions from the reactor line exceeded 8.00 pounds per hour, and the actual average hourly OC emissions for each such day; and

b. an identification of each day during which the OC emissions from the reactor line exceeded 40.0 pounds per day, and the actual OC emissions for each such day.

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

3. The permittee shall submit deviation (excursion) reports in accordance with Part I of the General Terms and Conditions, Section A of this permit, which include the following information for the list of emissions units referenced in A.2.b:

a. an identification of each month during which the rolling, 12-month individual HAP material usage and emissions exceed 9.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month individual HAP emissions for each such month;

b. an identification of each month during which the rolling, 12-month combined HAP material usage and emissions exceeds 24.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month combined HAP emissions for each such month;

And, for the first 12 calendar months of operation following the issuance of this permit, reports shall be submitted identifying all exceedances of the maximum allowable cumulative HAP usage and emissions rate.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.

Applicable Compliance Method:
Compliance with these emission limitations may be demonstrated based upon the records required pursuant to Section C.6. If required by CDAQ or Ohio EPA, compliance with the OC emission limitation shall be determined through emission testing conducted in accordance with Methods 1 through 4 and 25 or 25A, as

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applicable, of 40 CFR Part 60, Appendix A, or any approved alternative testing method.

b. Emission Limitation:
9.9 tons individual HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in Section C.7.

c. Emission Limitation:
24.9 tons combined HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in Section C.7.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Toxic Air Contaminant Statute," ORC 3704.03(F) was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1.0 ton per year of each toxic pollutant that is listed under OAC rule 3745-114-01(A).

2. The following terms are federally enforceable: A, B, C, D, and E.

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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.

Operations, Property, and/or Equipment - (P048) - Reactor No. 23 Process Line - Hot oil reactor, crystallizer, centrifuge, and filter press

The Terms in this permit supercede those identified in PTI No. 13-04497 issued final on 5/17/2005.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.
OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V and MACT	See A.2.a below.
ORC 3704.03(T)(4)	See A.2.c below.

2. Additional Terms and Conditions

2.a The total allowable usage and emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from emissions units at this facility (listed in A.2.b below) shall not exceed 9.9 tons/year for any individual HAP and 24.9 tons/year for any combination of HAPs. Compliance with the above limitations shall be based upon a rolling, 12-month summation of emissions for this emissions unit plus the annual HAP contribution from all other emissions units at this facility (listed in A.2.b below).

2.b The current list of emissions units at this facility are P005, P006, P007, P008, P009, P010, P011, P012, P013, P014, P016, P017, P019, P024, P026, P027, P028, P029, P030, P031, P033, P034, P035, P036, P037, P038, P039, P040, P041, P042, P043, P044, P047, P048, P049, P050, P051, T001, T002, T003, T004, T005, T006, T010, T011, T013, B001, B002, F001, Z001, and Z002.

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2.c The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the OC emissions from this air contaminant source since the calculated annual emission rate for OC is less than 10.0 tons/year taking into account the federally enforceable rule limit of 8.00 lbs/hr and 40.0 lbs/day under OAC rule 3745-21-07(G)(2).

B. Operational Restrictions

1. The scrubber No. 5 shall be operating at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor of the scrubber on a daily basis.

2. Whenever the monitored value for the pressure drop across the scrubber, the scrubber water flow rate, and the pH of the scrubber liquor deviates from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

3. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges and values specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pressure drop reading, water flow rate, and pH reading immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

C:\temp\permits3\11481.wpd

4. The acceptable ranges for the pressure drop across the scrubber, the flow rate range for the scrubber, and the pH range for the scrubber shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted.

   a. The acceptable ranges from the manufacturer's specifications are 10.5 to 14.0 inches of water for the pressure drop across the scrubber, 90-110 gallons per minute for the scrubber flow rate range, and 6.0 to 9.5 for the pH range of the scrubber.

5. These ranges and values are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Cleveland Division of Air Quality (CDAQ). The permittee may request revisions to the ranges and values based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the ranges and values will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

6. The permittee shall collect and record the following information each month for P048:

   a. the name and identification of each product;
   b. number of batches;
   c. number of days in operation;
   d. number of hours in operation;
   e. the calculated amount of OC emissions for the month using the formula provided below:

      (lbs OC emissions/batch) x (number of batches/month) = lbs OC emissions/month

   f. the calculated amount of OC emissions for each day [e divided by c]; and
   g. the average hourly OC emissions rate, in lbs/hr (average) [e divided by d].

7. The permittee shall collect and record the following information each month on a facility-wide basis, for emissions units referenced in A.2.b:

   a. the name and identification number of each HAP containing material employed;

   b. the total individual and combined HAPs material usage and emissions, in pounds per month; and

C:\temp\permits3\11481.wpd

c. beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of individual HAPs and combined HAPs material usage and emissions, in tons.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative HAP usage and emissions rate for each calendar month.

***** A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your CDAQ contact. This information does not have to be kept on an individual emissions unit basis.

D. Reporting Requirements

1. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. each period of time during which the static pressure across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH were outside the range specified by the manufacturer;

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the pressure drop across the scrubber, the scrubber water flow rate, and/or the scrubber liquor pH into compliance with the acceptable range, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

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

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

C:\temp\permits3\11481.wpd

a. an identification of each day during which the average hourly OC emissions from the reactor line exceeded 8.00 pounds per hour, and the actual average hourly OC emissions for each such day; and

b. an identification of each day during which the OC emissions from the reactor line exceeded 40.0 pounds per day, and the actual OC emissions for each such day.

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

3. The permittee shall submit deviation (excursion) reports in accordance with Part I of the General Terms and Conditions, Section A of this permit, which include the following information for the list of emissions units referenced in A.2.b:

a. an identification of each month during which the rolling, 12-month individual HAP material usage and emissions exceed 9.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month individual HAP emissions for each such month;

b. an identification of each month during which the rolling, 12-month combined HAP material usage and emissions exceeds 24.9 tons/year based on a rolling, 12-month summation, and the actual rolling, 12-month combined HAP emissions for each such month;

And, for the first 12 calendar months of operation following the issuance of this permit, reports shall be submitted identifying all exceedances of the maximum allowable cumulative HAP usage and emissions rate.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:
OC emissions shall not exceed 8.00 lbs/hr and 40.0 lbs/day.

Applicable Compliance Method:
Compliance with these emission limitations may be demonstrated based upon the records required pursuant to Section C.6. If required by CDAQ or Ohio EPA, compliance with the OC emission limitation shall be determined through emission testing conducted in accordance with Methods 1 through 4 and 25 or 25A, as

C:\temp\permits3\11481.wpd

applicable, of 40 CFR Part 60, Appendix A, or any approved alternative testing method.

b. Emission Limitation:
9.9 tons individual HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in Section C.7.

c. Emission Limitation:
24.9 tons combined HAPs/year for the list of emissions units in A.2.b, as a 12-month rolling summation.

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in Section C.7.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Toxic Air Contaminant Statute," ORC 3704.03(F) was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1.0 ton per year of each toxic pollutant that is listed under OAC rule 3745-114-01(A).

2. The following terms are federally enforceable: A, B, C, D, and E.

C:\temp\permits3\11481.wpd

Research Organics, Inc. **Facility ID: 1318172081**
PTI Application: 13-04695
Issued: To be entered upon final issuance

SIC CODE 2869 SCC CODE n/a EMISSIONS UNIT ID P005

EMISSIONS UNIT DESCRIPTION Reactor No. 7 Process Line - Hot oil reactor, crystallizer, centrifuge and filter press

DATE INSTALLED April, 2007

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	nonattainment	0.011 lb/hour	0.048	8.00 lbs/hour 40.0 lbs/day	
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Compliance with the terms and conditions in this permit.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no.

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? n/a.

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*? YES xxx NO xxx

IDENTIFY THE AIR CONTAMINANTS: none.

C:\temp\permits3\11481.wpd

Research Organics, Inc. **Facility ID: 1318172081**
PTI Application: 13-04695
Issued: To be entered upon final issuance

SIC CODE 2869 SCC CODE n/a EMISSIONS UNIT ID P006

EMISSIONS UNIT DESCRIPTION Reactor No. 12 Process Line - Hot oil reactor, crystallizer, centrifuge and filter press

DATE INSTALLED April, 2007

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	nonattainment	0.012 lb/hour	0.053	8.00 lbs/hour 40.0 lbs/day	
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Compliance with the terms and conditions in this permit.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no.

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? n/a.

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*? YES xxx NO xxx

IDENTIFY THE AIR CONTAMINANTS: none.

C:\temp\permits3\11481.wpd

Research Organics, Inc. **Facility ID: 1318172081**
PTI Application: 13-04695
Issued: To be entered upon final issuance

SIC CODE 2869 SCC CODE n/a EMISSIONS UNIT ID P007

EMISSIONS UNIT DESCRIPTION Reactor No. 13 Process Line - Hot oil reactor, crystallizer, centrifuge and filter press

DATE INSTALLED April, 2007

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	nonattainment	0.012 lb/hour	0.053	8.00 lbs/hour 40.0 lbs/day	
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Compliance with the terms and conditions in this permit.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no.

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? n/a.

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*? YES xxx NO xxx

IDENTIFY THE AIR CONTAMINANTS: none.

C:\temp\permits3\11481.wpd

Research Organics, Inc. **Facility ID: 1318172081**
PTI Application: 13-04695
Issued: To be entered upon final issuance

SIC CODE 2869 SCC CODE n/a EMISSIONS UNIT ID P047

EMISSIONS UNIT DESCRIPTION Reactor No. 22 Process Line - Hot oil reactor, crystallizer, centrifuge and filter press

DATE INSTALLED April, 2007

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	nonattainment	0.012 lb/hour	0.053	8.00 lbs/hour 40.0 lbs/day	
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Compliance with the terms and conditions in this permit.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no.

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? n/a.

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*? YES xxx NO xxx

IDENTIFY THE AIR CONTAMINANTS: none.

C:\temp\permits3\11481.wpd

Research Organics, Inc. **Facility ID: 1318172081**
PTI Application: 13-04695
Issued: To be entered upon final issuance

SIC CODE 2869 SCC CODE n/a EMISSIONS UNIT ID P048

EMISSIONS UNIT DESCRIPTION Reactor No. 23 Process Line - Hot oil reactor, crystallizer, centrifuge, and filter press

DATE INSTALLED April, 2007

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	nonattainment	0.012 lb/hour	0.053	8.00 lbs/hour 40.0 lbs/day	
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Compliance with the terms and conditions in this permit.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no.

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? n/a.

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*? YES xxx NO xxx

IDENTIFY THE AIR CONTAMINANTS: none.

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