Ohio Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

4/19/2016

Certified Mail

Mr. Michael Shuler, Jr.
Research Organics LLC dba SAFC Cleveland
4353 East 49th Street
Cleveland, OH 44125

Facility ID: 1318172081
Permit Number: P0112455
County: Cuyahoga

RE: PRELIMINARY PROPOSED AIR POLLUTION TITLE V PERMIT
Permit Type: Initial

Dear Permit Holder:

Enclosed is the Ohio Environmental Protection Agency (EPA)Preliminary Proposed Title V permit that was issued in draft form on 9/24/2015. The comment period for the Draft permit has ended. We are now ready to submit this permit to U.S. EPA for approval.

We are submitting this for your review and comment. If you do not agree with the Preliminary Proposed Title V permit as written, you now have the opportunity to raise your concerns. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the permit or in narrative format. Any comments must be sent to the following within 14 days of your receipt of this letter:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Cleveland Division of Air Quality
2nd Floor
75 Erieview Plaza
Cleveland, OH 44114

If you believe that it is necessary to have an informal conference with us, then, as part of your written comments, you should request a conference concerning the written comments.If comments are not submitted within 14 days of your receipt of this letter, we will forward the proposed permit to U.S. EPA for approval. All comments received will be carefully considered before proceeding with the proposed permit.

Sincerely,

Michael E. Hopkins, P.E
Assistant ChiefPermitting Section, DAPC

Cc: Cleveland Division of Air Quality

Response to Comments

Facility ID:	1318172081
Facility Name:	Research Organics LLC dba SAFC Cleveland
Facility Description:	Biochemical Product Manufacturing
Facility Address:	4353 East 49th Street Cuyahoga Heights, OH 44125 Cuyahoga County
Permit:	P0112455, Title V Permit - Initial
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Plain Dealer on 10/07/2015. The comment period ended on 11/06/2015.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: Ensuring flare destruction efficiency

a. Comment: US EPA comments that the permit should specify the minimum heating value of the gas being combusted by the flare, as provided in the 40 C.P.R. §63.11 (b).

b. Response: Cleveland DAQ has received documentation from Research Organics in response to the above request. Research Organics has indicated it is impractical to meet this requirement due to the large amount of natural gas that would be necessary to obtain the minimum heat content values. The manufacturer was provided details regarding Research Organic's waste stream prior to design to select the correct enclosed ground flare. The manufacturer guaranteed the control efficiency based on that information and provided a letter. The vent stream sent to the flare contains enough oxygen to support combustion, and the damper position was closed to minimize additional combustion air. This should not be affected by the position of the damper. The flare damper was set during the flare compliance assessment. The damper is not automatically adjusted, and has not been changed since the compliance assessment. In order to maintain the manufacturer's guaranteed destruction efficiency, language has been added to the facility-wide operational restrictions section to ensure adjustment to the auxiliary combustion air damper according to the manufacturer's recommendations based upon the variability of the gas stream.

2. Topic: LDAR program

a. Comment: US EPA comments that as part of the leak detection and repair program, the permit should provide the option to utilize an optical gas imaging camera as an alternative work practice to Method 21, as provided in 40 C.F.R. §63.ll(c)-(e).

b. Response: Cleveland DAQ agrees with this comment and has revised the permit to include this option.

3. Topic: Federal subpart applicability

a. Comment: US EPA comments that the permit should specify which requirements from 40 C.F.R. Part 63, Subpart ZZZZ, 40 C.F.R. Part 63, Subpart DDDDD, and 40 C.F.R. Part 60, Subpart IIII are applicable to the facility.

b. Response: Cleveland DAQ agrees with this comment and has revised the permit to include the specific requirements from 40 C.F.R. Part 63, Subpart ZZZZ, 40 C.F.R. Part 63, Subpart DDDDD, and 40 C.F.R. Part 60, Subpart IIII that are applicable to the facility.

PRELIMINARY PROPOSED

Division of Air Pollution Control
Title V Permit
for
Research Organics LLC dba SAFC Cleveland

Facility ID:	1318172081
Permit Number:	P0112455
Permit Type:	Initial
Issued:	4/19/2016
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Ohio Environmental Protection Agency

Division of Air Pollution Control
Title V Permit
for
Research Organics LLC dba SAFC Cleveland

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Authorization

Facility ID:	1318172081
Facility Description:	Biochemical Product Manufacturing
Application Number(s):	A0046229, A0050103
Permit Number:	P0112455
Permit Description:	Initial Title V permit for a biochemical product manufacturing facility that includes 14 reactors, five (5) tumble dryers, and one transfer rack. VOC emissions are controlled by a flare and HCl emissions are controlled by a scrubber.
Permit Type:	Initial
Issue Date:	4/19/2016
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Research Organics LLC dba SAFC Cleveland
4353 East 49th Street
Cuyahoga Heights, OH 44125

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

Cleveland Division of Air Quality
2nd Floor
75 ErieviewPlaza
Cleveland, OH 44114
(216)664-2297

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Cleveland Division of Air Quality. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordingsfor continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

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

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

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

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

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

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

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

(2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the

probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be submitted promptly to the Cleveland Division of Air Quality. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

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

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

See A.29 below if no deviations occurred during the quarter.

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

(3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Cleveland Division of Air Quality by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable

requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

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

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

(4) Each written report shall be signed by a Responsible Official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

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

(5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Cleveland Division of Air Quality unless otherwise specified.

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

3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

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

4. Risk Management Plans

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

a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

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

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

5. Title IV Provisions

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

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

6. Severability Clause

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

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

7. General Requirements

a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permitexcept as provided pursuant to A.16 below.

c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

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

8. Fees

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

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

9. Marketable Permit Programs

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

(Authority for term: OAC rule 3745-77-07(A)(9))

10. Reasonably Anticipated Operating Scenarios

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

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

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

a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

12. Federal and State Enforceability

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

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

13. Compliance Requirements

a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c) The permittee shall submit progress reports to the Cleveland Division of Air Quality concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Cleveland Division of Air Quality) and the Administrator of the U.S. EPA in the following manner and with the following content:

(1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms

and conditions with which there has been continuous compliance throughout the year are not separately identified.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittentconsistent with A.13.d.2.a above.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.

e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

(3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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

14. Permit Shield

a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

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

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

15. Operational Flexibility

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

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

16. Emergencies

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

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

17. Off-Permit Changes

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

a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

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

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

18. Compliance Method Requirements

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

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

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

20. Permit to Install Requirement

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

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

21. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

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

22. Permanent Shutdown of an Emissions Unit

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

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

Unless otherwise exempted, noemissions unit identified in this permit that has beencertified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

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

23. Title VI Provisions

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

a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

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

24. Reporting Requirements Related to Monitoring and Record Keeping RequirementsUnder State Law Only

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping information shall be submitted to theCleveland Division of Air Quality.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Cleveland Division of Air Quality. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted 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.)

25. Records Retention RequirementsUnder State Law Only

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.

26. 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.

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

27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

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 Cleveland Division of Air Quality 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).

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Cleveland Division of Air Quality must be notified in writing of any transfer of this permit.

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

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or

b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potential to emit; or

c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.

30. Submitting Documents Required by this Permit

All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event ofan alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Cleveland Division of Air Quality, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the Responsible Official may be represented as provided through procedures established in Air Services.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

   a) b)(1)b., and b)(2)b.

   b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) as effective 11/30/2001. PTI P0114439 issued 9/3/2013 and modified PTI P0120394 issued 7/9/2015	Particulate emissions (PE) from flare shall not exceed 0.078 lb/hr and 0.34 ton/yr. NOx emissions from flare shall not exceed 1.56 lbs/hr and 6.8 tons/yr. CO emissions from flare shall not exceed 2.08 lbs/hr and 9.1 tons/yr. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006.	See b)(2)b. below.
c.	OAC rule 3745-31-05(F)	See b)(2)i. and b)(2)j. below.
d.	40 CFR Part 63, Subpart FFFF [In accordance with 40 CFR 63.2435 this facility is an existing miscellaneous organic chemical manufacturing facility subject to the emissions limitations/control measures specified in this section.]	See c)(10), d)(2), e)(2), and f)(2) below.
e.	40 CFR 63.1-16	Table 12 to 40 CFR, Part 63, Subpart FFFF – Applicability of General Provisions to Subpart FFFF shows which parts of the General Provisions in 40 CFR 63.1-16 apply. See b)(2)c. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR Part 63, Subpart SS [In accordance with 40 CFR 63.980 this facility operates a control device and is subject to the emissions limitations/control measures specified in this section.]	See c)(10), d)(2), e)(2), and f)(2) below.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, NOx, and COemissions from the flare since the uncontrolled potential to emit for PE, NOx, and COfrom the flareis each less than 10 tons/year.

c. Pursuant to 40 CFR Part 63 Subpart FFFF §63.2550, miscellaneous organic chemical manufacturing process means all equipment which collectively function to produce a product or isolated intermediate that are materials described in §63.2435(b). For the purposes of this subpart, process includes any, all or a combination of reaction, recovery, separation, purification, or other activity, operation, manufacture, or treatment which are used to produce a product or isolated intermediate.

d. Pursuant to 40 CFR Part 63 Subpart FFFF §63.2435(b), a miscellaneous organic chemical manufacturing process unit (MCPU) includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in §63.2550. An MCPU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having

the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture organic chemicals and organic solvents as specified at §63.2435(b).

e. Pursuant to 40 CFR Part 63 Subpart FFFF §63.2550, Group 1 batch process vent means each of the batch process vents in a process for which the collective uncontrolled organic hazardous air pollutant (HAP) emissions from all of the batch process vents are greater than or equal to 10,000 lbs/yr at an existing source. Group 2 batch process vent means each batch process vent that does not meet the criteria of Group 1 batch process vent.

f. Pursuant to 40 CFR Part 63 Subpart FFFF §63.2550, Group 1 transfer rack means a transfer rack that loads more than 0.65 million liters/year of liquids that contain organic HAP with a rack-weighted average partial pressure, as defined in §63.111, greater than or equal to 1.5 pound per square inch absolute. Group 2 transfer rack means a transfer rack that does not meet the definition of a Group 1 transfer rack.

The transfer rack (P044) at this facility is a Group 1 transfer rack and is assigned to MCPU1. The transfer rack, P044, is used for loading of tanker trucks.

g. Pursuant to 40 CFR Part 63 Subpart FFFF §63.2550, Group 1 storage tank means a storage tank with a capacity greater than or equal to 10,000 gallons storing material that has a maximum true vapor pressure of total HAP greater than or equal to 6.9 kilopascals at an existing source. Group 2 storage tanks are storage tanks that do not meet the definition of a Group 1 storage tank.

This facility has only Group 2 storage tanks and no Group 1 storage tanks. The storage tanks are assigned to MCPU1. The storage tanks also include totes and drums containing liquid HAP. Wastewater storage tanks are excluded from the definition of "storage tank" at §63.2550.

h. Pursuant to 40 CFR Part 63 Subpart FFFF §63.2550, Group 1 wastewater stream means a wastewater stream consisting of process wastewater at an existing or new source that meets the criteria for Group 1 status in § 63.2485(c) for compounds in Tables 8 and 9 to this subpart. Group 2 wastewater stream means any process wastewater stream that does not meet the definition of a Group 1 wastewater stream.

The liquid waste streams at this facility which have been determined to be Group 1 wastewater streams will be managed pursuant to 40 CFR 63 Subpart FFFF, Table 7.

i. Emissions from each product shall not exceed the short-term (lbs/batch) controlled potential to emit as established below:

Potential to Emit	Controlled EF, lbs/batch				
	MeOH	HCl	HAP	VOC	OC
Each Product (MCPU)	9.1	0.7	9.1	9.1	21.4

j. Total facility-wide emissions shall not exceed the controlled potential to emit as established below:

Potential to Emit	Controlled Emissions, tons/yr				
	MeOH	HCl	HAP	VOC	OC
Large Production Subtotal*	14.8	0.2	14.8	14.8	33.8
Storage Tanks	0.2	0.0	0.2	0.2	0.2
Transfer Rack	0.15	0.0	0.15	0.15	0.15
Storage Tank Lines	1.7	0.0	1.7	2.5	2.5
Small Production	3.7	0.07	3.7	3.7	3.7
Facility PTE, tons/yr	**20.6**	**0.3**	**20.6**	**21.4**	**40.4**

* Potential to emit for Large Production is based on a maximum of 3,080 batches per year total for all products produced for both Group 1 and Group 2 products, and by combining with Intermediate Production potential to emit. The potential to emit for HCl is based on a maximum of 571 batches per year for products that contain HCl.

c) Operational Restrictions

(1) MACT Subpart FFFF requires the control of emissions from Group 1 batch process vents and from MCPU with collective uncontrolled emissions of greater than or equal to 1,000 lbs/year of hydrochloric acid (HCl). Process vent emissions that do not meet these thresholds are not required to be controlled under Subpart FFFF. The permittee shall route reactor vent streams that contain HCl but not volatile organic compounds (VOC) to the scrubber, as noted below in c)(3), and other vent streams, as described herein, containing organics but not HCl to the flare regardless of whether control of these streams is required under Subpart FFFF.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(2) The limited number of vent streams that contain both organics and HCl cannot be routed directly to the flare for control since the HCl would not be controlled and could damage

the closed vent system and reduce its control effectiveness. The scrubber, and a reactor as noted below in c)(3), shall be operated as an acid gas control device for reactor vent streams containing HCl prior to routing these vent streams to the flare for control of VOC.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(3) Emissions shall be controlled in the manner specified below:

a. All organic emissions from Group 1 product batch process vents from Large Production shall be vented to the flare;

b. All organic emissions from Group 2 product batch process vents from Large Production shall be vented to the flare;

c. Reactor vents in Large Production containing HCl but no organic emissions - including MCPU with less than 1,000 lb/year of uncontrolled HCl emissions as well as MCPU with process vents containing 1,000 lb/yr or more of uncontrolled HCl emissions - shall be vented to Scrubber 5;

d. Reactor, crystallizer, and centrifuge vents containing both organic emissions and HCl shall be routed through a reactor filled with caustic solution and then vented to the flare (this includes Group 2 process vents or vents with less than 200 lb/yr HAP);

e. All organic emissions from both Group 1 and Group 2 products produced in P011, P012, P013, P014, P027, P028, P029, P030, P048, P055, and Crystallizer F shall be vented to the flare or Scrubber 5;

f. All HCl emissions from products produced in P006, and P007 shall be vented to Scrubber 5. Products using organic solvents or organic HAP shall not be produced in these reactors;

g. All emissions from both Group 1 and Group 2 products produced in P040 shall be vented to Scrubber 4;

h. All organic emissions from both Group 1 and Group 2 products produced in P016, P019, P024, P033, P039, and P050 shall be vented to the flare only;

i. Organic emissions from storage tanks T001 – T003, T005, T006, T010, T011, and T014 shall be vented to the flare;

j. Emissions from the transfer rack (P044) shall be vented to the flare; and

k. All emissions from vents from Small Production (P020) shall be vented to the atmosphere.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(4) The primary VOC at this facility is an organic HAP; therefore, the permittee shall include all components in organic HAP liquid service in the Leak Detection and Repair (LDAR) program as required per c)(10) and d)(2) below.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(5) The crystallizers are jacketed and cooled using either cooling tower water or a glycol cooling system; therefore, these systems are heat exchange systems that shall comply with the MACT Subpart FFFF requirements for heat exchangers per c)(10) below.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(6) The following miscellaneous organic chemical manufacturing processing units (MCPUs) for Large Production Group 1 products are associated with the equipment listed below. Crystallizers and centrifuges are permitted as part of the reactor process trains.

a. MCPU1 and MCPU5 involve the use of the following equipment:

P006 (Reactor 12), P007 (Reactor 13), Crystallizer I, Crystallizer B, Crystallizer C2, Crystallizer D, Crystallizer E, Crystallizer F, Crystallizer G, Crystallizer H, Crystallizer J2, Centrifuge 1, Centrifuge 3, Centrifuge 5, Centrifuge 7, Centrifuge 8, P016 (Tumbler 2), P019 (Tumbler 4), P024 (Tumbler 6), P050 (Tumbler 8), and P039 (Tumbler 9).

MCPU1 also includes P044 (load rack) as a Group 1 rack, as well as all storage tanks.

b. MCPU2, MCPU3, MCPU4a, MCPU4b, MCPU4c, and MCPU6 involve the use of the following equipment:

P011 (Reactor 4), P012 (Reactor 5), P013 (Reactor 8), P014 (Reactor 9B), P030 (Reactor 16B), P027 (Reactor 18), P028 (Reactor 14), P029 (Reactor 15), P048 (Reactor 23), P055 (Reactor 24), Crystallizer I, Crystallizer B, Crystallizer C2, Crystallizer D, Crystallizer E, Crystallizer F, Crystallizer G, Crystallizer H, Crystallizer J2, Centrifuge 1, Centrifuge 3, Centrifuge 5, Centrifuge 7, Centrifuge 8, P016 (Tumbler 2), P019 (Tumbler 4), P024 (Tumbler 6), P050 (Tumbler 8), and P039 (Tumbler 9).

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(7) The following miscellaneous organic chemical manufacturing processing units (MCPUs) or groups of MCPUs for Large Production Group 2 products are associated with the equipment listed below. Crystallizer and centrifuges are permitted as part of the reactor process trains.

a. MCPU100 involves the use of the following equipment:

P040 (Reactor 40), P033 (Reactor 19), Crystallizer I, Crystallizer B, Crystallizer C2, Crystallizer D, Crystallizer E, Crystallizer F, Crystallizer G, Crystallizer H, Crystallizer J2, Centrifuge 1, Centrifuge 3, Centrifuge 5, Centrifuge 7, Centrifuge

8, P016 (Tumbler 2), P019 (Tumbler 4), P024 (Tumbler 6), P050 (Tumbler 8), and P039 (Tumbler 9).

b. Organic Group 2 products (which includes multiple different MCPUs) involves the use of the following equipment:

P011 (Reactor 4), P012 (Reactor 5), P013 (Reactor 8), P014 (Reactor 9B), P030 (Reactor 16B), P027 (Reactor 18), P028 (Reactor 14), P029 (Reactor 15), P048 (Reactor 23), P055 (Reactor 24), Crystallizer I, Crystallizer B, Crystallizer C2, Crystallizer D, Crystallizer E, Crystallizer F, Crystallizer G, Crystallizer H, Crystallizer J2, Centrifuge 1, Centrifuge 3, Centrifuge 5, Centrifuge 7, Centrifuge 8, P016 (Tumbler 2), P019 (Tumbler 4), P024 (Tumbler 6), P050 (Tumbler 8), and P039 (Tumbler 9).

c. Aqueous Group 2 products with no OC or HCl emissions involve the use of the same equipment as noted above in c)(7)b.

Vent streams from these products are not “batch process vents” as defined at 40 CFR 63.2550 because they are vents from unit operations from which total uncontrolled HAP emissions are less than 200 lbs/yr. No emission control is needed because there are no OC or HCl emissions from these products.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(8) The transfer rack (P044) and the storage tanks T001 – T003, T005, T006, T010, T011, and T014 are not included as part of Large Production.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(9) Small Production (P020) is not included as part of Large Production.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(10) In order to obtain the flare destruction efficiency achieved during the most recent stack test, the auxiliary combustion air damper shall be adjusted according to the manufacturer’s recommendations based upon the variability of the gas stream.

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

(11) The permittee shall comply with the applicable operational restrictions and requirements under 40 CFR, Part 63, Subpart FFFF, and Subpart SS as referenced by Subpart FFFF, including the following sections:

63.11(a) and (b)	Subpart A: General provisions and control device requirements.
63.982(a)(1)	Subpart SS general requirements for storage tanks.
63.982(a)(2)	Subpart SS general requirements for process vents.

63.982(a)(3)	Subpart SS general requirements for transfer racks.
63.982(a)(4)	Subpart SS general requirements for equipment leaks.
63.982(b)	Subpart SS closed vent system and flare.
63.982(c)	Subpart SS closed vent system and non-flare control.
63.982(f)	Subpart SS combined emissions requirements.
63.983	Subpart SS closed vent system requirements.
63.987	Subpart SS flare requirements.
63.994	Subpart SS Halogen scrubbers and other halogen reduction devices.
63.2450	General requirements; Tables 1-7 to Subpart FFFF.
63.2460	Batch process vents requirements; Table 2 to Subpart FFFF.
63.2470	Storage tanks requirements; Table 4 to Subpart FFFF.
63.2475	Transfer rack requirements; Table 5 to Subpart FFFF.
63.2480	Equipment leaks requirements; Table 6 to Subpart FFFF.
63.2485	Wastewater stream requirements; Table 7 to Subpart FFFF.
63.2490	Heat exchange systems requirements; Table 10 to Subpart FFFF.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

a. the name and identification (including MCPU number) of each different product produced;

b. the designation of whether the product (MCPU) is a Group 1 or a Group 2 MCPU;

c. the number of batches of each product produced;

d. the emission rate, in pounds per month, of methanol (MeOH), HCl, HAP, VOC, and OC determined using the emission factors in b)(2)i. (or the most current emission factor determined in accordance with Subpart FFFF) multiplied by the number of batches/month for each separate product produced;

e. the type of material stored in each storage tank;

f. the amount, in gallons, of throughput for each material stored in a storage tank;

g. the emission rate, in pounds per month, of MeOH, HCl, HAP, VOC, and OC from the storage tanks and storage tank lines determined in accordance with f)(1)h. below;

h. the amount, in gallons, of each material loaded out through the transfer rack (P044); and

i. the emission rate, in pounds per month, of MeOH, HCl, HAP, VOC, and OC from the transfer rack determined in accordance with f)(1)h. below.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

(2) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart FFFF, and Subpart SS including the following sections:

63.11(c)-(e)	Subpart A: Alternative work practice for monitoring equipment leaks.
63.987(c)	Subpart SS flare flame monitoring.
63.994(c)	Subpart SS Halogen scrubbers and other halogen reduction devices monitoring requirements.
63.996	Subpart SS general monitoring requirements.
63.998	Subpart SS recordkeeping requirements.
63.2450(k)	Subpart FFFF continuous parameter monitoring.
63.2525	Subpart FFFF recordkeeping requirements.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

(2) The permittee shall comply with the applicable reporting requirements under 40 CFR, Part 63, Subpart FFFF, and Subpart SS including the following sections:

63.999	Subpart SS Notifications and other reports.
63.2450(m)	Subpart FFFF reporting requirements.
63.2515	Subpart FFFF required notifications.
63.2520	Subpart FFFF required reports – Table 11.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

f) Testing Requirements

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

a. Emission Limitation:
Particulate emissions (PE) from flare shall not exceed 0.078 lb/hr.

Applicable Compliance Method:
This limit was established using the AP-42 emission factor from Table 1.4-2 of 0.0075 lb/mmBtu. The short-term emissions limitation was determined by multiplying the emission factor (0.0075 lb/mmBtu) times the flare rating (10.4 mmBtu/hr).

If required, compliance with the PE emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-5 of 40 CFR Part 60, Appendix A.

b. Emission Limitation:
Particulate emissions (PE) from flare shall not exceed 0.34 ton/yr.

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the hourly emissions rate by the actual annual operating hours, and then dividing by 2,000 lbs/ton.

c. Emission Limitation:
NOx emissions from flare shall not exceed 1.56 lbs/hr.

Applicable Compliance Method:
This limit was established by using the emission factor of 0.15 lb/mmBtu of NO_x provided by the manufacturer performance guarantee. The short-term emissions limitation was determined by multiplying the emission factor (0.15 lb/mmBtu) times the flare rating (10.4 mmBtu/hr).

If required, compliance with the NOx emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 7E of 40 CFR Part 60, Appendix A.

d. Emission Limitation:
NOx emissions from flare shall not exceed 6.8 tons/yr.

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the hourly emissions rate by the actual annual operating hours, and then dividing by 2,000 lbs/ton.

e. Emission Limitation:
CO emissions from flare shall not exceed 2.08 lbs/hr.

Applicable Compliance Method:
This limit was established by using the emission factor of 0.2 lb/mmBtu of CO provided by the manufacturer performance guarantee. The short-term emissions limitation was determined by multiplying the emission factor (0.2 lb/mmBtu) times the flare rating (10.4 mmBtu/hr).

If required, compliance with the CO emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

f. Emission Limitation:
CO emissions from flare shall not exceed 9.1 tons/yr.

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the hourly emissions rate by the actual annual operating hours, and then dividing by 2,000 lbs/ton.

g. Emission Limitations:

Potential to Emit	Controlled EF, lbs/batch				
	MeOH	HCl	HAP	VOC	OC
Each Product (MCPU)	9.1	0.7	9.1	9.1	21.4

Applicable Compliance Method:
The permittee shall demonstrate compliance with the pound per batch emission limits by calculating the controlled emissions from all of the equipment associated with the production of each product according to the procedures described in 40 CFR Parts 63.2460(b), 63.1257(d)(2)(i) and (ii), and 63.1257(d)(3)(i) or (ii) including the following:

Displacement emissions shall be determined using Equation 11 of 40 CFR 63 Subpart GGG and multiplied by the control efficiency of the flare per 40 CFR Part 63.1257(d)(3)(i) or (ii).

Purging emissions shall be determined using Equation 12 of 40 CFR 63 Subpart GGG and multiplied by the control efficiency of the flare per 40 CFR Part 63.1257(d)(3)(i) or (ii).

Heating emissions shall be determined using either Equation 13 or 37 of 40 CFR 63 Subpart GGG and multiplied by the control efficiency of the flare per 40 CFR Part 63.1257(d)(3)(i) or (ii). Reactors are the only vessels that are heated, and all reactors except for Reactor 40 are controlled by a condenser or series of condensers.

h. Emission Limitation:
MeOH emissions shall not exceed 20.6 tons/yr
HCl emissions shall not exceed 0.3 ton/yr
HAP emissions shall not exceed 20.6 tons/yr
VOC emissions shall not exceed 21.4 tons/yr
OC emissions shall not exceed 40.4 tons/yr

Applicable Compliance Method:
Compliance with the ton/year emission limitations shall be determined from the record keeping in d)(1) by summing the monthly emissions from all products produced, storage tanks, transfer rack, storage tank lines, and small production as follows. The monthly emissions shall be summed to determine the total annual emissions for each calendar year.

Annual emissions from each product (both Group 1 and Group 2 products) shall be determined by multiplying the total number of batches for each product produced per month by the corresponding emission factor for the product determined in accordance with f)(1)g. above and then summing total emissions.

Storage tank emissions shall be determined using the most current version of USEPA's TANKS or similar program based on the actual monthly throughput for each storage tank and multiplying by (1 – 0.95) to account for the 95% flare control efficiency.

Transfer rack emissions shall be determined using the appropriate emission factor (for splash or submerged loading), in pounds per 1,000 gallons, from AP-42 Section 5.2, Equation (1). The emission factor shall be multiplied by the actual monthly throughput, in gallons/month, and then multiplying by (1 – 0.95) to account for the 95% control efficiency of the flare.

Fugitive emissions from lines between storage tanks and manifold including valves, pump seals, agitators, compressor seals, pressure relief valves (PRVs), connectors, open-ended lines, and sampling connections, shall be determined using the SOCMI average emission factors from Table 2-1 of USEPA's Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017, November 1995) to

determine a pound per hour emission rate and then multiplying by the actual hours of operation and dividing by 2,000 lbs/ton. Alternatively, actual fugitive emission leak rate data collected from the Leak Detection and Repair program may be used with the correlation equations from Table 2-9 and the default zero leak rates from Table 2-11 of the EPA Protocol document to calculate emissions.

Emissions from Small Production (P020) were determined from engineering study measurements that resulted in the following:

	VOC (methanol)	HCl	Total HAPs
Total	0.855 lb/hr	0.016 lb/hr	0.871 lb/hr
PTE	3.74 tons/yr	0.07 tons/yr	3.81 tons/yr

The PTE for small production is based on 8,760 hours per year.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

(2) The permittee shall comply with the applicable testing requirements under 40 CFR, Part 63, Subpart FFFF, Subpart SS and Subpart GGG including the following sections:

63.982(b)	Subpart SS flare compliance assessment.
63.987(b)	Subpart SS flare compliance assessment.
63.994	Subpart SS Halogen scrubbers and other halogen reduction devices compliance assessment requirements.
63.997	Subpart SS Performance test and compliance assessment requirements for control devices.
63.1257	Subpart GGG Test methods and compliance procedures; initial compliance with process vent provisions.
63.2450(f)	Subpart FFFF flare compliance assessment.
63.2450(g)	Subpart FFFF performance tests.
63.2450(h)	Subpart FFFF design evaluation.
63.2460(c)(2)(v)	Subpart FFFF process condensers.
63.2465(c)(1)	Subpart FFFF scrubber performance test.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

g) Miscellaneous Requirements

(1) Although Research Organics produces approximately 75 different products, the following Group 1 Products are considered the worst-case products produced at this facility: MCPU1, MCPU2, MCPU3, MCPU4a, MCPU4b, MCPU4c, MCPU5, and MCPU6. An MCPU number shall be assigned to each separate product. A detailed list of the MCPU's shall be submitted in the Subpart FFFF Notification of Compliance Status, and shall be updated as necessary through the Subpart FFFF Periodic Reports.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

(2) The Small Laboratory-Scale Production operation (P020) of the facility includes research activities and small scale production required to meet small quantity orders. These activities are conducted in laboratory scale equipment in rooms equipped with fume hoods that exhaust to the atmosphere via stacks.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

(3) The Large Production operation of the facility includes 13 reactors, 9 crystallizers, 5 centrifuges, 4 vacuum ovens/shelf dryers, and 5 tumble dryers. These are used in a batch manufacturing process to produce product. Different reactors, crystallizers, and centrifuges are connected as needed according to production demands. Materials are transferred between equipment using fixed piping manifold and flexible hoses.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

2. The existing emergency or limited use compression ignition (CI) reciprocating internal combustion engine(s) (RICE), less than or equal to 500 brake horse power and located at a major source of hazardous air pollutants (HAPs), are subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Part 63, Subpart ZZZZ. The existing stationary CI RICE, P041 (300 kW, 402 brake HP), P042 (80 kW, 107 brake HP), and P043 (40 kW, 54 brake HP), installed before 6/12/06, shall meet the requirements of Part 63, Subpart ZZZZ no later than 5/3/13.

The permittee must comply with all applicable requirements of 40 CFR Part 63, Subpart ZZZZ. The permittee shall also comply with all applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) as identified in Table 8 of 40 CFR Part 63, Subpart ZZZZ. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 63, Subpart ZZZZ, and Subpart A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

a) The permittee shall comply with the applicable standards required under 40 CFR Part 63, Subpart ZZZZ including the following sections:

63.6590(a)(1)(ii)	Existing stationary RICE less than or equal to 500 brake HP.
63.6595(a)(1)	Final compliance date: 5/3/2013.

Table 2d to Subpart ZZZZ of Part 63: #1.	Requirements for Existing Stationary RICE Located at Area Source of HAP
63.6665	General provisions based on Table 8 to this subpart.
Table 8 to Subpart ZZZZ of Part 63	General provisions.

[Authority for Term: 40 CFR Part 63, Subpart ZZZZ]

b) The permittee shall comply with the applicable operational restrictions and requirements under 40 CFR Part 63, Subpart ZZZZ, including the following sections:

63.6605	General compliance requirements.
63.6625(e)(2), (f), (h), and (i)	Operation and maintenance.

[Authority for Term: 40 CFR Part 63, Subpart ZZZZ]

c) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR Part 63, Subpart ZZZZ, including the following sections:

63.6635	Monitoring requirements.
63.6655(a)(1)-(a)(5)	Recordkeeping requirements.
63.6655(b)(1)-(b)(3)	If facility elects to install a CEMS or are required to install a CPMS.
63.6655(d)	Recordkeeping required per Table 6 of this subpart.
Table 6 to Subpart ZZZZ of Part 63: #9.	Continuous Compliance With Emission Limitations, and Other Requirements for existing emergency stationary RICE less than or equal to 500 HP located at a major source of HAP.
63.6655(e)(2)	Maintenance recordkeeping requirements.
63.6655(f)(1)	Records of hours of operation.
63.6660	Form and length of time to keep records.

[Authority for Term: 40 CFR Part 63, Subpart ZZZZ]

d) The permittee shall comply with the applicable reporting requirements under 40 CFR Part 63, Subpart ZZZZ, including the following sections:

63.6640(a), (b), (e), and (f)(1)-(f)(3)	Continuous compliance reporting demonstration.
66.6645(a)(5), (f), (g), and (h)	Notification requirements.
63.6650(a)	Submit each report in Table 7 that applies to you.
63.6650(b)(6)-(b)(9)	Timeline of report submission based on Table 7.
63.6650(d)(1)-(d)(2)	Reporting deviations when not using a CMS.
63.6650(f)	Deviation report for each affected source that has obtained a Title V operating permit pursuant to 40 CFR Part 70 or 71.

[Authority for Term: 40 CFR Part 63, Subpart ZZZZ]

3. The new emergency or limited use compression ignition (CI) reciprocating internal combustion engine(s) (RICE), less than or equal to 500 brake horse power, is subject to the requirements of the New Source Performance Standards (NSPS) for Stationary Reciprocating Internal Combustion Engines, Part 60, Subpart IIII. The stationary CI RICE, P045 (60 kW, 80 brake HP), installed in 2009, shall meet the requirements of Part 60, Subpart IIII.

The permittee must comply with all applicable requirements of 40 CFR Part 60, Subpart IIII. The permittee shall also comply with all applicable requirements of 40 CFR Part 60, Subpart A (General Provisions) as identified in Table 8 of 40 CFR Part 60, Subpart IIII. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 60, Subpart IIII, and Subpart A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

a) The permittee shall comply with the applicable emission limits and standards required under 40 CFR Part 60, Subpart IIII including the following sections:

60.4205(b); and 60.4206	Emission standards.
60.4218	General provisions.
Table 8 to Subpart IIII of Part 60	General provisions.

[Authority for Term: 40 CFR Part 60, Subpart IIII]

b) The permittee shall comply with the applicable operational restrictions and requirements under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4207(a) and (b)	Fuel requirements.
60.4208(a)-(i)	Installation deadlines.
60.4211(f)(1)-(f)(3), and (g)(1)	Operational requirements.

[Authority for Term: 40 CFR Part 60, Subpart IIII]

c) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR Part 60, Subpart IIII, including the following sections:

60.4209(a)	Monitoring requirements.
60.4214(b)	Record keeping requirements

4. [Authority for Term: 40 CFR Part 60, Subpart IIII]The following emissions units are subject to 40 CFR Part 63, Subpart DDDDD, National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters: B001 (1.26 MMBtu/hr) and B002 (1.35 MMBtu/hr). They are existing affected sources under this rule since they were constructed before 6/4/10. The complete NESHAP requirements, including the Subpart A General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website at http://www.ecfr.gov or by contacting the Cleveland Division of Air Quality (CDAQ).

The permittee must comply with all applicable requirements of 40 CFR Part 63, Subpart DDDDD. The permittee shall also comply with all applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) as identified in Table 10 of 40 CFR Part 63, Subpart DDDDD. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 63, Subpart DDDDD, and Subpart A.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

a) The permittee shall comply with the applicable standards required under 40 CFR Part 63, Subpart DDDDD including the following sections:

63.7495(b), (d), and (f)-(i)	Compliance deadline: 1/31/2016.
63.7500(a)(1)	Meet applicable work practice standards in Table 3.
63.7500(a)(3)	Operate to minimize emissions.
63.7500(b)	Use of alternative to work practice standards.
63.7500(e)	Maintenance Requirements.
63.7500(f)	Applicable Standards.

Table 3 to Subpart DDDDD of Part 63: #1.	Engine Maintenance Requirements.
Table 3 to Subpart DDDDD of Part 63: #4(a)-(h).	Work Practice Standards.
63.7505(a)	General compliance requirements.
63.7565(a) and (b)	Implementation and enforcement of this subpart.
Table 10 to Subpart DDDDD of Part 63	General provisions.

[Authority for Term: 40 CFR Part 63, Subpart DDDDD]

b) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR Part 63, Subpart DDDDD, including the following sections:

63.7525(d)-(i)	Operating and maintenance requirements.
63.7535(a)-(d)	Monitoring requirements.
63.7555(a)(1), (a)(2), and (h)	Record keeping requirements.
63.7560(a)-(c)	Record formatting requirements.

[Authority for Term: 40 CFR Part 63, Subpart DDDDD]

c) The permittee shall comply with the applicable reporting requirements under 40 CFR Part 63, Subpart DDDDD, including the following sections:

63.7545(a), (b), (f), and (h)	Notification requirements.
63.7550(a)-(h)	Reporting requirements.

[Authority for Term: 40 CFR Part 63, Subpart DDDDD]

d) The permittee shall comply with the applicable testing requirements under 40 CFR Part 63, Subpart DDDDD, including the following sections:

63.7510(e) and (k); and, 63.7530(e)-(g)	Initial compliance requirements.
63.7515(d)	Engine maintenance work practice standard.

[Authority for Term: 40 CFR Part 63, Subpart DDDDD]

5. The following insignificant emissions units at this facility must comply with all applicable State and federal regulations, as well as any emissions limitations and/or control requirements contained within the identified permit-to-install for the emissions unit. The insignificant emissions units listed below are subject to one or more applicable requirements contained in a permit-to-install or in the SIP approved versions of OAC Chapters 3745-17, 3745-18, 3745-21, and 3745-31, and/or 40 CFR Part 60 or 63:

EU ID	Operations, Property and/or Equipment Description
P020	Small Production - Laboratory Scale (PTI P0120394).
P041	300 kw emergency electrical generator; PBR09182.
P042	80 kw emergency electrical generator; PBR09182.
P043	40 kw emergency electrical generator; PBR09182.
P045	60 kw emergency electrical generator; PBR09182.

[Authority for term: OAC rule 3745-77-07(A)(13)]

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group – Reactor Process Lines: P006, P007, P011, P012, P013, P014, P027, P028, P029, P030, P033, P040, P048, and P055

EU ID	Operations, Property and/or Equipment Description
P006	Reactor 12: 200-gallon hot oil vessel and ancillary equipment including crystallizers, and centrifuges.
P007	Reactor 13: 200-gallon hot oil vessel and ancillary equipment including crystallizers, and centrifuges.
P011	Reactor 4: 200-gallon vessel and ancillary equipment including crystallizers and centrifuges.
P012	Reactor 5: 300-gallon vessel and ancillary equipment including crystallizers and centrifuges.
P013	Reactor 8: 300-gallon hot oil vessel and ancillary equipment including crystallizers, and centrifuges.
P014	Reactor 9: 300-gallon vessel, with ancillary equipment including crystallizers and centrifuges.
P027	Reactor 18: 500-gallon vessel and ancillary equipment including crystallizers and centrifuges.
P028	Reactor 14: 300-gallon vessel and ancillary equipment including crystallizers and centrifuges.
P029	Reactor 15: 300-gallon vessel and ancillary equipment including crystallizers and centrifuges.
P030	Reactor 16: 300-gallon vessel and ancillary equipment including crystallizers and centrifuges.
P033	Reactor 19: 300-gallon vessel and ancillary equipment including crystallizers and centrifuges.
P040	Reactor 40: 500-gallon vessel for BisTris Production.
P048	Reactor 23: 30-gallon vessel and ancillary equipment including crystallizers and centrifuges.
P055	Reactor 24: 500-gallon vessel and ancillary equipment including crystallizers and centrifuges.

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

(1) b)(1)b., and b)(2)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC Rule 3745-31-05(A)(3) as effective 11/30/2001 PTI P0114439 issued 9/3/2013 and modified PTI P0120394 issued 7/9/2015	See Section B. Facility-Wide Terms and Conditions. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)b. below.
c.	OAC Rule 3745-31-05(F)	See Section B. Facility-Wide Terms and Conditions.
d.	OAC Rule 3745-21-07(M)(3)(a)	The requirements of this rule do not apply to these emissions units because the uncontrolled potential to emit organic compounds for each emissions unit is less than 40 pounds/day in accordance with OAC rule 3745-21-07(M)(3)(c)(ii).
e.	40 CFR Part 63, Subpart FFFF [In accordance with 40 CFR 63.2435 this unit is an existing miscellaneous organic chemical manufacturing facility subject to the emissions limitations/control measures specified in this section.]	See Section B. Facility-Wide Terms and Conditions.
f.	40 CFR Part 63, Subpart SS [In accordance with 40 CFR 63.980 this facility operates a control device which routes air emissions to a fuel gas system and is subject to the emissions limitations/control measures specified in this section.]	See Section B. Facility-Wide Terms and Conditions.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality

Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0120394 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

Use of a flare to control organic compound emissions, and use of scrubbers to control HCl emissions.

c) Operational Restrictions

(1) See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

d) Monitoring and/or Recordkeeping Requirements

(1) See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

e) Reporting Requirements

(1) See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

f) Testing Requirements

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

a. See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

g) Miscellaneous Requirements

(1) None.

2. Emissions Unit Group - Tumblers: P016, P019, P024, P039, and P050

EU ID	Operations, Property and/or Equipment Description
P016	Tumble Dryer 2: Rotating conical dryer with condensate recovery tank and vacuum pump, controlled by the flare.
P019	Tumble Dryer 4: Rotating conical dryer with condensate recovery tanks and vacuum pump, controlled by the flare.
P024	Tumble Dryer 6: Rotating conical dryer with condensate recovery tank and vacuum pump, controlled by the flare.
P039	Tumble Dryer 9: Rotating conical dryer with condensate recovery tank and vacuum pump, controlled by the flare.
P050	Tumbler Dryer 8: Rotating conical dryer with condensate recovery tank and vacuum pump, controlled by the flare.

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

(1) b)(1)b., and b)(2)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC Rule 3745-31-05(A)(3) as effective 11/30/2001 PTI P0114439 issued 9/3/2013 and modified PTI P0120394 issued 7/9/2015	See Section B. Facility-Wide Terms and Conditions. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)b. below.
c.	OAC Rule 3745-31-05(F)	See Section B. Facility-Wide Terms and Conditions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC Rule 3745-21-07(M)(3)(a)	The requirements of this rule do not apply to these emissions units because the uncontrolled potential to emit organic compounds for each emissions unit is less than 40 pounds/day in accordance with OAC rule 3745-21-07(M)(3)(c)(ii).
e.	40 CFR Part 63, Subpart FFFF [In accordance with 40 CFR 63.2435 this unit is an existing miscellaneous organic chemical manufacturing facility subject to the emissions limitations/control measures specified in this section.]	See Section B. Facility-Wide Terms and Conditions.
f.	40 CFR Part 63, Subpart SS [In accordance with 40 CFR 63.980 this facility operates a control device which routes air emissions to a fuel gas system and is subject to the emissions limitations/control measures specified in this section.]	See Section B. Facility-Wide Terms and Conditions.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0120394 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

Use of a flare to control organic compound emissions, and use of a scrubber to control HCl emissions.

c) Operational Restrictions

(1) See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

d) Monitoring and/or Recordkeeping Requirements

(1) See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

e) Reporting Requirements

(1) See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

f) Testing Requirements

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

a. See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

g) Miscellaneous Requirements

(1) None.

3. P044, Transfer Rack

Operations, Property and/or Equipment Description:

Recoverable alcohol transfer rack used for loading of tanker trucks.

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

(1) b)(1)b., and b)(2)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC Rule 3745-31-05(A)(3) as effective 11/30/2001 PTI P0114439 issued 9/3/2013 and modified PTI P0120394 issued 7/9/2015	See Section B. Facility-Wide Terms and Conditions. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)b. below.
c.	OAC Rule 3745-31-05(F)	See Section B. Facility-Wide Terms and Conditions.
d.	OAC Rule 3745-21-07(M)	The requirements of this rule do not apply to this emissions unit because the amended rule does not apply to transfer racks.
e.	40 CFR Part 63, Subpart FFFF [In accordance with 40 CFR 63.2435 this unit is an existing miscellaneous organic chemical manufacturing facility subject to the emissions limitations/control measures specified in this section.]	See Section B. Facility-Wide Terms and Conditions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR Part 63, Subpart SS [In accordance with 40 CFR 63.980 this facility operates a control device which routes air emissions to a fuel gas system and is subject to the emissions limitations/control measures specified in this section.]	See Section B. Facility-Wide Terms and Conditions.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Permit to Install P0120394 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

Use of a flare to control organic compound emissions.

c) Operational Restrictions

(1) See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(A)(1) and PTI P0120394]

(2) This emissions unit (P044) shall be equipped with a vapor collection system whereby during the transfer of material to any delivery vessel:

a. all vapors displaced from the delivery vessel during loading are vented only to the vapor collection system;

b. all vapors collected by the vapor collection system shall be vented to the flare;

c. a means shall be provided to prevent drainage of material from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected; and

d. all material loading lines and vapor lines shall be equipped with fittings that are vapor tight.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

d) Monitoring and/or Recordkeeping Requirements

(1) See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

e) Reporting Requirements

(1) See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

f) Testing Requirements

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

a. See Section B. Facility-Wide Terms and Conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0120394]

g) Miscellaneous Requirements

(1) None.