



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
LAKE COUNTY**

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov. Center

Application No: 02-18029

DATE: 6/5/2003

Ricerca LLC
Michael Contenza
7528 Auburn Rd
Concord Twp, OH 44077

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Michael W. Ahern

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

NEDO



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

**Permit To Install
Terms and Conditions**

**Issue Date: 6/5/2003
Effective Date: 6/5/2003**

FINAL PERMIT TO INSTALL 02-18029

Application Number: 02-18029
APS Premise Number: 0243000241
Permit Fee: **\$600**
Name of Facility: Ricerca LLC
Person to Contact: Michael Contenza
Address: 7528 Auburn Rd
Concord Twp, OH 44077

Location of proposed air contaminant source(s) [emissions unit(s)]:
7528 Auburn Rd
Concord Twp, Ohio

Description of proposed emissions unit(s):
Pressure filter, flash chromatography system, reactor system.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous

calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

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

5. Severability Clause

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

6. General Requirements

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

7. Fees

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

8. 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.

9. Compliance Requirements

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

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

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

12. 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.

B. State Only Enforceable Permit To Install General Terms and Conditions**1. Compliance Requirements**

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

4. Termination of Permit To Install

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

5. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

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

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

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

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

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

C. Permit To Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
OC	75 TPY from emissions units P007-P015, P018-P020, and P024-P039 combined.

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Ricerca LLC

PTI Application: **02-18029**

Issued: 6/5/2003

Facility ID: **0243000241**

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Ricerca

PTI A₁

Issued: 6/5/2003

Emissions Unit ID: P037

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P037 - 30 inch, Glass-Lined Steel Pressure Filter (S- 18300)	OAC rule 3745-31-03(A)(3)	See sections A.I.2.a and A.I.2.b below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2).
	OAC rule 3745-21-07(G)(2)	See section A.I.2.c below.

2. Additional Terms and Conditions

- 2.a On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are not employed, applied, evaporated, or dried, the permittee shall emit no more than 50 (fifty) pounds per hour of organic compounds.
- 2.b The emissions of organic compounds from emissions units P007 through P015, P018 through P020, and P024 through P039, combined, shall be limited to 75 (seventy five) tons per year.
- 2.c On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit not more than 40 (forty) pounds per day nor more than 8 (eight) pounds per hour of organic compounds, as defined in OAC rule 3745-21-01. Emissions of organic materials from cleanup with photochemically reactive materials shall be included in the calculation of actual emissions when determining compliance with the 8 pounds per hour and 40 pounds per day limits.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall keep the following daily records for all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not each material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
2. The permittee shall develop an emission factor for the total amount of organic compounds emitted for each product generated in this emissions unit. The emission factors shall be in units of pounds of organic compounds emitted per hour of operation for each product generated. The permittee shall indicate whether or not each emission factor is based upon the use of any photochemically reactive materials. The permittee's calculation of each emission factor shall be submitted to the Ohio EPA Northeast District Office for review and approval.
3. The permittee shall collect and record the following information each day for each product generated in this emissions unit:
 - a. the company identification for the product;
 - b. whether or not any photochemically reactive materials were used to generate the product;
 - c. the hours of operation (during the day of record) to generate the product;
 - d. the emission factor for the product, in pounds of organic compounds emitted per hour of operation; and
 - e. the total organic compound emission rate, in pounds © x d).
4. The permittee shall collect and record the following information each day for all the products generated in this emissions unit:
 - a. for each day during which any photochemically reactive material was used as a cleanup material and/or for one or more of the products, the total emissions from all products produced that day, in pounds (the summation of A.III.3.e for all products);
 - b. for each day during which no photochemically reactive material was used as a cleanup material and for any of the products, the total emissions from all products produced that day, in pounds (the summation of A.III.3.e for all products); and

Emissions Unit ID: P037

- c. the total number of hours the emissions unit was in operation to produce all the products (not to exceed 24 hours minus the total hours for cleanup).
5. The permittee shall determine the total amount of organic compounds emitted for each cleaning of the emissions unit. The organic compound emissions shall be in units of pounds of organic compounds emitted and shall be determined by material balance. The permittee shall indicate whether or not each cleaning of the emissions unit is based upon the use of any photochemically reactive materials. The permittee's calculation of the organic compound emissions for each cleaning shall be submitted to the Ohio EPA Northeast District Office for review and approval.

Each cleaning of the emissions unit shall be performed in accordance with the procedures and assumptions used in the material balance calculations.

6. The permittee shall collect and record the following information each day when cleaning of the emissions unit is performed:
 - a. the company identification for each cleanup material;
 - b. whether or not each cleanup material is a photochemically reactive material;
 - c. the total organic compound emissions from the cleanup materials that are photochemically reactive materials, in pounds per day;
 - d. the total organic compound emissions from the cleanup materials that are not photochemically reactive materials, in pounds per day;
 - e. the number of hours photochemically reactive materials were employed;
 - f. the number of hours nonphotochemically reactive materials were employed (not including hours when photochemically reactive materials and nonphotochemically reactive materials were employed at the same time); and
 - g. the total organic compound emissions from all cleanup materials, in pounds © + d).
7. The permittee shall collect and record the following information each day for this emissions unit:
 - a. for each day during which any photochemically reactive material was used for one or more of the products and/or as a cleanup material, the total daily organic compound emissions from all the cleanup materials that are photochemically reactive materials and all the products, in pounds per day (A.III.4.a + A.III.6.c);
 - b. for each day during which any photochemically reactive material was used for one or more of the products and/or as a cleanup material, the total hourly organic compound emissions from all the cleanup materials that are photochemically reactive materials and all the products, in pounds per hour (A.III.7.a/[A.III.4.c + A.III.6.e]);
 - c. for each day during which any photochemically reactive material was used for one or more of the products and/or as a cleanup material, the total daily organic compound emissions from all the cleanup materials that are not photochemically reactive materials, in pounds per day (A.III.6.d);

Emissions Unit ID: P037

- d. for each day during which no photochemically reactive material was used for any of the products and any of the cleanup materials, the total daily organic compound emissions from all products and all cleanup materials, in pounds per day (A.III.4.b + A.III.6.d); and
 - e. for each day during which no photochemically reactive material was used for any of the products and any of the cleanup materials, the total hourly organic compound emissions from all products and all cleanup materials, in pounds per hour (A.III.7.d/[A.III.4.c + A.III.6.f]).
8. The permittee shall record annually the total organic compound emissions from this emissions unit and from emissions units P007 through P015, P018 through P020, and P024 through P039, combined. The annual emissions (in tons) for this emissions unit shall be calculated by summing the values from A.III.7.a, A.III.7.c and A.III.7.d for the entire calendar year, and then dividing by 2000.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. For each day during which a photochemically reactive material was employed for one or more of the products and/or as a cleanup material, an identification of each day during which the average hourly organic compound emissions from the emissions unit exceeded 8 pounds per hour, and the actual average hourly organic compound emission rate for each such day.
 - b. For each day during which a photochemically reactive material was employed for one or more of the products and/or as a cleanup material, an identification of each day during which the organic compound emissions from the emissions unit exceeded 40 pounds per day, and the actual organic compound emissions for each such day.
 - c. For each day during which no photochemically reactive material was employed for any of the products and any of the cleanup materials, an identification of each day during which the average hourly organic compound emissions from the emissions unit exceeded 50 pounds per hour, and the actual average hourly organic compound emission rate for each such day.
2. Each year, the permittee shall submit an annual report, by April 30, for the preceding calendar year. Each annual report shall specify the annual organic compound emissions for this emissions unit and for emissions units P007 through P015, P018 through P020, and P024 through P039, combined.

V. Testing Requirements

1. Emission Limitation:

On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit not more than 40 (forty) pounds per day of organic compounds, as defined in OAC rule 3745-21-01.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in section A.III of these terms and conditions.

2. Emission Limitation:

On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit not more than 8 (eight) pounds per hour of organic compounds, as defined in OAC rule 3745-21-01.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required by the Ohio EPA, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or 18.

3. Emission Limitation:

On the days that no photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit no more than 50 (fifty) pounds per hour of organic compounds.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required by the Ohio EPA, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or 18.

4. Emission Limitation:

75 tons OC per year from emissions units P007 through P015, P018 through P020, and P024 through P039, combined.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions.

5. Formulation data shall be used to determine the organic compound contents of the materials employed for each final product and each cleanup material.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P037 - 30 inch, Glass-Lined Steel Pressure Filter (S-18300)	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- 1. The permit to install for this emissions unit (P037) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant potentially emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetic acid
 TLV (ug/m3): 25000
 Maximum Hourly Emission Rate (lbs/hr): 0.3
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 25 (EF45) and 23 (EF76)
 MAGLC (ug/m3): 2500

Pollutant: acetone

TLV (ug/m³): 1188000

Maximum Hourly Emission Rate (lbs/hr): 21.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1568 (EF45) and 1416 (EF76)

MAGLC (ug/m³): 118800

Pollutant: acetonitrile

TLV (ug/m³): 67000

Maximum Hourly Emission Rate (lbs/hr): 1.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 102 (EF45) and 92 (EF76)

MAGLC (ug/m³): 6700

Pollutant: chloroform

TLV (ug/m³): 48834

Maximum Hourly Emission Rate (lbs/hr): 8.7

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 638 (EF45) and 576 (EF76)

MAGLC (ug/m³): 4883

Pollutant: cyclohexane

TLV (ug/m³): 1030000

Maximum Hourly Emission Rate (lbs/hr): 3.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 226 (EF45) and 204 (EF76)

MAGLC (ug/m³): 103000

Pollutant: dimethylformamide

TLV (ug/m³): 30000

Maximum Hourly Emission Rate (lbs/hr): 0.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 8 (EF45) and 7 (EF76)

MAGLC (ug/m³): 3000

Pollutant: ethyl acetate

TLV (ug/m³): 1440000

Maximum Hourly Emission Rate (lbs/hr): 3.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 223 (EF45) and 202 (EF76)

MAGLC (ug/m³): 144000

Pollutant: ethyl alcohol

TLV (ug/m³): 1880000

Maximum Hourly Emission Rate (lbs/hr): 1.0
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 74 (EF45) and 67 (EF76)
MAGLC (ug/m³): 188000

Pollutant: heptane
TLV (ug/m³): 1640000
Maximum Hourly Emission Rate (lbs/hr): 1.7
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 124 (EF45) and 112 (EF76)
MAGLC (ug/m³): 164000

Pollutant: isopropyl acetate
TLV (ug/m³): 1044000
Maximum Hourly Emission Rate (lbs/hr): 2.3
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 168 (EF45) and 151 (EF76)
MAGLC (ug/m³): 104400

Pollutant: isopropyl alcohol
TLV (ug/m³): 983000
Maximum Hourly Emission Rate (lbs/hr): 1.0
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 74 (EF45) and 67 (EF76)
MAGLC (ug/m³): 98300

Pollutant: methyl alcohol
TLV (ug/m³): 262000
Maximum Hourly Emission Rate (lbs/hr): 1.5
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 110 (EF45) and 99 (EF76)
MAGLC (ug/m³): 26200

Pollutant: methylamyl alcohol
TLV (ug/m³): 104000
Maximum Hourly Emission Rate (lbs/hr): 0.1
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 5 (EF45) and 5 (EF76)
MAGLC (ug/m³): 10400

Pollutant: methylene chloride
TLV (ug/m³): 174000
Maximum Hourly Emission Rate (lbs/hr): 13.8
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1011 (EF45) and 913 (EF76)
MAGLC (ug/m³): 17400

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Pollutant: methyl tert butyl ether

TLV (ug/m3): 144000

Maximum Hourly Emission Rate (lbs/hr): 8.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 599 (EF45) and 541 (EF76)

MAGLC (ug/m3): 14400

Pollutant: pyridine

TLV (ug/m3): 16000

Maximum Hourly Emission Rate (lbs/hr): 0.6

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 317 (EF45) and 286 EF76)

MAGLC (ug/m3): 1600

Pollutant: tetrahydrofuran

TLV (ug/m³): 590000

Maximum Hourly Emission Rate (lbs/hr): 4.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 317 (EF45) and 286 (EF76)

MAGLC (ug/m³): 59000

Pollutant: toluene

TLV (ug/m³): 188000

Maximum Hourly Emission Rate (lbs/hr): 1.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 71 (EF45) and 65 (EF76)

MAGLC (ug/m³): 18800

* emissions unit will discharge through either egress point EF45 or EF76.

Physical changes to or changes in the method of operation of the emissions unit after its installation could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
2. The permittee shall sum the predicted 1-hour maximum ground-level concentrations for each pollutant from emissions units P007 through P015, P018 through P020, and P024 through P039, to demonstrate compliance with the "Air Toxic Policy". This sum shall take into account the actual equipment's operating schedule and equipment utilization. Comparison of the sum to the MAGLC shall be made to demonstrate compliance with the "Air Toxic Policy".

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P038 - Biotage 400 L, Flash Chromatography System (S-17900)	OAC rule 3745-31-03(A)(3)	See sections A.I.2.a and A.I.2.b below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2).
	OAC rule 3745-21-07(G)(2)	See section A.I.2.c below.

2. Additional Terms and Conditions

- 2.a On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are not employed, applied, evaporated, or dried, the permittee shall emit no more than 50 (fifty) pounds per hour of organic compounds.
- 2.b The emissions of organic compounds from emissions units P007 through P015, P018 through P020, and P024 through P039, combined, shall be limited to 75 (seventy five) tons per year.
- 2.c On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit not more than 40 (forty) pounds per day nor more than 8 (eight) pounds per hour of organic compounds, as defined in OAC rule 3745-21-01. Emissions of organic materials from cleanup with photochemically reactive materials shall be included in the calculation of actual emissions when determining compliance with the 8 pounds per hour and 40 pounds per day limits.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall keep the following daily records for all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not each material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
2. The permittee shall develop an emission factor for the total amount of organic compounds emitted for each product generated in this emissions unit. The emission factors shall be in units of pounds of organic compounds emitted per hour of operation for each product generated. The permittee shall indicate whether or not each emission factor is based upon the use of any photochemically reactive materials. The permittee's calculation of each emission factor shall be submitted to the Ohio EPA Northeast District Office for review and approval.
3. The permittee shall collect and record the following information each day for each product generated in this emissions unit:
 - a. the company identification for the product;
 - b. whether or not any photochemically reactive materials were used to generate the product;
 - c. the hours of operation (during the day of record) to generate the product;
 - d. the emission factor for the product, in pounds of organic compounds emitted per hour of operation; and
 - e. the total organic compound emission rate, in pounds © x d).
4. The permittee shall collect and record the following information each day for all the products generated in this emissions unit:
 - a. for each day during which any photochemically reactive material was used as a cleanup material and/or for one or more of the products, the total emissions from all products produced that day, in pounds (the summation of A.III.3.e for all products);
 - b. for each day during which no photochemically reactive material was used as a cleanup material and for any of the products, the total emissions from all products produced that day, in pounds (the summation of A.III.3.e for all products); and
 - c. the total number of hours the emissions unit was in operation to produce all the products (not to exceed 24 hours minus the total hours for cleanup).
5. The permittee shall determine the total amount of organic compounds emitted for each cleaning of the emissions unit. The organic compound emissions shall be in units of pounds of organic compounds emitted and shall be determined by material balance. The permittee shall indicate

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whether or not each cleaning of the emissions unit is based upon the use of any photochemically reactive materials. The permittee's calculation of the organic compound emissions for each cleaning shall be submitted to the Ohio EPA Northeast District Office for review and approval.

Each cleaning of the emissions unit shall be performed in accordance with the procedures and assumptions used in the material balance calculations.

6. The permittee shall collect and record the following information each day when cleaning of the emissions unit is performed:
 - a. the company identification for each cleanup material;
 - b. whether or not each cleanup material is a photochemically reactive material;
 - c. the total organic compound emissions from the cleanup materials that are photochemically reactive materials, in pounds per day;
 - d. the total organic compound emissions from the cleanup materials that are not photochemically reactive materials, in pounds per day;
 - e. the number of hours photochemically reactive materials were employed;
 - f. the number of hours nonphotochemically reactive materials were employed (not including hours when photochemically reactive materials and nonphotochemically reactive materials were employed at the same time); and
 - g. the total organic compound emissions from all cleanup materials, in pounds © + d).

7. The permittee shall collect and record the following information each day for this emissions unit:
 - a. for each day during which any photochemically reactive material was used for one or more of the products and/or as a cleanup material, the total daily organic compound emissions from all the cleanup materials that are photochemically reactive materials and all the products, in pounds per day (A.III.4.a + A.III.6.c);
 - b. for each day during which any photochemically reactive material was used for one or more of the products and/or as a cleanup material, the total hourly organic compound emissions from all the cleanup materials that are photochemically reactive materials and all the products, in pounds per hour (A.III.7.a/[A.III.4.c + A.III.6.e]);
 - c. for each day during which any photochemically reactive material was used for one or more of the products and/or as a cleanup material, the total daily organic compound emissions from all the cleanup materials that are not photochemically reactive materials, in pounds per day (A.III.6.d);
 - d. for each day during which no photochemically reactive material was used for any of the products and any of the cleanup materials, the total daily organic compound emissions from all products and all cleanup materials, in pounds per day (A.III.4.b + A.III.6.d); and
 - e. for each day during which no photochemically reactive material was used for any of the products and any of the cleanup materials, the total hourly organic compound emissions from all products and all cleanup materials, in pounds per hour (A.III.7.d/[A.III.4.c + A.III.6.f]).

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8. The permittee shall record annually the total organic compound emissions from this emissions unit and from emissions units P007 through P015, P018 through P020, and P024 through P039, combined. The annual emissions (in tons) for this emissions unit shall be calculated by summing the values from A.III.7.a, A.III.7.c and A.III.7.d for the entire calendar year, and then dividing by 2000.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. For each day during which a photochemically reactive material was employed for one or more of the products and/or as a cleanup material, an identification of each day during which the average hourly organic compound emissions from the emissions unit exceeded 8 pounds per hour, and the actual average hourly organic compound emission rate for each such day.
 - b. For each day during which a photochemically reactive material was employed for one or more of the products and/or as a cleanup material, an identification of each day during which the organic compound emissions from the emissions unit exceeded 40 pounds per day, and the actual organic compound emissions for each such day.
 - c. For each day during which no photochemically reactive material was employed for any of the products and any of the cleanup materials, an identification of each day during which the average hourly organic compound emissions from the emissions unit exceeded 50 pounds per hour, and the actual average hourly organic compound emission rate for each such day.
2. Each year, the permittee shall submit an annual report, by April 30, for the preceding calendar year. Each annual report shall specify the annual organic compound emissions for this emissions unit and for emissions units P007 through P015, P018 through P020, and P024 through P039, combined.

V. Testing Requirements

1. Emission Limitation:

On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit not more than 40 (forty) pounds per day of organic compounds, as defined in OAC rule 3745-21-01.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions.

2. Emission Limitation:

On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit not more than 8 (eight) pounds per hour of organic compounds, as defined in OAC rule 3745-21-01.

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Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required by the Ohio EPA, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or 18.

3. Emission Limitation:
On the days that no photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit no more than 50 (fifty) pounds per hour of organic compounds.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required by the Ohio EPA, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or 18.

4. Emission Limitation:
75 tons OC per year from emissions units P007 through P015, P018 through P020, and P024 through P039, combined.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions.

5. Formulation data shall be used to determine the organic compound contents of the materials employed for each final product and each cleanup material.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P038 - Biotage 400 L, Flash Chromatography System (S-17900)	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (P038) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant potentially emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetone
 TLV (ug/m3): 1188000
 Maximum Hourly Emission Rate (lbs/hr): 13.2

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 968 (EF45) and 874 (EF76)
MAGLC (ug/m3): 118800

Pollutant: acetonitrile

TLV (ug/m3): 67000

Maximum Hourly Emission Rate (lbs/hr): 3.7

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 270 (EF45) and 244 (EF76)

MAGLC (ug/m3): 6700

Pollutant: cyclohexane

TLV (ug/m3): 1030000

Maximum Hourly Emission Rate (lbs/hr): 8.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 601 (EF45) and 543 (EF76)

MAGLC (ug/m3): 103000

Pollutant: ethyl acetate

TLV (ug/m3): 1440000

Maximum Hourly Emission Rate (lbs/hr): 8.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 593 (EF45) and 536 (EF76)

MAGLC (ug/m3): 144000

Pollutant: ethyl alcohol

TLV (ug/m3): 1880000

Maximum Hourly Emission Rate (lbs/hr): 2.7

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 198 (EF45) and 179 (EF76)

MAGLC (ug/m3): 188000

Pollutant: heptane

TLV (ug/m3): 1640000

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 330 (EF45) and 297 (EF76)

MAGLC (ug/m3): 164000

Pollutant: isopropyl acetate

TLV (ug/m3): 1044000

Maximum Hourly Emission Rate (lbs/hr): 6.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 446 (EF45) and 403 (EF76)

MAGLC (ug/m3): 104400

Pollutant: isopropyl alcohol

TLV (ug/m3): 983000

Maximum Hourly Emission Rate (lbs/hr): 2.7

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 197 (EF45) and 178 (EF76)

MAGLC (ug/m3): 98300

Pollutant: methyl alcohol

TLV (ug/m3): 262000

Maximum Hourly Emission Rate (lbs/hr): 4.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 293 (EF45) and 264 (EF76)

MAGLC (ug/m3): 26200

Pollutant: methylene chloride

TLV (ug/m3): 174000

Maximum Hourly Emission Rate (lbs/hr): 36.7

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2689 (EF45) and 2428(EF76)

MAGLC (ug/m3): 17400

Pollutant: toluene

TLV (ug/m3): 188000

Maximum Hourly Emission Rate (lbs/hr): 2.6

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 190 (EF45) and 172 (EF76)

MAGLC (ug/m3): 18800

- * emissions unit will discharge through either egress point EF45 or EF76.

Physical changes to or changes in the method of operation of the emissions unit after its installation could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the

Emissions Unit ID: P038

Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
2. The permittee shall sum the predicted 1-hour maximum ground-level concentrations for each pollutant from emissions units P007 through P015, P018 through P020, and P024 through P039, to demonstrate compliance with the "Air Toxic Policy". This sum shall take into account the actual equipment's operating schedule and equipment utilization. Comparison of the sum to the MAGLC shall be made to demonstrate compliance with the "Air Toxic Policy".

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P039 - 200 Gallon, Glass-Lined Steel Reactor System (R-700)	OAC rule 3745-31-03(A)(3)	See sections A.I.2.a and A.I.2.b below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2).
	OAC rule 3745-21-07(G)(2)	See section A.I.2.c below.

2. Additional Terms and Conditions

- 2.a On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are not employed, applied, evaporated, or dried, the permittee shall emit no more than 50 (fifty) pounds per hour of organic compounds.
- 2.b The emissions of organic compounds from emissions units P007 through P015, P018 through P020, and P024 through P039, combined, shall be limited to 75 (seventy five) tons per year.
- 2.c On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit not more than 40 (forty) pounds per day nor more than 8 (eight) pounds per hour of organic compounds, as defined in OAC rule 3745-21-01. Emissions of organic materials from cleanup with photochemically reactive materials shall be included in the calculation of actual emissions when determining compliance with the 8 pounds per hour and 40 pounds per day limits.

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II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall keep the following daily records for all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state; and
 - b. for any liquid organic materials, whether or not each material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
2. The permittee shall develop an emission factor for the total amount of organic compounds emitted for each product generated in this emissions unit. The emission factors shall be in units of pounds of organic compounds emitted per hour of operation for each product generated. The permittee shall indicate whether or not each emission factor is based upon the use of any photochemically reactive materials. The permittee's calculation of each emission factor shall be submitted to the Ohio EPA Northeast District Office for review and approval.
3. The permittee shall collect and record the following information each day for each product generated in this emissions unit:
 - a. the company identification for the product;
 - b. whether or not any photochemically reactive materials were used to generate the product;
 - c. the hours of operation (during the day of record) to generate the product;
 - d. the emission factor for the product, in pounds of organic compounds emitted per hour of operation; and
 - e. the total organic compound emission rate, in pounds © x d).
4. The permittee shall collect and record the following information each day for all the products generated in this emissions unit:
 - a. for each day during which any photochemically reactive material was used as a cleanup material and/or for one or more of the products, the total emissions from all products produced that day, in pounds (the summation of A.III.3.e for all products);
 - b. for each day during which no photochemically reactive material was used as a cleanup material and for any of the products, the total emissions from all products produced that day, in pounds (the summation of A.III.3.e for all products); and
 - c. the total number of hours the emissions unit was in operation to produce all the products (not to exceed 24 hours minus the total hours for cleanup).
5. The permittee shall determine the total amount of organic compounds emitted for each cleaning of the emissions unit. The organic compound emissions shall be in units of pounds of organic compounds emitted and shall be determined by material balance. The permittee shall indicate whether or not each cleaning of the emissions unit is based upon the use of any photochemically reactive materials. The permittee's calculation of the organic compound emissions for each cleaning shall be submitted to the Ohio EPA Northeast District Office for review and approval.

Each cleaning of the emissions unit shall be performed in accordance with the procedures and assumptions used in the material balance calculations.

6. The permittee shall collect and record the following information each day when cleaning of the emissions unit is performed:
 - a. the company identification for each cleanup material;
 - b. whether or not each cleanup material is a photochemically reactive material;
 - c. the total organic compound emissions from the cleanup materials that are photochemically reactive materials, in pounds per day;
 - d. the total organic compound emissions from the cleanup materials that are not photochemically reactive materials, in pounds per day;
 - e. the number of hours photochemically reactive materials were employed;
 - f. the number of hours nonphotochemically reactive materials were employed (not including hours when photochemically reactive materials and nonphotochemically reactive materials were employed at the same time); and
 - g. the total organic compound emissions from all cleanup materials, in pounds © + d).

7. The permittee shall collect and record the following information each day for this emissions unit:
 - a. for each day during which any photochemically reactive material was used for one or more of the products and/or as a cleanup material, the total daily organic compound emissions from all the cleanup materials that are photochemically reactive materials and all the products, in pounds per day (A.III.4.a + A.III.6.c);
 - b. for each day during which any photochemically reactive material was used for one or more of the products and/or as a cleanup material, the total hourly organic compound emissions from all the cleanup materials that are photochemically reactive materials and all the products, in pounds per hour (A.III.7.a/[A.III.4.c + A.III.6.e]);
 - c. for each day during which any photochemically reactive material was used for one or more of the products and/or as a cleanup material, the total daily organic compound emissions from all the cleanup materials that are not photochemically reactive materials, in pounds per day (A.III.6.d);
 - d. for each day during which no photochemically reactive material was used for any of the products and any of the cleanup materials, the total daily organic compound emissions from all products and all cleanup materials, in pounds per day (A.III.4.b + A.III.6.d); and
 - e. for each day during which no photochemically reactive material was used for any of the products and any of the cleanup materials, the total hourly organic compound emissions

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from all products and all cleanup materials, in pounds per hour (A.III.7.d/[A.III.4.c + A.III.6.f]).

8. The permittee shall record annually the total organic compound emissions from this emissions unit and from emissions units P007 through P015, P018 through P020, and P024 through P039, combined. The annual emissions (in tons) for this emissions unit shall be calculated by summing the values from A.III.7.a, A.III.7.c and A.III.7.d for the entire calendar year, and then dividing by 2000.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. For each day during which a photochemically reactive material was employed for one or more of the products and/or as a cleanup material, an identification of each day during which the average hourly organic compound emissions from the emissions unit exceeded 8 pounds per hour, and the actual average hourly organic compound emission rate for each such day.
 - b. For each day during which a photochemically reactive material was employed for one or more of the products and/or as a cleanup material, an identification of each day during which the organic compound emissions from the emissions unit exceeded 40 pounds per day, and the actual organic compound emissions for each such day.
 - c. For each day during which no photochemically reactive material was employed for any of the products and any of the cleanup materials, an identification of each day during which the average hourly organic compound emissions from the emissions unit exceeded 50 pounds per hour, and the actual average hourly organic compound emission rate for each such day.
2. Each year, the permittee shall submit an annual report, by April 30, for the preceding calendar year. Each annual report shall specify the annual organic compound emissions for this emissions unit and for emissions units P007 through P015, P018 through P020, and P024 through P039, combined.

V. Testing Requirements

1. Emission Limitation:
 On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit not more than 40 (forty) pounds per day of organic compounds, as defined in OAC rule 3745-21-01.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions.

2. Emission Limitation:

On the days that photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit not more than 8 (eight) pounds per hour of organic compounds, as defined in OAC rule 3745-21-01.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required by the Ohio EPA, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or 18.

3. Emission Limitation:

On the days that no photochemically reactive materials, as defined in OAC rule 3745-21-01, are employed, applied, evaporated, or dried, the permittee shall emit no more than 50 (fifty) pounds per hour of organic compounds.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions. If required by the Ohio EPA, compliance shall be demonstrated by emissions testing using U.S. EPA reference Methods 25, 25A, or 18.

4. Emission Limitation:

75 tons OC per year from emissions units P007 through P015, P018 through P020, and P024 through P039, combined.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping required in Section A.III of these terms and conditions.

5. Formulation data shall be used to determine the organic compound contents of the materials employed for each final product and each cleanup material.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P039 - 200 Gallon, Glass-Lined Steel Reactor System (R-700)	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

1. When using chlorine, hydrogen chloride, hydrogen bromide and/or t-butylamine in this emissions unit, a scrubber shall be employed. The pH of the scrubber liquor shall be maintained at a pH of 10 or greater when using chlorine, hydrogen chloride and/or hydrogen bromide. The pH of the scrubber liquor shall be maintained at a pH of 3 or less when using t-butylamine.

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit (P039) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant potentially emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetic acid
 TLV (ug/m3): 25000
 Maximum Hourly Emission Rate (lbs/hr): 0.7
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3)*: 52 (EF45) and 47 (EF76)
 MAGLC (ug/m3): 2500

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Pollutant: acetone

TLV (ug/m³): 1188000

Maximum Hourly Emission Rate (lbs/hr): 10.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 749 (EF45) and 676 (EF76)

MAGLC (ug/m³): 118800

Pollutant: acetonitrile

TLV (ug/m³): 67000

Maximum Hourly Emission Rate (lbs/hr): 2.9

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 209 (EF45) and 189 (EF76)

MAGLC (ug/m³): 6700

Pollutant: t-butylamine

TLV (ug/m³): 11000

Maximum Hourly Emission Rate (lbs/hr): 0.10

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 7 (EF45) and 7 (EF76)

MAGLC (ug/m³): 1100

Pollutant: chlorine

TLV (ug/m³): 1450

Maximum Hourly Emission Rate (lbs/hr): 0.05

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 4 (EF45) and 3 (EF76)

MAGLC (ug/m³): 145

Pollutant: chloroform

TLV (ug/m³): 48834

Maximum Hourly Emission Rate (lbs/hr): 17.9

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1313 (EF45) and 1185 (EF76)

MAGLC (ug/m³): 4883

Pollutant: cyclohexane

TLV (ug/m³): 1030000

Maximum Hourly Emission Rate (lbs/hr): 6.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 465 (EF45) and 420 (EF76)

MAGLC (ug/m³): 103000

Pollutant: diethyl ether

TLV (ug/m³): 1210000

Maximum Hourly Emission Rate (lbs/hr): 30.4

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2231 (EF45) and 2014 (EF76)

MAGLC (ug/m3): 121000

Pollutant: dimethylformamide

TLV (ug/m3): 30000

Maximum Hourly Emission Rate (lbs/hr): 0.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 17 (EF45) and 15 (EF76)

MAGLC (ug/m3): 3000

Pollutant: ethyl acetate

TLV (ug/m3): 1440000

Maximum Hourly Emission Rate (lbs/hr): 6.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 459 (EF45) and 415 (EF76)

MAGLC (ug/m3): 144000

Pollutant: ethyl alcohol

TLV (ug/m3): 1880000

Maximum Hourly Emission Rate (lbs/hr): 2.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 153 (EF45) and 138 (EF76)

MAGLC (ug/m3): 188000

Pollutant: heptane

TLV (ug/m3): 1640000

Maximum Hourly Emission Rate (lbs/hr): 3.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 255 (EF45) and 230 (EF76)

MAGLC (ug/m3): 164000

Pollutant: hydrogen bromide

TLV (ug/m3): 7300

Maximum Hourly Emission Rate (lbs/hr): 0.52

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 38 (EF45) and 34 (EF76)

MAGLC (ug/m3): 730

Pollutant: hydrogen chloride

TLV (ug/m3): 5500

Maximum Hourly Emission Rate (lbs/hr): 0.06

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4 (EF45) and 4 (EF76)

MAGLC (ug/m3): 550

Pollutant: isopropyl acetate

TLV (ug/m3): 1044000

Maximum Hourly Emission Rate (lbs/hr): 4.7

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 345 (EF45) and 312 (EF76)

MAGLC (ug/m3): 104400

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Ricerca

PTI A₁

Issued: 6/5/2003

Emissions Unit ID: P039

Pollutant: isopropyl alcohol

TLV (ug/m³): 983000

Maximum Hourly Emission Rate (lbs/hr): 2.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 153 (EF45) and 138 (EF76)

MAGLC (ug/m³): 98300

Pollutant: methyl alcohol

TLV (ug/m³): 262000

Maximum Hourly Emission Rate (lbs/hr): 3.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 226 (EF45) and 204 (EF76)

MAGLC (ug/m³): 26200

Pollutant: methylamyl alcohol

TLV (ug/m³): 104000

Maximum Hourly Emission Rate (lbs/hr): 0.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 11 (EF45) and 10 (EF76)

MAGLC (ug/m³): 10400

Pollutant: methylene chloride

TLV (ug/m³): 174000

Maximum Hourly Emission Rate (lbs/hr): 15.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1100 (EF45) and 993 (EF76)

MAGLC (ug/m³): 17400

Pollutant: methyl tert butyl ether

TLV (ug/m³): 144000

Maximum Hourly Emission Rate (lbs/hr): 8.7

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 638 (EF45) and 576 (EF76)

MAGLC (ug/m³): 14400

Pollutant: pyridine

TLV (ug/m³): 16000

Maximum Hourly Emission Rate (lbs/hr): 1.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 92 (EF45) and 83 (EF76)

MAGLC (ug/m³): 1600

Pollutant: tetrahydrofuran

TLV (ug/m³): 590000

Maximum Hourly Emission Rate (lbs/hr): 8.9

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 652 (EF45) and 588 (EF76)

MAGLC (ug/m³): 59000

Pollutant: toluene

TLV (ug/m³): 188000

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 147 (EF45) and 133 (EF76)

MAGLC (ug/m³): 18800

* emissions unit will discharge through either egress point EF45 or EF76.

Physical changes to or changes in the method of operation of the emissions unit after its installation could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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2. The permittee shall sum the predicted 1-hour maximum ground-level concentrations for each pollutant from emissions units P007 through P015, P018 through P020, and P024 through P039, to demonstrate compliance with the "Air Toxic Policy". This sum shall take into account the actual equipment's operating schedule and equipment utilization. Comparison of the sum to the MAGLC shall be made to demonstrate compliance with the "Air Toxic Policy".
3. The permittee shall monitor the pH of the scrubber liquor while the emissions unit is being operated using chlorine, hydrogen chloride, hydrogen bromide and/or t-butylamine. The permittee shall collect and record the following information:
 - a. The pH of the scrubber liquor before and after each reaction. The pH of the scrubber liquor before and after some reactions, i.e., those reactions where the operators know before the reaction takes place (based upon operating experience) that the pH will be within the limits specified in term B.II.1, may be based on the stoichiometry of the reactions.
 - b. A log or record of operating time for the emissions unit and the scrubber.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None