State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
MONTGOMERY COUNTY

Street Address:
122 S. Front Street
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329
Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 08-04232

DATE: 7/24/2001

ChemFirst Fine Chemicals Inc
Aaron Smith
1515 Nicholas Rd
Dayton, OH 454182700

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,

Thomas G. Rigo

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

CC: **USEPA** **RAPCA**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 7/24/2001**
Terms and Conditions	**Effective Date: 7/24/2001**

FINAL PERMIT TO INSTALL 08-04232

Application Number:	08-04232
APS Premise Number:	0857040727
Permit Fee:	**$600**
Name of Facility:	ChemFirst Fine Chemicals Inc
Person to Contact:	Aaron Smith
Address:	1515 Nicholas Rd Dayton, OH 454182700

Location of proposed air contaminant source(s) [emissions unit(s)]:
1515 Nicholas Rd
Dayton, **Ohio**

Description of proposed emissions unit(s):
HF-600 centrifuge system, 2 conical dryers.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

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

3. Records Retention Requirements

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

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

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

6. Permit Transfers

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

7. Air Pollution Nuisance

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

8. Termination of Permit to Install

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

9. Construction of New Sources(s)

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

Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

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

10. Public Disclosure

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

11. Applicability

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

12. Best Available Technology

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

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

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

14. Construction Compliance Certification

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

15. Fees

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

B. Permit to Install Summary of Allowable Emissions

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

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

Pollutant	Tons Per Year
OC	5.43
Individual HAPS	9.9
Combined HAPS	24.9

Emissions Unit ID: **P025**

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

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P025 - Conical Dryer D3 system which includes XS-200 dryer condenser, 300 gallon T-67 receiver, XS-400-1 condenser, 500 gallon 3P receiver, and activated carbon bed	OAC rule 3745-31-05(A)(3)	0.40 lb OC/hr, 9.9 lbs OC/day and 1.81 TPY See A.2.a
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-35-07(B)	See A.2.b

2. Additional Terms and Conditions

2.a Emissions of organic compounds from the common carbon adsorption unit serving emissions units P025 (D3 dryer system), P026 (D5 dryer system), and P027 (HF-600 centrifuge system) shall not exceed a total combined allowable emission rate of:

	pounds/hour	pounds/day	TPY
P025	0.4	9.9	1.81
P026	0.4	9.9	1.81
P027	0.4	9.9	1.81
Total OC	1.2	29.7	5.43

2.b The emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 0.825 ton/month (1650 lbs/month, 9.9 TPY) for any individual HAP and 2.075 tons/month(4150 lbs/month, 24.9 TPY) for any combination of HAPs.

2.c Within 180 days of the effective date of this permit, the permittee shall submit an operational and maintenance plan for the carbon adsorption unit which describes the monitoring of the removal efficiency and the carbon adsorption change-out procedures.

2.d Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous organic compound (VOC) monitoring system designed to ensure continuous valid and representative readings of organic compounds (VOC). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality/assurance/quality control plan and a logbook dedicated to the continuous organic compound (VOC) monitoring system must be kept on site and available for inspection during regular office hours.

2.e Within 180 days of the effective date of this permit, the permittee shall identify, purchase, and install an OC (VOC) analyzer and a gas flow meter on the vent line from the carbon absorber. Until this equipment is certified, daily sampling, monitoring, and record keeping by the Drager tube method shall be conducted.

B. Operational Restrictions

1. The permittee shall employ a carbon adsorption unit and maintain an overall removal efficiency at or above 95% while the emissions unit is in operation.

2. The condensers installed for the Conical Dryer D3 process are not operated primarily to control OC (VOC) loss. The units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent that is evolved during the drying process and returning it to the T-67 receiver and the 3P receiver tank. The solvent reflux condensers predominantly function to regulate and control the physical and chemical reaction that takes place in the affected equipment. In order to ensure that the condensers are operating properly to reflux solvent, the coolant shall be flowing to each condenser during the full duration of a batch.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the OC (VOC) emission rates in the exhaust gases from the carbon adsorber when the emissions unit is in operation. The organic monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix

B, Performance Specification 8 or Performance Specification 9. Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9. The organic monitoring device and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (VOC) from this emissions unit in units of lb OC/hr. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous organic compound (VOC) monitoring system including, but not limited to, parts per million organic compound (VOC) on an instantaneous (one-minute) basis, emissions of organic compound (VOC) in units of lbs/hr in the appropriate averaging period (e.g., hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

3. The permittee shall monitor and record that coolant is flowing to each condenser at the beginning and at the end of each batch operation.

4. The company has sufficient records to demonstrate compliance with the HAPs limitation for the initial months of operation. To determine continual compliance, the permittee shall collect and record the following information each month:

a. The number of pounds of each organic material employed, on a facility-wide basis.

b. The hazardous air pollutant (HAP) content of each organic material, in pounds.

c. The total uncontrolled HAP emission rate for each HAP determined by summing the emissions generated from the individual processes, storage tanks, and loading operations based on actual production data and engineering calculations or monitoring/testing data.

d. The total controlled HAP emission rate, for each HAP, in tons per month determined by summing emissions generated from the individual processes, storage tanks, and loading operations based on actual production data and engineering calculations or monitoring/testing data and the overall control efficiency for each process. (from the most

recent performance test that demonstrated that the emissions unit was in compliance).

e. The total combined HAP emissions from all material produced, in tons.

* A listing of the Hazardous Air Pollutants (HAPs) can be found in Section 112 (b) of the Clean Air Act or can be obtained by contacting your Ohio EPA office or local air agency contact.

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

Pollutant: Methylene Chloride

TLV (mg/m3): 173.68

Maximum Hourly Emission Rate (lbs/hr) = 1.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3) = 206.8

MAGLC (ug/m3): 4130

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

a. changes in the composition of the materials used, 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) defines 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 permitteee 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.

Within two weeks of performing the evaluation to determine if the changed emissions unit will still satisfy the "Air Toxic Policy", the permittee shall submit a report to the Regional Air Pollution Control Agency (RAPCA) which describes the parameters changed, the determination of the evaluation, and a copy of the computer model runs.

D. Reporting Requirements

1. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of organic compound (VOC) values in excess of the applicable limits specified in OAC Chapter 3745-21 or any limitations specified in the terms and conditions of this permit.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous organic compound(VOC) monitoring system downtime while the emissions unit was on-line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of source and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

2. The permittee shall submit quarterly deviation (excursion) reports which identify the following:

   a. each hour during which the organic compound emissions exceeded 1.2 lbs/hr and 29.7 lbs/day from the carbon adsorption unit;

   b. each month during which the emissions of individual HAPs from the facility exceeded 1650 lbs and the actual monthly emissions of the individual HAPs for each such month.

   c. each month during which the emissions of combined HAPs from the facility exceeded 4150 lbs and the actual monthly emissions of combined HAPs for each such month.

3. The facility shall submit annual reports to the Director (appropriate District Office or local air agency) which specify the total OC (VOC) emissions, the individual HAPs emissions, and the total HAPs emissions, on a facility-wide basis. These reports shall be submitted by January 31 of each calendar year.

E. Testing Requirements

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

   a. Emission Limitation-
   0.40 lb OC/hr

   Applicable Compliance Method-
   This limitation is based on the following:

   Assumption: inert gas streams (air or nitrogen) become saturated withMeCl2, resulting in molar concentrations in the total stream at atmospheric pressure) of:

   Mole Fraction MeCl2 = 160 mmHg/760 mmHg = 0.21
   Mole Fraction Inert Gas = 1 - (160 mmHg/760 mmHg) = 0.79

   System Volume = 168 cubic feet

   Maximum air leakage = 4.3 pounds of air/hour

   Mole flow of air = Air Leakage Rate (lbs/hr)/ 29 pounds/mole*
   *1 mole of air = 29 lbs of air

Mole flow of air = 4.3 lbs/hr / 29 lbs/mole = 0.148 moles/hr

A nitrogen purge is sometimes desired to assist the last stages of drying. At a maximum nitrogen purge flow of 1.3 SCFM:

Mole flow of nitrogen = (1.3 SCFM)(60 min/hr)(mole/359 SCF**) = 0.217 moles/hr
** 1 mole of gas occupies 359 standard cubic feet at standard temperature/pressure

Total non-condensable mole flow = mole flow of air + mole flow of nitrogen = 0.148 moles/hr + 0.217 moles/hr = 0.365 moles/hr

Total saturated molar flow = (0.365 moles/hr)/0.79 mole fraction of air) = 0.46 moles/hr

Mole Fraction of MeCl2 = 0.21, so mole flow of MeCl2 = (0.21)(0.46 moles/hr) = 0.0966 mole/hr

Weight of MeCl2 to carbon post treatment = (0.0966 mole/hr)(84.94 lbs/mole) = 8.21 lbs/hr

Carbon treatment, 95% control efficiency
(8.21 lbs/hr)(1- 0.95) = 0.40 lb/hr

Since this limitation is based on the maximum capacity of the system and full saturation of inert gas flow with methylene chloride vapor, compliance is assumed if compliance with the combined organic compound limitation of 1.20 lb/hr for emissions units P025, P026, and P027 is maintained.

b. Emission Limitation-
9.9 lbs OC/day

Applicable Compliance Method-
This emission limitation was developed by multiplying the maximum hourly emission rate of 0.40 lb/hr by 24 hrs/day.

c. Emission Limitation-
1.81 TPY OC

Applicable Compliance Method-
The emission limitation was developed by multiplying 0.40 lb/hr by 8760 hrs/yr and

dividing by 2000 lbs/ton.

d. Emission Limitation-
The combined OC (VOC) emission rate for P025, P026, and P027 shall not exceed 1.20 lbs/hr at the exhaust for the common carbon adsorber unit.

Applicable Compliance Method-
Compliance shall be determined by stack testing and by an OC (VOC) continuous emission monitoring (CEM) system.

e. Emission Limitation-
The combined OC (VOC) emission rate for P025, P026, and P027 shall not exceed 29.7 lbs/day at the exhaust for the common carbon adsorber unit.

Applicable Compliance Method-
Compliance shall be determined by multiplying the maximum hourly emission rate determined by the CEM, for P025, P026, and P027 combined, and multiplying by 24 hours/day.

f. Emission Limitation-
The combined OC (VOC) emission rate for P025, P026, and P027 shall not exceed 5.43 TPY at the exhaust for the common carbon adsorber unit.

Applicable Compliance Method-
Compliance shall be determined by summing the 365 daily emission rates, for the calendar year, as determined in E.1.e. and dividing by 2000 lbs/ton.

g. Emission Limitation-
0.825 ton/month (9.9 TPY) for individual HAPs

Applicable Compliance Method-
Compliance shall be determined by record keeping as described in Section C.4.

h. Emission Limitation-
2.075 tons/month (24.9 TPY) for total HAPs

Applicable Compliance Method-
Compliance shall be determined by record keeping as described in Section C.4.

2. Certification of the Continuous Monitoring Device

Prior to the installation of the continuous organic compound (VOC) monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed volatile organic compound detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the volatile organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 6.

Within 60 days of CEM installation, the permittee shall conduct certification of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous organic compound(VOC) monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6.

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

   a. The emission testing shall be conducted within 3 months after permit issuance.

   b. The emission testing shall be conducted to demonstrate compliance with the combined 1.20 lbs OC/hr limitation for P025, P026, and P027, and an overall control efficiency for OC (VOC) of 95%.

   c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25, Method 25A, or Method 18. The test method(s) which must be employed to demonstrate compliance with the 95% overall control efficiency limitation are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

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

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

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

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

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

F. Miscellaneous Requirements

1. Sections A., B., C.1.-4., D. and E. above are federally enforceable.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P026 - Conical Dryer D5 system which includes the dryer condenser, D-5 200 gallon receiver, XS-400-1 condenser, a 500 gallon 3P receiver and the activated carbon bed	OAC rule 3745-31-05(A)(3)	0.40 lb OC/hr, 9.9 lbs OC/day and 1.81 TPY See A.2.a
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-35-07(B)	See A.2.b

2. Additional Terms and Conditions

2.a Emissions of organic compounds from the common carbon adsorption unit serving emissions units P025 (D3 dryer system), P026 (D5 dryer system), and P027 (HF-600 centrifuge system) shall not exceed a total combined allowable emission rate of:

	pounds/hour	pounds/day	TPY
P025	0.40	9.9	1.81
P026	0.40	9.9	1.81
P027	0.40	9.9	1.81

Total OC	1.2	29.7	5.43

2.b The emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 0.825 ton/month (1650 lbs/month, 9.9 TPY) for any individual HAP and 2.075 tons/month (4150 lbs/month, 24.9 TPY) for any combination of HAPs.

2.c Within 180 days of the effective date of this permit, the permittee shall submit an operational and maintenance plan for the carbon adsorption unit which describes the monitoring of the removal efficiency and the carbon adsorption change-out procedures.

2.d Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous organic compound (VOC) monitoring system designed to ensure continuous valid and representative readings of organic compounds (VOC). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality/assurance/quality control plan and a logbook dedicated to the continuous organic compound (VOC) monitoring system must be kept on site and available for inspection during regular office hours.

2.e Within 180 days of the effective date of this permit, the permittee shall identify, purchase, and install an OC (VOC) analyzer and a gas flow meter on the vent line from the carbon absorber. Until this equipment is certified, daily sampling, monitoring, and record keeping by the Drager tube method shall be conducted.

B. Operational Restrictions

1. The permittee shall employ a carbon adsorption unit and maintain a removal efficiency at or above 95% while the emissions unit is in operation.

2. The condensers installed for the Conical Dryer D5 process are not operated primarily to control OC (VOC) loss. The units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent that is evolved during the drying process and returning it to the KO Pot and the 3P receiver tank. The solvent reflux condensers predominantly function to regulate and control the physical and chemical reaction that takes place in the affected equipment. In order to ensure that the condensers are operating properly to reflux solvent, the coolant shall be flowing to each condenser during the full duration of a batch.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the OC (VOC) concentrations in the exhaust gases from the carbon adsorber when the emissions unit is in operation. The organic monitoring device and recorder

shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device

and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9. The organic monitoring device and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (VOC) from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

   The permittee shall maintain records of all data obtained by the continuous organic compound (VOC) monitoring system including, but not limited to, parts per million organic compound (VOC) on an instantaneous (one-minute) basis, emissions of organic compound (VOC) in units of the applicable standard in the appropriate averaging period (e.g., hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

3. The permittee shall monitor and record that coolant is flowing to each condenser at the beginning and at the end of each batch operation.

4. The company has sufficient records to demonstrate compliance with the HAPs limitation for the initial months of operation. To determine continual compliance, the permittee shall collect and record the following information each month:

   a. The number of pounds of each organic material employed, on a facility-wide basis.

   b. The hazardous air pollutant (HAP) content of each organic material, in pounds.

   c. The total uncontrolled HAP emission rate for each HAP determined by summing the emissions generated from the individual processes, storage tanks, and loading operations based on actual production data and engineering calculations or monitoring/testing data.

   d. The total controlled HAP emission rate, for each HAP, in tons per month determined by summing emissions generated from the individual processes, storage tanks, and loading operations based on actual production data and engineering calculations or monitoring/testing data and the overall control efficiency for each process. (from the most

recent performance test that demonstrated that the emissions unit was in compliance).

e. The total combined HAP emissions from all material produced, in tons.

* A listing of the Hazardous Air Pollutants (HAPs) can be found in Section 112 (b) of the Clean Air Act or can be obtained by contacting your Ohio EPA office or local air agency contact.

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

Pollutant: Methylene Chloride

TLV (mg/m3): 173.68

Maximum Hourly Emission Rate (lbs/hr) = 1.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3) = 206.8

MAGLC (ug/m3): 4130

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

a. changes in the composition of the materials used, 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) defines 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.

Within two weeks of performing the evaluation to determine if the changed emissions unit will still satisfy the "Air Toxic Policy", the permittee shall submit a report to the Regional Air Pollution Control Agency (RAPCA) which describes the parameters changed, the determination of the evaluation, and a copy of the computer model runs.

D. Reporting Requirements

1. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of organic compound (VOC) values in excess of the applicable limits specified in OAC Chapter 3745-21 or any limitations specified in the terms and conditions of this permit.

   The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous organic compound (VOC) monitoring system downtime while the emissions unit was on-line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of source and control equipment malfunctions.

Emissions Unit ID: **P026**

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

2. The permittee shall submit quarterly deviation (excursion) reports which identify the following:

   a. each hour during which the organic compound emissions exceeded 1.2 lbs/hr and 29.7 lbs/day from the carbon adsorption unit;

   b. each month during which the emissions of individual HAPs from the facility exceeded 1650 lbs and the actual monthly emissions of the individual HAPs for each such month.

   c. each month during which the emissions of combined HAPs from the facility exceeded 4150 lbs and the actual monthly emissions of combined HAPs for each such month.

3. The facility shall submit annual reports to the Director (appropriate District Office or local air agency) which specify the total OC (VOC) emissions, the individual HAPs emissions, and the total HAPs emissions, on a facility-wide basis. These reports shall be submitted by January 31 of each calendar year.

E. Testing Requirements

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

   a. Emission Limitation-
   0.40 lb OC/hr

   Applicable Compliance Method-
   This emissions is based on the following:

   Assumption: inert gas streams (air or nitrogen) become saturated withMeCl2, resulting in molar concentrations in the total stream at atmospheric pressure) of:

   Mole Fraction MeCl2 = 160 mmHg/760 mmHg = 0.21

Mole Fraction Inert Gas = 1 - (160 mmHg/760 mmHg) = 0.79

System Volume = 168 cubic feet

Maximum air leakage = 4.3 pounds of air/hour

Mole flow of air = Air Leakage Rate (lbs/hr)/ 29 pounds/mole*
*1 mole of air = 29 lbs of air

Mole flow of air = 4.3 lbs/hr / 29 lbs/mole = 0.148 moles/hr

A nitrogen purge is sometimes desired to assist the last stages of drying. At a maximum nitrogen purge flow of 1.3 SCFM:

Mole flow of nitrogen = (1.3 SCFM)(60 min/hr)(mole/359 SCF**) = 0.217 moles/hr
** 1 mole of gas occupies 359 standard cubic feet at standard temperature/pressure

Total non-condensable mole flow = mole flow of air + mole flow of nitrogen = 0.148 moles/hr + 0.217 moles/hr = 0.365 moles/hr

Total saturated molar flow = (0.365 moles/hr)/0.79 mole fraction of air) = 0.46 moles/hr

Mole Fraction of MeCl2 = 0.21, so mole flow of MeCl2 = (0.21)(0.46 moles/hr) = 0.0966 mole/hr

Weight of MeCl2 to carbon post treatment = (0.0966 mole/hr)(84.94 lbs/mole) = 8.21 lbs/hr

Carbon treatment, 95% control efficiency
(8.21 lbs/hr)(1- 0.95) = 0.40 lb/hr

Since this limitation is based on the maximum capacity of the system and full saturation of inert gas flow with methylene chloride vapor, compliance is assumed if compliance with the combined organic compound limitation of 1.20 lb/hr for emissions units P025, P026, and P027 is maintained.

b. Emission Limitation-
9.9 lbs OC/day

Applicable Compliance Method-
This emission limitation was developed by multiplying the maximum hourly emission rate of 0.40 lb/hr by 24 hrs/day.

c. Emission Limitation-
1.81 TPY OC

Applicable Compliance Method-
The emission limitation was developed by multiplying 0.40 lb/hr by 8760 hrs/yr and dividing by 2000 lbs/ton.

d. Emission Limitation-
The combined OC (VOC) emission rate for P025, P026, and P027 shall not exceed 1.20 lbs/hr at the exhaust for the common carbon adsorber unit.

Applicable Compliance Method-
Compliance shall be determined by stack testing and by an OC (VOC) continuous emission monitoring (CEM) system.

e. Emission Limitation-
The combined OC (VOC) emission rate for P025, P026, and P027 shall not exceed 29.7 lbs/day at the exhaust for the common carbon adsorber unit.

Applicable Compliance Method-
Compliance shall be determined by multiplying the maximum hourly emission rate determined by the CEM, for P025, P026, and P027 combined, and multiplying by 24 hours/day.

f. Emission Limitation-
The combined OC (VOC) emission rate for P025, P026, and P027 shall not exceed 5.43 TPY at the exhaust for the common carbon adsorber unit.

Applicable Compliance Method-
Compliance shall be determined by summing the 365 daily emission rates, for the calendar year, as determined in E.1.e. and dividing by 2000 lbs/ton.

g. Emission Limitation-
0.825 ton/month (9.9 TPY) for individual HAPs

Applicable Compliance Method-
Compliance shall be determined by record keeping as described in Section C.4.

h. Emission Limitation-
2.075 tons/month (24.9 TPY) for total HAPs

Applicable Compliance Method-
Compliance shall be determined by record keeping as described in Section C.4.

2. <u>Certification of the Continuous Monitoring Device</u>

Prior to the installation of the continuous organic compound (VOC) monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 6 for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed volatile organic compound detection principle (flame ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the volatile organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 6.

Within 60 days of CEM installation, the permittee shall conduct certification of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous organic compound(VOC) monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6.

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

   a. The emission testing shall be conducted within 3 months after permit issuance.

   b. The emission testing shall be conducted to demonstrate compliance with the combined 1.20 lbs OC/hr limitation for P025, P026, and P027, and an overall control efficiency for OC (VOC) of 95%.

   c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25, Method 25A, or Method 18. The test method(s) which must be employed to demonstrate compliance with the 95% overall control efficiency limitation are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

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

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

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

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

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

F. Miscellaneous Requirements

1. Sections A., B., C.1.-4., D. and E. above are federally enforceable.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P027 - HF-600 centrifuge system, 500 gallon slurry tank TG-500-1, 1500 gallon 2P tank, 1000 gallon knock-out pot, 3-R condenser, 2900 gallon 4Q filtrate receiver, 4Q condenser, 2600 gallon filtrate receiver, and activated carbon bed	OAC rule 3745-31-05(A)(3)	0.40 lb OC/hr, 9.9 lbs OC/day and 1.81 TPY See A.2.a
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-35-07(B)	See A.2.b

2. Additional Terms and Conditions

2.a Emissions of organic compounds from the common carbon adsorption unit serving emissions units P025 (D3 dryer system), P026 (D5 dryer system), and P027 (HF-600 centrifuge system) shall not exceed a total combined allowable emission rate of:

	pounds/hour	pounds/day	TPY
P025	0.4	9.9	1.81
P026	0.4	9.9	1.81
P027	0.4	9.9	1.81

Total OC	1.2	29.7	5.43

2.b The emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 0.825 ton/month (1650 lbs/month, 9.9 TPY) for any individual HAP and 2.075 tons/month(4150 lbs/month, 24.9 TPY) for any combination of HAPs.

2.c Within 180 days of the effective date of this permit, the permittee shall submit an operational and maintenance plan for the carbon adsorption unit which describes the monitoring of the removal efficiency and the carbon adsorption change-out procedures.

2.d Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous organic compound (VOC) monitoring system designed to ensure continuous valid and representative readings of organic compounds (VOC). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality/assurance/quality control plan and a logbook dedicated to the continuous organic compound (VOC) monitoring system must be kept on site and available for inspection during regular office hours.

2.e Within 180 days of the effective date of this permit, the permittee shall identify, purchase, and install an OC (VOC) analyzer and a gas flow meter on the vent line from the carbon absorber. Until this equipment is certified, daily sampling, monitoring, and record keeping by the Drager tube method shall be conducted.

B. Operational Restrictions

1. The permittee shall employ a carbon adsorption unit and maintain a removal efficiency at or above 95% while the emissions unit is in operation.

2. The condensers installed for the HF-600 process are not operated primarily to control OC (VOC) loss. The units are operated as reflux condensers with the primary purpose of capturing and condensing any solvent that is evolved during the mixing process and returning it to the 3R receiver tank and the 4Q receiver tank. The solvent reflux condensers predominantly function to regulate and control the physical and chemical reaction that takes place in the affected equipment. In order to ensure that the condensers are operating properly to reflux solvent, the coolant shall be flowing to each condenser during the full duration of a batch.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous organic monitoring device and recorder which measures and records the OC (VOC) concentrations in the exhaust gases from the carbon adsorber when the emissions unit is in operation. The organic monitoring device and recorder

shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 8 or Performance Specification 9. Prior to any compliance demonstration, the permittee shall demonstrate that the organic monitoring device and recorder satisfy the requirements of Performance Specification 8 or Performance Specification 9. The organic monitoring device and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

2. The permittee shall operate and maintain equipment to continuously monitor and record organic compound (VOC) from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

   The permittee shall maintain records of all data obtained by the continuous OC (VOC) monitoring system including, but not limited to, parts per million OC (VOC) on an instantaneous (one-minute) basis, emissions of OC (VOC) in units of the applicable standard in the appropriate averaging period (e.g., hourly), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

3. The permittee shall monitor and record that coolant is flowing to each condenser at the beginning and at the end of each batch operation.

4. The company has sufficient records to demonstrate compliance with the HAPs limitation for the initial months of operation. To determine continual compliance, the permittee shall collect and record the following information each month:

   a. The number of pounds of each organic material employed, on a facility-wide basis.

   b. The hazardous air pollutant (HAP) content of each organic material, in pounds.

   c. The total uncontrolled HAP emission rate for each HAP determined by summing the emissions generated from the individual processes, storage tanks, and loading operations based on actual production data and engineering calculations or monitoring/testing data.

   d. The total controlled HAP emission rate, for each HAP, in tons per month determined by

summing emissions generated from the individual processes, storage tanks, and loading operations based on actual production data and engineering calculations or monitoring/testing data and the overall control efficiency for each process. (from the most recent performance test that demonstrated that the emissions unit was in compliance).

e. The total combined HAP emissions from all material produced, in tons.

* A listing of the Hazardous Air Pollutants (HAPs) can be found in Section 112 (b) of the Clean Air Act or can be obtained by contacting your Ohio EPA office or local air agency contact.

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

Pollutant: Methylene Chloride

TLV (mg/m3): 173.68

Maximum Hourly Emission Rate (lbs/hr) = 1.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3) = 206.8

MAGLC (ug/m3): 4130

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

a. changes in the composition of the materials used, 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) defines 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.

Within two weeks of performing the evaluation to determine if the changed emissions unit will still satisfy the "Air Toxic Policy", the permittee shall submit a report to the Regional Air Pollution Control Agency (RAPCA) which describes the parameters changed, the determination of the evaluation, and a copy of the computer model runs.

D. Reporting Requirements

1. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of organic compound (VOC) values in excess of the applicable limits specified in OAC Chapter 3745-21 or any limitations specified in the terms and conditions of this permit.

   The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any continuous OC (VOC) monitoring system downtime while the emissions unit was on-line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of source and control equipment malfunctions. The total operating time

of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

2. The permittee shall submit quarterly deviation (excursion) reports which identify the following:

   a. each hour during which the organic compound emissions exceeded 1.2 lbs/hr and 29.7 lbs/day from the carbon adsorption unit;

   b. each month during which the emissions of individual HAPs from the facility exceeded 1650 lbs and the actual monthly emissions of the individual HAPs for each such month.

   c. each month during which the emissions of combined HAPs from the facility exceeded 4150 lbs and the actual monthly emissions of combined HAPs for each such month.

3. The facility shall submit annual reports to the Director (appropriate District Office or local air agency) which specify the total OC emissions, the individual HAPs emissions, and the total HAPs emissions, on a facility-wide basis. These reports shall be submitted by January 31 of each calendar year.

E. Testing Requirements

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

   a. Emission Limitation-
   0.40 lb OC/hr

   Applicable Compliance Method-
   This emissions is based on the following:

   Assumption: inert gas streams (air or nitrogen) become saturated withMeCl2, resulting in molar concentrations in the total stream at atmospheric pressure) of:

   Mole Fraction MeCl2 = 160 mmHg/760 mmHg = 0.21

Mole Fraction Inert Gas = 1 - (160 mmHg/760 mmHg) = 0.79

System Volume = 168 cubic feet

Maximum air leakage = 4.3 pounds of air/hour

Mole flow of air = Air Leakage Rate (lbs/hr)/ 29 pounds/mole*
*1 mole of air = 29 lbs of air

Mole flow of air = 4.3 lbs/hr / 29 lbs/mole = 0.148 moles/hr

A nitrogen purge is sometimes desired to assist the last stages of drying. At a maximum nitrogen purge flow of 1.3 SCFM:

Mole flow of nitrogen = (1.3 SCFM)(60 min/hr)(mole/359 SCF**) = 0.217 moles/hr
** 1 mole of gas occupies 359 standard cubic feet at standard temperature/pressure

Total non-condensable mole flow = mole flow of air + mole flow of nitrogen = 0.148 moles/hr + 0.217 moles/hr = 0.365 moles/hr

Total saturated molar flow = (0.365 moles/hr)/0.79 mole fraction of air) = 0.46 moles/hr

Mole Fraction of MeCl2 = 0.21, so mole flow of MeCl2 = (0.21)(0.46 moles/hr) = 0.0966 mole/hr

Weight of MeCl2 to carbon post treatment = (0.0966 mole/hr)(84.94 lbs/mole) = 8.21 lbs/hr

Carbon treatment, 95% control efficiency
(8.21 lbs/hr)(1- 0.95) = 0.40 lb/hr

Since this limitation is based on the maximum capacity of the system and full saturation of inert gas flow with methylene chloride vapor, compliance is assumed if compliance with the combined organic compound limitation of 1.20 lb/hr for emissions units P025, P026, and P027 is maintained.

b. Emission Limitation-
9.9 lbs OC/day

Applicable Compliance Method-

This emission limitation was developed by multiplying the maximum hourly emission rate of 0.40 lb/hr by 24 hrs/day.

c. Emission Limitation-
1.81 TPY OC

Applicable Compliance Method-
The emission limitation was developed by multiplying 0.40 lb/hr by 8760 hrs/yr and dividing by 2000 lbs/ton.

d. Emission Limitation-
The combined OC (VOC) emission rate for P025, P026, and P027 shall not exceed 1.20 lbs/hr at the exhaust for the common carbon adsorber unit.

Applicable Compliance Method-
Compliance shall be determined by stack testing and by an OC (VOC) continuous emission monitoring (CEM) system.

e. Emission Limitation-
The combined OC (VOC) emission rate for P025, P026, and P027 shall not exceed 29.7 lbs/day at the exhaust for the common carbon adsorber unit.

Applicable Compliance Method-
Compliance shall be determined by multiplying the maximum hourly emission rate determined by the CEM and multiplying by 24 hour/day.

f. Emission Limitation-
The combined OC (VOC) emission rate for P025, P026, and P027 shall not exceed 5.43 TPY at the exhaust for the common carbon adsorber unit.

Applicable Compliance Method-
Compliance shall be determined by the summation of the daily emission rates.

g. Emission Limitation-
0.825 ton/month (9.9 TPY) for individual HAPs

Applicable Compliance Method-
Compliance shall be determined by record keeping as described in Section C.4.

h. Emission Limitation-
2.075 tons/month (24.9 TPY) for total HAPs

Applicable Compliance Method-
Compliance shall be determined by record keeping as described in Section C.4.

2. <u>Certification of the Continuous Monitoring Device</u>

Prior to the installation of the continuous organic compound (VOC) monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance

Specification 6 for approval by the Ohio EPA, Central Office. The permittee also shall submit documentation supporting the proposed volatile organic compound detection principle (flame

ionization (FI), photoionization (PI), nondispersive infrared absorption (NDIR), or other detection principle) that is appropriate for the volatile organic compound species present in the emission gases and that meets all requirements of 40 CFR Part 60, Appendix B, Performance Specification 6.

Within 60 days of CEM installation, the permittee shall conduct certification of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6. Personnel from the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the appropriate Ohio EPA District Office or local air agency office within 30 days after the test is completed. Copies of the test results shall be sent to the appropriate Ohio EPA District Office or local air agency and the Ohio EPA, Central Office. Certification of the continuous organic compound(VOC) monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 6.

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

   a. The emission testing shall be conducted within 3 months after permit issuance.

   b. The emission testing shall be conducted to demonstrate compliance with the combined 1.20 lbs OC/hr limitation for P025, P026, and P027, and an overall control efficiency for OC (VOC) of 95%.

   c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25, Method 25A, or Method 18. The test method(s) which must be employed to demonstrate compliance with the 95% overall control efficiency limitation are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

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

      The overall control efficiency (i.e., the percent reduction in mass emissions between the outlet of the dryer and the outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., "the mass balance protocol approved on 10/25/95"). The

test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

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

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

F. Miscellaneous Requirements

1. Sections A., B., C.1.-4., D. and E. above are federally enforceable.

NEW SOURCE REVIEW FORM B

PTI Number: 08-04232 Facility ID: 0857040727

FACILITY NAME ChemFirst Fin Chemicals Inc

FACILITY DESCRIPTION HF-600 centrifuge system, 2 conical dryers. CITY/TWP Dayton

SIC CODE 2821 SCC CODE 30101820 EMISSIONS UNIT ID P025

EMISSIONS UNIT DESCRIPTION Conical Dryer D3 system which includes XS-200 dryer condenser, 300 gallon T-67 receiver, XS-400-1 condenser, 500 gallon 3P receiver, and activated carbon bed

DATE INSTALLED 1997

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM_{10}					
Sulfur Dioxide					
Organic Compounds	lb/hr	0.40	1.81	0.40	1.81
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination: Compliance with the limitations specified in the permit, control by a carbon adsorber, record keeping, CEM monitoring

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? x YES ____ NO

IDENTIFY THE AIR CONTAMINANTS: methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04232 Facility ID: 0857040727

FACILITY NAME ChemFirst Fin Chemicals Inc

FACILITY DESCRIPTION HF-600 centrifuge system, 2 conical dryers, CITY/TWP Dayton

Emissions Unit ID: **P027**

SIC CODE 2821 SCC CODE 30101820 EMISSIONS UNIT ID P026

EMISSIONS UNIT DESCRIPTION Conical Dryer D5 system which includes the dryer condenser, D-5 200 gallon receiver, XS-400-1 condenser, a 500 gallon 3P receiver and the activated carbon bed

DATE INSTALLED 1997

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM_{10}					
Sulfur Dioxide					
Organic Compounds	lb/hr	0.40	1.81	0.40	1.81
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination: Compliance with the limitations specified in the permit, control by a carbon adsorber, record keeping, CEM monitoring

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? x YES ____ NO

IDENTIFY THE AIR CONTAMINANTS: methylene chloride

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NEW SOURCE REVIEW FORM B

PTI Number: 08-04232 Facility ID: 0857040727

FACILITY NAME ChemFirst Fin Chemicals Inc

FACILITY DESCRIPTION HF-600 centrifuge system, 2 conical dryers. CITY/TWP Dayton

Emissions Unit ID: **P027**

SIC CODE 2821 SCC CODE 30101818 EMISSIONS UNIT ID P027

EMISSIONS UNIT DESCRIPTION HF-600 centrifuge system, 500 gallon slurry tank TG-500-1, 1500 gallon 2P tank, 1000 gallon knock-out pot, 3-R condenser, 2900 gallon 4Q filtrate receiver, 4Q condenser, 2600 gallon filtrate receiver, and activated carbon bed

DATE INSTALLED 1997

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM_{10}					
Sulfur Dioxide					
Organic Compounds	lb/hr	0.40	1.81	0.40	1.81
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Enter Determination Compliance with the limitations specified in the permit, control by a carbon adsorber, record keeping, CEM monitoring

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? x YES ____ NO

IDENTIFY THE AIR CONTAMINANTS: methylene chloride

NEW SOURCE REVIEW FORM B

PTI Number: 08-04232 Facility ID: 0857040727

FACILITY NAME ChemFirst Fin Chemicals Inc

FACILITY DESCRIPTION HF-600 centrifuge system, 2 conical dryers. CITY/TWP Dayton

Emissions Unit ID: **P027**

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit hard copy items to Pam McGraner, AQM&P, DAPC, Central Office, and electronic files to airpti@epa.state.oh.us

Please fill out the following. If the checkbox does not work, replace it with an 'X'	Electronic	Additional information File Name Convention (your PTI # plus this letter)	Hard Copy	None
Calculations (required)	x	0000000c.wpd	☐	
Modeling form/results	☐	0000000s.wpd	☒	☐
PTI Application (complete or partial)*	☐	0000000a.wpd	☐	☐
BAT Study	☐	0000000b.wpd	☐	☐
Other/misc.	☐	0000000t.wpd	☐	☐

*** Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.**

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

ChemFirst Fine Chemicals is applying for a PTI because they have exceeded their deminimus status for these emissions units.

In 1996, this facility was involved in the manufacture of speciality chemicals for many types of industry, including intermediate products for the agricultural, polymer and pharmaceutical markets. Products were often made on a one-time only basis. Since 1997, the production has become more focused on the electronics industry. In March of 2000, the large scale equipment at the site was dedicated to electronics chemicals production.

Methylene chloride is used in the production of electronic chemicals. Each emissions unit, the two dryers and centrifuge, utilize condensers as integral parts of the process. All three units are vented to a common carbon adsorber unit. The carbon adsorber unit is assumed to have a control efficiency of 95%. Allowable emissions have been calculated by using engineering calculations and basing the emissions on worst case conditions (full saturation of inert gas flow with methylene chloride). Methylene chloride emissions, prior to the carbon adsorber unit, have been calculated to be equal to 197.76 pounds/day for each dryer and 199.68 pounds/day for the centrifuge, for total daily emissions of 595.2 pounds/day before control. Potential emissions of methylene chloride are equal to 108.62 TPY. To avoid Title V threshold values, this permit will be written in draft to ensure federal enforceability of the emission control requirements and the allowable emission rates. Allowable emissions will be equal to 1.21 lbs/hr, 29.70 lbs/day, and 5.43 TPY, as a combined emissions limitation, for P025, P026, and P027. Chem First will demonstrate compliance with BAT and the OAC rule by a 95% reduction in

53 **NEW SC**
PTI Num
FACILIT
Emissions Unit ID: **P027**
FACILITY DESCRIPTION HF-600 centrifuge system, 2 conical dryers. CITY/TWP Dayton

OC and an allowable emission rate. Verification of compliance will be determined by stack testing, CEMs, and recordkeeping.

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

☒ Synthetic Minor Determination and/or ☐ Netting Determination
Permit To Install 08-04232

A. Source Description: ChemFirst Fine Chemicals is applying for a PTI due to production changes and; therefore, an increase in emissions above deminimus levels. This facility has become more focused on the electronics industry and large scale equipment at the site has been dedicated to the electronics chemicals production.

B. Facility Emissions and Attainment Status: This is a non-major facility. The emissions from this facility are primarily organic emissions. Montgomery County is an attainment area for VOCs.

C. Source Emissions: Potential emissions (before the carbon adsorber unit) of methylene chloride from P025, P026, and P027, combined, are equal to 108.62 TPY. ChemFirst Fine Chemicals has proposed to restrict HAPs emissions to 9.9 TPY for each individual HAP and 24.9 TPY for total HAPs. The annual OC limits will be restricted to 5.43 TPY. The emissions will be controlled by a carbon adsorber unit with a control efficiency of 95%.

D. Conclusion: The control requirements will limit the emissions of OC to 5.43 TPY for P025, P026, and P027, combined. The emissions of HAPs will be limited by 9.9 TPY for each individual HAP and 24.9 TPY for combined HAPs. This will limit the facility to an amount under Title V thresholds and therefore avoid Title V permitting requirements.

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:
NONE

Please complete:

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

Pollutant	Tons Per Year
OC	5.43
Individual HAPS	9.9
Combined HAPS	24.9