

Synthetic Minor Determination and/or **Netting Determination**

EM SciencePTI Application No. 14-05212

A. Source Description:

EM Science has proposed to install a filling station in Building 11. The Ohio EPA identification number for this emissions unit will be P033. The permittee packages a variety of liquids into smaller containers at this facility.

B. Facility Emissions and Air Quality Designations:

EM Science is located in Hamilton County, OH. Hamilton County is designated as non-attainment for VOC and attainment for all other pollutants.

C. New Source Emissions:

Without federally enforceable terms and conditions, EM Science would have a potential to emit greater than 10 TPY for any individual HAP and 25 TPY for combined HAPs. Hazardous air pollutants (HAP) emissions will be limited to less than 25 tons per year of combined HAPs and 10 tons per year of any single HAP.

The permittee will demonstrate compliance with the limitations by recording chemical/solvent throughput (loaded) information per month. In addition, the permittee is required to keep records of the molecular weight and vapor pressure of the chemicals in order to calculate HAP emissions.

D. Conclusions:

Through this synthetic minor Permit To Install (PTI), EM Science will be limited to less than 10 tons per year of any one HAP and 25 tons per year of any combination of HAPs. For this reason, EM Science is not considered a major facility for the purposes of the MACT regulations and Title V permitting.



Street Address:

State of Ohio Environmental Protection Agency
Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov.
Center

**RE: DRAFT PERMIT TO INSTALL
HAMILTON COUNTY
Application No: 14-05212**

CERTIFIED MAIL

DATE: 11/6/2001

EM Science
Mary Backherms
2909 Highland Ave
Cincinnati, OH 45212

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

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$600** will be due. Please do not submit any payment now.

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

Very truly yours,

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

CC: USEPA

HCDES

Ohio-Kentucky-Indiana Reg Coun of Gov

KY

IN



**Permit To Install
Terms and Conditions**

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

DRAFT PERMIT TO INSTALL 14-05212

Application Number: 14-05212
APS Premise Number: 1431370602
Permit Fee: **To be entered upon final issuance**
Name of Facility: EM Science
Person to Contact: Mary Backherms
Address: 2909 Highland Ave
Cincinnati, OH 45212

Location of proposed air contaminant source(s) [emissions unit(s)]:
**2909 Highland Ave
Cincinnati, Ohio**

Description of proposed emissions unit(s):
Building a New Fill Station.

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

EM Science

Facility ID: 1431370602

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Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

3. Records Retention Requirements

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

4. Inspections and Information Requests

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

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

5. Scheduled Maintenance/Malfunction Reporting

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

6. Permit Transfers

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

7. Air Pollution Nuisance

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

8. Termination of Permit to Install

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

9. Construction of New Sources(s)

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

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lead to such sanctions

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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

- 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

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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 thirty (30) days after commencing operation of the source(s) covered by this permit.

14. Construction Compliance Certification

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

15. Fees

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

B. Permit to Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
OC	1.94

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P033 - Building 11 Fill Station	OAC rule 3745-31-05(A)(3)	21.79 lbs/hr OC, 1.94 TPY OC The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
	OAC rule 3745-31-05(D)	See term A.2.a

2. Additional Terms and Conditions

- 2.a The total allowable 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 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

The permittee has existing records to demonstrate compliance with the rolling, 12-month summation limit upon issuance of the permit.

- 2.b Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limits and compliance with the Air Toxics Policy.
- 2.c The hourly emission limitation outlined above is based on the emissions unit’s potential to emit (PTE). Therefore, no hourly records are required to demonstrate compliance with this limit.

B. Operational Restrictions

1. None

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The company identification for each liquid organic material.
 - b. The number of gallons of throughput (loaded) for each liquid organic material.
 - c. The molecular weight of each liquid organic material (lbs./lb-mole).
 - d. The vapor pressure (psia) of each liquid organic material.
 - e. The total organic compound emission rate for each liquid organic material, in pounds per month.
 - f. The total organic compound emission rate for all liquid organic materials, in pounds per month.
2. The permittee shall collect and record the following information each month for the entire facility:
 - a. The name and identification number of each liquid material.
 - b. The individual Hazardous Air Pollutant (HAP)* content for each HAP of each liquid material in gallon of individual HAP per gallon of material.
 - c. The total combined HAP content of each liquid material in gallon of combined HAPs per gallon of material [sum all the individual HAP contents from (b)].
 - d. The number of gallons transferred of each liquid material.
 - e. The total individual HAP emissions for each HAP from all liquid materials, in pounds or tons per month [b x d x loading loss emission factor (see term E.1)].
 - f. The total combined HAP emissions from all liquid materials, in pounds or tons per month [sum of all individual HAP emissions in (e)].

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Emissions Unit ID: **P033**

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- g. The updated rolling, 12-month summation of individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceeding eleven calender months.
- h. The updated rolling, 12-month summation of total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceeding eleven calender months.

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

3. The permit to install for this emissions unit P033 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 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 Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Methylene Chloride

TLV (ug/m³): 174,000

Maximum Hourly Emission Rate (lbs/hr): 12.1

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 601

MAGLC (ug/m³): 4138

Pollutant: Chloroform

TLV (ug/m³): 49,000

Maximum Hourly Emission Rate (lbs/hr): 8.31

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 413

MAGLC (ug/m³): 1167

Physical changes to or in the method of operation of the emissions unit after its installation or

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modification could affect the parameters used to determine whether or not the "Air Toxics 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 satisfied. If, upon

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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 the "Air Toxic Policy" include the following:

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

If the permittee determines that the "Air Toxic Policy" will be satisfied with 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 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. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP usage limitations set forth in term A.2.a. The permittee shall submit

annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.

2. The permittee shall also submit annual reports which specify the total organic compound emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
3. The permittee shall notify the Hamilton County Department of Environmental Services in writing prior to employing any materials not listed in the Permit to Install (PTI) application for this emissions unit. This notification shall include information sufficient to determine if the materials complies with the existing permit to install limitations. If the use of the material will not comply with the existing permit to install limitations, the permittee shall not use the material until a permit to install modification is issued.

E. Testing Requirements

1. Compliance with the emissions limits in term A.1. and A.2. shall be determined using the following equation from AP-42, 5th edition (1995), Chapter 5:

Loading losses are the sum of the following equation for each species in the blend:

Total Loading Emissions (lbs/1000 gallons) = 12.46 SPM/T where

S = saturation factor = 1.45

P = true vapor pressure of the liquid loaded (psia)

M = molecular weight (lbs./lb.-mole)

T = temperature of bulk liquid loaded (degrees R)

Hourly emissions = Worst-case emissions based on the above emission factor.

2. Compliance with the HAP emissions limitation in term A.2.a shall be demonstrated by the recordkeeping in term C.2.

F. Miscellaneous Requirements

1. The following terms and conditions of this permit are federally enforceable: A., B., C.1., C.2., D. and E.

NEW SOURCE REVIEW FORM B

PTI Number: 14-05212 Facility ID: 1431370602

FACILITY NAME EM Science

FACILITY DESCRIPTION Building a New Fill Station CITY/TWP Cincinnati

SIC CODE 5169 SCC CODE 4-08-999-99 EMISSIONS UNIT ID P033

EMISSIONS UNIT DESCRIPTION Building 11 Fill Station

DATE INSTALLED January 2002

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	Attainment	21.79	1.94	21.79	1.94
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

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

Compliance with BAT shall be demonstrated by the emission limits and compliance with the Air Toxics Policy.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

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TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? X YES NOIDENTIFY THE AIR CONTAMINANTS: Chloroform, Methylene Chloride