State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
HAMILTON 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: 14-05493

DATE: 2/5/2004

EMD Chemicals Inc
Mary Backherms
2909 Highland Ave
Cincinnati, OH 45212

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
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern

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

CC: USEPA **HCDES**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 2/5/2004**
Terms and Conditions	**Effective Date: 2/5/2004**

FINAL PERMIT TO INSTALL 14-05493

Application Number:	14-05493
APS Premise Number:	1431370602
Permit Fee:	**$750**
Name of Facility:	EMD Chemicals Inc
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):
Modification to PTI 14-05212; addition of a can/pail filling machine to Emission Unit P033, Building 11 Filling.

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

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 Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

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

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

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

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

15. Fees

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

B. Permit to Install Summary of Allowable Emissions

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

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

Pollutant	Tons Per Year
OC	2.50

Emissions Unit ID: **P033**

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
P033 - Building 11 Filling operations	OAC rule 3745-31-05(A)(3)	8.26 lbs/hr OC 2.50 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 emissions units P002 (Filling Station), P003 (Solvent Packaging Station), P005 (Laboratory Fume Hoods), P011 (Solvent Distillation Operation), P015 (Reactor), P018 (Chemical Waste Packaging), P019 (Distillation Unit), P020 (Distillation Unit), P021 (Distillation Unit), P022 (Distillation Unit), P023 (Distillation Pretreatment Vessel), P024 (Solvent Fill Carts), P025 (Solvent Filling Lines), P026 (Holding Tank), P027 (Solution Tank), P028 (Fill Cart), P029 (Fill Cart), P030 (Fill Cart), P031 (Solvent Distillation Process), P032 (Solvent Filling Line), P033 (Fill Station), and T001 - T013 (Organic Storage Tanks), 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 compliance with the emission limitations .

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 loaded.

   b. The number of liters 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 loading loss emission factor in lbs/liter.

   f. The total organic compound emission rate for each liquid organic material, in pounds per month (b x e).

   g. 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 emissions units P002, P003, P005, P011, P015, P018 - P033 and T001 - T013:

   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 liter of individual HAP per liter of material.

c. The total combined HAP content of each liquid material in liter of combined HAPs per liter of material [sum all the individual HAP contents from (b)].

d. The number of liters 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)].

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 preceding 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.

* 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: N,N dimethyl formamide

TLV (ug/m3): 30,000

Maximum Hourly Emission Rate (lbs/hr): 8.26

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 412.5

MAGLC (ug/m3): 714

Physical changes to or in the method of operation of the emissions unit after it's installation or 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 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 it's 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 submit quarterly deviation reports which identify any exceedance of the HAP emission limitations set forth in term A.2.a.

   The reports shall be submitted to the Director (the Hamilton County Department of Environmental Services) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous three calendar months (October through December, January through March, April through June and July through September, respectively) .

If no exceedances occurred, the permittee shall state so in the report.

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. Emissions Limitation:

   8.26 lbs/hour OC
   2.50 TPY OC

   Applicable Compliance Method:

   Compliance with the emissions limits in term A.1. and A.2. shall be determined using the following equation as submitted by the permittee for PTI 14-05493 on (09/23/03).

   Loading losses are the sum of the following equation for each species in the blend:
   Loading Loss Emissions Factor (lbs./liter) = (0.002599 * x P x M / Pd x Md)
   where:
   P = true vapor pressure of the liquid loaded (psia)
   M = molecular weight (lbs./lb.-mole)
   Pd = true vapor pressure of dichloromethane (psia)
   Md = molecular weight dichloromethane (lbs./lb.-mole)
   * = 0.002599 lbs./ liter was the measured dichloromethane emission rate as measured (5/91) for "unrinsed" 4 liter bottle line@152 bottles per hour

   Hourly emissions = Worst-case emissions based on the above emission factor times the liters/hour

   Annual Emissions = Summation of the emissions in term C.1.g.

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.

2. The terms and conditions contained in this permit to install supercede the terms and conditions contained in PTI 14-05212 issued 1/10/2002.