

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
AIR QUALITY DIVISION**

September 6, 2019

**PERMIT TO INSTALL**  
294-00F

**ISSUED TO**  
PPI Aerospace Acquisition

**LOCATED AT**  
23514 Groesbeck Highway  
Warren, Michigan

**IN THE COUNTY OF**  
Macomb

**STATE REGISTRATION NUMBER**  
N6857

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>August 9, 2019</b>	
DATE PERMIT TO INSTALL APPROVED: <b>September 6, 2019</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

**Table of Contents**

COMMON ACRONYMS ..... 2  
POLLUTANT / MEASUREMENT ABBREVIATIONS..... 3  
GENERAL CONDITIONS ..... 4  
EMISSION UNIT SPECIAL CONDITIONS..... 6  
    EMISSION UNIT SUMMARY TABLE ..... 6  
    EUDEGREASER ..... 7  
FGFACILITY CONDITIONS..... 11

### COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig

### POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H <sub>2</sub> S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO <sub>x</sub>	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO <sub>2</sub>	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

## GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

### EMISSION UNIT SPECIAL CONDITIONS

#### EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Flexible Group ID</b>
EUDEGREASER	Detrex batch vapor degreaser, Model VS800 with a built-in chilled condenser (i.e. "freeboard chiller"), manual cover, and deep-tank design. This degreaser is identified as "Tank A-1" on the application form. There is no stack associated with this degreaser.	NA

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

## EUDEGREASER EMISSION UNIT CONDITIONS

**DESCRIPTION**

Detrex batch vapor degreaser, Model VS800 with a built-in chilled condenser (i.e. “freeboard chiller”), manual cover, and deep-tank design. This degreaser is identified as “Tank A-1” on the application form. There is no stack associated with this degreaser.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

Freeboard chiller

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Trichloroethylene	8.9 tpy	12-month rolling time period as determined at the end of each calendar month	EUDEGREASER	SC VI.7	R 336.1205(3) R 336.1225 R 336.1702(a)
2. Trichloroethylene	150 kilograms per square meter per month	3-month rolling average	EUDEGREASER	SC VI.2, VI.3, VI.4, VI.5, VI.6	40 CFR 63.464 (a)(1)(ii)

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall, on the first operating day of every month ensure that EUDEGREASER contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that has been cleaned of soils. A fill line must be indicated during the first month the measurements are made. The solvent level within EUDEGREASER must be returned to the same fill-line each month, immediately prior to calculating monthly emissions as specified in 40 CFR 63.465(c). EUDEGREASER does not have to be emptied and filled with fresh unused solvent prior to the calculations. **(40 CFR 63.464(b), 40 CFR 63.465(b))**
2. The permittee shall not operate EUDEGREASER unless a malfunction abatement plan (MAP) as described in Rule 911(2), for EUDEGREASER, has been submitted within 30 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
  - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
  - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
  - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

3. The permittee shall capture all waste solvent and shall store it in closed containers. The permittee shall dispose of all waste solvent in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(3), R 336.1225, R 336.1702(a))**
2. The permittee shall maintain a log of solvent additions and deletions for EUDEGREASER. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 63.464(a)(1)(i))**
3. The permittee shall, on the first operating day of the month, using the records of all solvent additions and deletions for the previous monthly reporting period, determine solvent emissions using the following equation (equation 2 of 40 CFR 63.465(c)(1)). The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 63.464(b), 40 CFR 63.465(c)(1))**

$$E_i = \frac{SA_i - LSR_i - SSR_i}{AREA_i} \quad (2)$$

where:

- $E_i$  = the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period  $i$ , (kilograms of solvent per square meter of solvent/air interface area per month).
- $E_n$  = the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period  $i$ , (kilograms of solvent per month).
- $SA_i$  = the total amount of halogenated HAP liquid solvent added to the solvent cleaning machine during the most recent monthly reporting period  $i$ , (kilograms of solvent per month).
- $LSR_i$  = the total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine during the most recent monthly reporting period  $i$ , (kilograms of solvent per month).
- $SSR_i$  = the total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste, obtained as described in paragraph (c)(2) of this section, during the most recent monthly reporting period  $i$ , (kilograms of solvent per month).
- $AREA_i$  = the solvent/air interface area of the solvent cleaning machine (square meters).

4. The permittee shall, on the first operating day of the month, determine the total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste during the preceding month, using tests conducted using EPA reference method 25d or by engineering calculations included in the compliance report. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 63.464(b), 40 CFR 63.465(c)(2))**
5. The permittee shall, on the first operating day of the month, determine the monthly rolling average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods, for the 3-month period ending with the most recent reporting period using the following equation (equation 4 of 40 CFR 63.465(c)(3)). The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 63.464(b), 40 CFR 63.465(c)(3))**

$$EA_j = \frac{\sum_{i=1}^3 E_i}{3} \quad (4)$$

where:

- EA<sub>i</sub> = the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods, (kilograms of solvent per square meter of solvent/air interface area per month).
- EA<sub>n</sub> = the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods (kilograms of solvent per month).
- E<sub>i</sub> = halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per square meter of solvent/air interface area).
- E<sub>n</sub> = halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per month).
- j = 1 = the most recent monthly reporting period.
- j = 2 = the monthly reporting period immediately prior to j = 1.
- j = 3 = the monthly reporting period immediately prior to j = 2.

6. The permittee shall maintain the following records:
  - a) The dates and amounts of solvent that are added to the solvent cleaning machine.
  - b) The solvent composition of wastes removed from cleaning machines as determined by tests conducted using EPA reference method 25d or by engineering calculations included in the compliance report.
  - c) Calculation sheets showing how monthly emissions and the rolling 3-month average emissions from the solvent cleaning machine were determined, and the results of all calculations.

The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 63.467(c))**

7. The permittee shall keep, in a satisfactory manner, records of the monthly and 12-month rolling time period calculations of the trichloroethylene emissions for EUDEGREASER. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3), R 336.1225, R 336.1702(a))**
8. The permittee shall determine the potential to emit from all solvent cleaning operations, using the following equation (equation 6 of (1)). The total potential to emit is the sum of the HAP emissions from all solvent cleaning operations, plus all HAP emissions from other sources within the facility. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 63.465(e))**

$$PTE_i = H_i \times W_i \times SAI_i$$

Where:

- PTE<sub>i</sub> = the potential to emit for solvent cleaning machine i (kilograms of solvent per year).
- H<sub>i</sub> = hours of operation for solvent cleaning machine i (hours per year).
  - = 8760 hours per year, unless otherwise restricted by a Federally enforceable requirement.
- W<sub>i</sub> = the working mode uncontrolled emission rate (kilograms per square meter per hour).
  - = 1.95 kilograms per square meter per hour for batch vapor cleaning machines.

SAL<sub>i</sub> = solvent/air interface area of solvent cleaning machine i (square meters).

## **VII. REPORTING**

1. The permittee shall submit an exceedance report to the AQD District Supervisor quarterly until a request to reduce reporting frequency under 40 CFR 63.468(i) is approved. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calendar quarter. The exceedance report shall include the following: **(40 CFR 63.464(c))**
  - a) If an exceedance has occurred, the reason for the exceedance and a description of the actions taken
  - b) If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.
2. The permittee shall submit a solvent emission report by February 1 every year containing: **(40 CFR 63.468(g))**
  - a) The size and type of EUDEGREASER (solvent/air interface area or cleaning capacity).
  - b) The average monthly solvent consumption for EUDEGREASER in kilograms per month.
  - c) The 3-month monthly rolling average solvent emission estimates calculated each month using the method as described in SC VI.3, VI.4, VI.5, and VI.8.
3. The permittee shall submit all applicable reports specified in 40 CFR 63.468 to the AQD District Supervisor. **(R 336.1205(3), R 336.1225, R 336.1702(a), 40 CFR Part 63 Subparts A & T)**

## **VIII. STACK/VENT RESTRICTION(S)**

NA

## **IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and T, as they apply to EUDEGREASER. **(40 CFR Part 63 Subparts A & T)**

### **Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

## FGFACILITY CONDITIONS

**DESCRIPTION:** The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment and exempt equipment.

### POLLUTION CONTROL EQUIPMENT

NA

#### I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Each Individual HAP	8.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
2. Total HAPs	22.4 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)

#### II. MATERIAL LIMIT(S)

NA

#### III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

#### IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

#### V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

#### VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(3))**
2. The permittee shall keep, in a satisfactory manner, records of monthly and 12-month rolling time period individual HAP and total HAP emission rate calculations for FGFACILITY. The permittee shall keep all records on file at the facility and shall make them available to the Department upon request. **(R 336.1205(3))**

#### VII. REPORTING

NA

**VIII. STACK/VENT RESTRICTION(S)**

NA

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and WWWWWW. (40 CFR Part 63 Subparts A & WWWWWW)

**Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).