

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

JULY 29, 2005



**STATE REGISTRATION NUMBER**  
A2677

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. 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>5/13/2005</b>	
DATE PERMIT TO INSTALL APPROVED: <b>7/29/2005</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant/Measurement Abbreviations</b>	
AQD	Air Quality Division	Btu	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
EPA	Environmental Protection Agency	gr	Grains
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallon of Applied Coating Solids	H <sub>2</sub> S	Hydrogen Sulfide
GC	General Condition	hp	Horsepower
HAP	Hazardous Air Pollutant	lb	Pound
HVLP	High Volume Low Pressure *	m	Meter
ID	Identification	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NO <sub>x</sub>	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM-10	Particulate Matter less than 10 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pound per hour
NSPS	New Source Performance Standards	ppm	Parts per million
NSR	New Source Review	ppmv	Parts per million by volume
PS	Performance Specification	ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonable Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO <sub>2</sub>	Sulfur Dioxide
SC	Special Condition Number	THC	Total Hydrocarbons
SCR	Selective Catalytic Reduction	tpy	Tons per year
SRN	State Registration Number	µg	Microgram
TAC	Toxic Air Contaminant	VOC	Volatile Organic Compounds
VE	Visible Emissions	yr	Year

\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

### 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. **[R336.1201(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 Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **[R336.1201(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 R336.1210, 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. **[R336.1201(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. **[R336.1201(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 R336.1219 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 R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[R336.1219]**
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. **[R336.1901]**
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). **[R336.1912]**
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 R336.1301, 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 R336.1303. **[R336.1301]**
  - 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 R336.1370(2). **[R336.1370]**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

**SPECIAL CONDITIONS**

**Emission Unit Identification**

<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Stack Identification</b>
EUDEGREASER	Detrex degreaser (20" x 24" x 18") utilizing trichloroethylene as a solvent. Equipped with a freeboard refrigeration device and electric sliding cover. Vented to general in-plant environment.	NA
Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.		

**Flexible Group Identification**

<b>Flexible Group ID</b>	<b>Emission Units Included in Flexible Group</b>	<b>Stack Identification</b>
FGFACILITY	All process equipment at the stationary source including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA

**The following conditions apply to: EUDEGREASER**

**Emission Limits**

	<b>Pollutant</b>	<b>Equipment</b>	<b>Limit</b>	<b>Time Period</b>	<b>Testing/ Monitoring Method</b>	<b>Applicable Requirement</b>
1.1	Trichloroethylene	EUDEGREASER	7 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 1.9	R336.1205(3), R336.1702(a), R336.1901

**Process/Operational Limits**

- 1.2 The consumption rate of trichloroethylene in EUDEGREASER shall not exceed a maximum of 1000 gallons per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205, R336.1702(a), R336.1901]**
- 1.3 The permittee shall not operate EUDEGREASER except in compliance with the control requirements of 40 CFR 63.463(b), (e) & (f). The requirements include, but are not limited to the items identified in Appendix A. **[R336.1205(3), R336.1702(a), R336.1901, 40 CFR Part 63 Subparts A & T]**
- 1.4 The permittee shall not operate EUDEGREASER except in compliance with the work and operational practice requirements of 40 CFR 63.463(d)(1) through (d)(12). The requirements include, but are not limited to the items identified in Appendix B. **[R336.1205(3), R336.1702(a), R336.1901, 40 CFR Part 63 Subparts A & T]**
- 1.5 The permittee shall not operate EUDEGREASER except in compliance with the design requirements of 40 CFR 63.463(a)(1) through (a)(7). The requirements include, but are not limited to the items identified in Appendix C. **[R336.1205(3), R336.1702(a), R336.1901, 40 CFR Part 63 Subparts A & T]**

1.6 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]**

**Monitoring**

1.7 The permittee shall not operate EUDEGREASER except in compliance with the monitoring requirements of 40 CFR 63.466. The requirements include, but are not limited to the items identified in Appendix D. **[R336.1205(3), R336.1702(a), R336.1901, 40 CFR Part 63 Subparts A & T]**

**Recordkeeping/Reporting/Notification**

1.8 All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **[R336.1205(3), R336.1702(a), R336.1901]**

1.9 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of trichloroethylene consumption rates for EUDEGREASER, as required by SC 1.2. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(3), R336.1702(a), R336.1901]**

1.10 The permittee shall keep records for EUDEGREASER as specified in 40 CFR 63.467. The records include, but are not limited to the items identified in Appendix E. All records shall be kept on file for a period of at least five years, unless otherwise specified, and made available to the Department upon request. **[R336.1205(3), R336.1702(a), R336.1901, 40 CFR Part 63 Subparts A & T]**

1.11 The permittee shall submit reports to the AQD District Supervisor as specified in 40 CFR 63.468. **[R336.1205(3), R336.1702(a), R336.1901, 40 CFR Part 63 Subparts A & T]**

**The following conditions apply to: FGFACILITY**

**Emission Limits**

	<b>Pollutant</b>	<b>Equipment</b>	<b>Limit</b>	<b>Time Period</b>	<b>Testing/ Monitoring Method</b>	<b>Applicable Requirement</b>
2.1a	VOC	FGFACILITY	40 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 2.2	R336.1205(3), R336.1702(a)
2.1b	Each Individual HAP	FGFACILITY	8.9 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 2.2	R336.1205(3)
2.1c	Total HAPs	FGFACILITY	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 2.2	R336.1205(3)

**Recordkeeping / Reporting / Notification**

2.2 The permittee shall keep, in a satisfactory manner, 12-month rolling time period emission calculations of VOCs, individual HAPs, and total HAPs for FGFACILITY, as required by SC 2.1a, 2.1b, and 2.1c. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(3)]**

**APPENDIX A**  
**Control Requirements for Degreasers**

The permittee shall not operate EUDEGREASER except in compliance with the control requirements of 40 CFR 63.463(b), (e) & (f). The requirements include, but are not limited to the following:

- 1) The solvent cleaner shall be equipped with a working mode cover that completely covers the openings when closed, only opens for part entrance and removal, and is free of cracks, holes and other defects.
- 2) The permittee shall maintain a temperature at the center of the chilled air blanket that is no greater than 57 °F. (Note: Must be less than or equal to 30 percent of the solvent boiling point.)
- 3) The permittee shall ensure that, after cleaning, each part is held in the solvent cleaner freeboard area above the vapor zone for the dwell time determined for that particular part or parts basket, or for the maximum dwell time determined using the most complex part type or parts basket.
- 4) The permittee shall demonstrate that the degreasing equipment can achieve and maintain an idling mode emission limit of 0.045 pounds per hour per square foot of solvent/air interface area. The permittee shall use the procedures contained in 40 CFR 63.465(a) and Appendix A of Subpart T to make this demonstration.
- 5) The idling mode cover shall be in place and completely cover the machine openings when parts are not in the solvent cleaner and the cover shall be maintained free of cracks, holes and other defects.

**APPENDIX B**  
**Work and Operational Practices for Degreasers**

The permittee shall not operate EUDEGREASER, except in compliance with the work and operational practice requirements of 40 CFR 63.463(d)(1) through (d)(12). The requirements include, but are not limited to the following:

- 1) A reduced room draft as described in 40 CFR 63.463(e)(2)(ii) shall be used.
- 2) The parts baskets or parts being cleaned in an open-top batch solvent cleaner shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of three feet per minute or less.
- 3) Any spraying operations shall be done within the vapor zone or within a section of EUDEGREASER that is not directly exposed to the ambient air (i.e. a baffled or enclosed area of EUDEGREASER).
- 4) Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being moved from EUDEGREASER unless an equally effective approach has been approved by the Department.
- 5) Parts or parts baskets shall not be removed from EUDEGREASER until dripping has stopped.
- 6) During startup of EUDEGREASER, the primary condenser shall be turned on before the sump heater.
- 7) During shutdown of EUDEGREASER, the sump heater shall be turned off, and the solvent vapor layer allowed to collapse before the primary condenser is turned off.
- 8) When solvent is added to or drained from EUDEGREASER, the solvent shall be transferred using threaded or other leak-proof couplings and closed plumbing directly to the sump or waste drum, and the end of the pipe in the solvent sump or waste drum shall be located beneath the liquid solvent surface.
- 9) EUDEGREASER and associated controls shall be maintained as recommended by the manufacturer of the equipment or by using alternate maintenance practices that have been demonstrated to the Department's satisfaction to achieve the same or better results as those recommended by the manufacturer.
- 10) Each operator of EUDEGREASER shall complete and pass the applicable sections of the solvent cleaner operating procedures tests as given in Appendix B of 40 CFR Part 63 Subpart T if requested by the Department.
- 11) Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers.
- 12) Sponges, fabric, wood, and paper products shall not be cleaned in EUDEGREASER.

**APPENDIX C**  
**Design Requirements for Degreasers**

The permittee shall not operate EUDEGREASER except in compliance with the design requirements of 40 CFR 63.463(a)(1) through (a)(7). The requirements include, but are not limited to the following:

- 1) Covers that completely cover the EUDEGREASER openings, and are free of cracks, holes, and other defects, shall be in place during the idling mode and the downtime mode.
- 2) The freeboard ratio shall be 0.75 or greater.
- 3) An automated parts handling system, capable of moving parts or parts baskets at a speed of 11 feet per minute or less from the initial loading of parts through the removal of cleaned parts, shall be used.
- 4) EUDEGREASER shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.
- 5) EUDEGREASER shall be equipped with a vapor level control device that shuts off the sump heat if the vapor level rises above the height of the primary condenser.
- 6) EUDEGREASER shall be equipped with a primary condenser.
- 7) If EUDEGREASER uses a lip exhaust, it shall be designed and operated to route all collected solvent vapors through a carbon adsorber that is installed, maintained and operated in a satisfactory manner and meets the requirements of 40 CFR 63.463(e)(2)(vii).

**APPENDIX D**  
**Monitoring Requirements for Degreasers**

The permittee shall not operate EUDEGREASER except in compliance with the monitoring requirements of 40 CFR 63.466. The requirements include, but are not limited to the following:

- 1) On a monthly basis, the permittee shall visually inspect each cover to determine if it is opening and closing properly, completely covers the opening, and is free of cracks, holes and other defects.
- 2) On a weekly basis, the permittee shall measure the temperature at the center of the air blanket during idling mode.
- 3) The hoist speed shall be determined on a monthly basis, in accordance with 40 CFR 63.466(c). If no hoist speed exceedances are measured in the first year, the monitoring may be done quarterly. If a hoist speed exceedance occurs, the monitoring frequency shall return to monthly until another year of compliance is demonstrated.

**APPENDIX E**  
**Recordkeeping Provisions for Degreasers**

The following records shall be kept on file for a period of at least five years, unless otherwise specified.

- 1) Owners' manuals, or if not available, written maintenance and operating procedures, for EUDEGREASER and control equipment, maintained for the life of EUDEGREASER.
- 2) Records of the monthly cover inspections.
- 3) Records of the hazardous air pollutant (HAP) content of each solvent used in EUDEGREASER, maintained for the life of EUDEGREASER.
- 4) Records as required in 40 CFR 63.467(b)(2).
- 5) Records of all hoist speed determinations.
- 6) Records of the amount of solvent used each month and 12-month rolling time period.
- 7) Records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test, maintained for the life of EUDEGREASER.
- 8) Records of the temperature measured at the center of the air blanket during idling mode.