

NEW SOURCE REVIEW PERMIT TO INSTALL

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Common Abbreviations / Acronyms Used in this Permit to Install

Common Acronyms		Pollutant / Measurement Abbreviations	
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 ₂ 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 _x	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
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
VE	Visible Emissions	VOC	Volatile Organic Compounds
		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, PO 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 Act 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. Except as allowed by Rule 285 (a), (b), and (c), the permittee shall not substitute any fuels, coatings, nor raw materials for those described in the application and allowed by this permit, nor make changes to the process or process equipment described in the application, without prior notification to and approval by the Air Quality Division. **[R336.1201(1)]**
14. 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

Emission Unit ID	Emission Unit Description	Stack Identification	Reference No.
EU-DEGREASER	One Detrex VS 2000 E batch vapor degreaser electric unit with chiller coil and no exhaust system.	N.A.	1
EU-COLDCLEANER	Custom build cold cleaner which utilizes RAP solvent to clean the hooks used in the varnish dip system	SVCOLDCLEANER	2
EU-ZINCFURNACE	Zinc melting furnace (natural gas-fired) used to melt zinc ingots for a die cast process.	SVZINCFURNACE	3
EU-VARNISHDIP	A varnish dip system to varnish coat motor shells prior to assembly. The system consists of one dip tank and a natural gas-fired oven.	SVVARNDIPTNK001 SVOVHVARNOVEN001 SVOVHVARNOVEN002	4
EU-SHWFRAMEPAINT	Sherwood end frame paint system (Black Paladin System) used to coat end frames of motors. The system consists of one paint spray booth with dry filters and a natural gas-fired oven.	SVSHWPAINBOTH SVSHWPAINTOVEN	4
EU-TRICKELVARNISH	A trickle varnish system and epoxy resin varnish system used to apply varnish to the armatures of motors after primary assembly. This consists of two booth stations with electric heaters both vented through one exhaust stack. A lidded cure container vented to the exhaust stack is also part of system to cure leftover varnish material.	SVTRICKELVARNISH	4
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

Flexible Group ID	Emission Units Included in Flexible Group	Reference No.
FG-COATINGSYSTEMS	EU-VARNISHDIP, EU-SHWFRAMEPAINT, and EU-TRICKELVARNISH	4
FG-FACILITY	All equipment at the stationary source including equipment covered by other permits, grandfathered equipment and exempt equipment.	5

The following conditions apply to: EU-DEGREASER

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirements
1.1	VOC	EU-DEGREASER	800 lb/month	3-month rolling average as determined at the end of each calendar month.	SC 1.2, SC 1.3, SC 1.7	R336.1205(3), R336.1225, R336.1702(a), 40 CFR 63.464

Material Usage Limits

- 1.2 The permittee shall not use more than 65.5 gallons per month of solvent containing trichloroethylene, hereinafter "solvent", based on a 3-month rolling average as determined at the end of each calendar month. The amount of solvent used shall be determined on a "net usage" basis. "Net usage" is defined as the amount of solvent added to EU-DEGREASER to bring the solvent levels up to starting levels less any amount of solvent removed as waste, and shall be measured at least once per month. **[R336.1225, R336.1702(a), 40 CFR Part 63 Subpart T]**

Process/Operational Limits

- 1.3 The permittee shall not operate EU-DEGREASER except in compliance with the overall emission limit requirements of 40 CFR 63.464(a)(1). **[R336.1225, R336.1702(a), 40 CFR Part 63 Subpart T]**
- 1.4 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 EU-DEGREASER. **[40 CFR Part 63 Subpart T]**

Equipment

- 1.5 The permittee shall not operate EU-DEGREASER unless the freeboard chiller is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the freeboard chiller includes maintaining an average temperature of less than 50°F. **[R336.1910]**
- 1.6 The permittee shall equip and maintain EU-DEGREASER with a temperature monitoring device on the primary condenser on the freeboard refrigeration system. **[R336.1910]**

Recordkeeping/Reporting/Notification

- 1.7 The permittee shall keep records for EU-DEGREASER as specified below. The records include, but are not limited to the items identified below:
- a) The dates and amounts of solvent that are added to and removed from EU-DEGREASER.
 - b) The solvent composition of wastes removed from EU-DEGREASER using the procedure described in 40 CFR 63.465 (c)(2).
 - c) Net usage of solvent on a monthly and 3-month rolling average as determined at the end of each calendar month for EU-DEGREASER.

- d) Calculation sheets showing how monthly and 3-month rolling average emissions as determined at the end of each calendar month for EU-DEGREASER were determined and the results of all calculations.

The records shall be kept in a format acceptable to the AQD District Supervisor. 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. **[R336.1225, R336.1702(a), R336.1901, 40 CFR Part 63 Subpart T]**

- 1.8 The permittee shall submit reports to the AQD District Supervisor as specified in 40 CFR 63.468. **[R336.1225, R336.1702(a), 40 CFR Part 63 Subpart T]**

The following conditions apply to: EU-COLDCLEANER

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirements
2.1	VOC	EU-COLDCLEANER	2.6 tpy	12-month rolling time period as determined at the end of each calendar month	SC 2.2, SC 2.4	R336.1205(3), R336.1225, R336.1702(a), 40 CFR Part 63 Subpart T

Material Usage Limits

2.2 The permittee shall not use more than 550 gallons per year of cleaning solvent containing methylene chloride, based on a 12-month rolling period as determined at the end of each calendar month, in EU-COLDCLEANER. The amount of solvent used shall be determined on a "net usage" basis. "Net usage" is defined as the amount of solvent added to EU-COLDCLEANER to bring the solvent levels up to starting levels less any amount of solvent removed, and shall be measured at least once per month. **[R336.1225, R336.1702(a)]**

Process/Operational Limits

2.3 The permittee shall not operate EU-COLDCLEANER except in compliance with the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) as specified in 40 CFR 63.462 (a) through (d). The requirements include, but are not limited to the following: a) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of one (1) inch on the surface of the solvent within the cleaning machine. **[40 CFR Part 63 Subpart T]**

Recordkeeping/Reporting/Notification

2.4 The permittee shall keep the following information on a monthly basis for EU-COLDCLEANER:

- a) The dates and amounts of solvent that are added to and removed from EU-COLDCLEANER.
- b) VOC content, in pounds per gallon, for the solvent used.
- c) Net usage of solvent on a monthly and 12-month rolling time period as determined at the end of each calendar month.
- d) VOC mass emission calculations determining the monthly emission rate in tons per calendar month and the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The records shall be kept in a format acceptable to the AQD District Supervisor. 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. **[R336.1225, R336.1702(a)]**

Stack / Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
2.5	SVCOLDCLEANER	20	27.5	R336.1225, R336.1901, 40 CFR 52.21(c) & (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: EU-ZINCFURNACE

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirements
3.1a	PM	EU-ZINCFURNACE	4.1 pounds per hour	Hourly	GC 14	R336.1331, R336.1901, 40 CFR 52.21 (c) & (d)
3.1b	PM	EU-ZINCFURNACE	0.1 lbs per 1,000 lbs of exhaust gas calculated on a dry gas basis	Test protocol	GC 14	R336.1331, R336.1901, 40 CFR 52.21 (c) & (d)
3.1c	Magnesium Chloride (CAS. 7786-30-3)	EU-ZINCFURNACE	0.21 pounds per hour	Hourly	GC 14	R336.1225

Material Usage Limits

3.2 The permittee shall not use more than 200 pounds per year of flux, based on a 12-month rolling period as determined at the end of each calendar month, in EU-ZINCFURNACE. **[R336.1225]**

Recordkeeping /Reporting /Notification

3.3 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of flux usage for EU-ZINCFURNACE. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1225]**

Stack / Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
3.4	SVZINCFURNACE	30	42	R336.1225, R336.1901, 40 CFR 52.21(c) & (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FG-COATINGSYSTEMS

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirements
4.1	VOC	FG-COATINGSYSTEMS	10 tpy	12-month rolling time period as determined at the end of each calendar month	SC 4.6	R336.1702(a)

Material Usage Limits

4.2 The permittee shall not use more than 1,540 gallons per year of varnish including reducer in EU-VARNISHDIP, 1,075 gallons per year of coating including thinner in EU-SHWFRAMEPAINT, nor 230 gallons per year of varnish in EU-TRICKELVARNISH. All limits are based on a 12-month rolling period as determined at the end of each calendar month. [R336.1702]

Process / Operational Limits

4.3 All waste materials shall be captured and stored in closed containers and shall be disposed of in an acceptable manner in compliance with all applicable rules and regulations. [R336.1224, R336.1702(a)]

Testing

4.4 The VOC content, water content, and density of any coatings or varnish, as applied and as received, shall be determined using federal Reference Test Method 24. Upon prior written approval by the AQD District Supervisor, the VOC content may be determined from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the Method 24 results shall be used to determine compliance. [R336.1225, R336.1702, R336.1901]

Recordkeeping /Reporting /Notification

4.5 The permittee shall maintain a current listing from the manufacturer of the chemical composition of each coating, varnish, solvent, etc., including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1225, R336.1702, R336.1901]

4.6 The permittee shall keep the following information on a monthly basis for FG-COATINGSYSTEMS:

- a) Gallons of each coating, varnish, solvent, etc., used for each individual emission unit on a monthly basis.
- b) Gallons of each coating, varnish, solvent, etc., used for each individual emission unit per 12-month rolling time period as determined at the end of each calendar month.
- c) VOC content of each coating, varnish, solvent, etc., as applied.
- d) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.

- e) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The records shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1225, R336.1702, R336.1901]

Stack / Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
4.7a	SVVARNDIPTNK001	9	26.7	R336.1225, R336.1901, 40 CFR 52.21(c) & (d)
4.7b	SVOVHVARNOVEN001	9	26.7	R336.1225, R336.1901, 40 CFR 52.21(c) & (d)
4.7c	SVOVHVARNOVEN002	12	26.5	R336.1225, R336.1901, 40 CFR 52.21(c) & (d)
4.7d	SVSHWPAINBTOOTH	18	26.9	R336.1225, R336.1901, 40 CFR 52.21(c) & (d)
4.7e	SVSHWPAINTOVEN	8	29.6	R336.1225, R336.1901, 40 CFR 52.21(c) & (d)
4.7f	SVTRICKLEVARNISH	10	27.7	R336.1225, R336.1901, 40 CFR 52.21(c) & (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FG-FACILITY

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirements
2.1a	Each Individual HAP	FG-FACILITY	Less than 9.0 tons per year	12-month rolling time period as determined at the end of each calendar month	SC 2.4	R336.1205(3)
2.1b	Aggregate HAPs	FG-FACILITY	Less than 22.5 tons per year	12-month rolling time period as determined at the end of each calendar month	SC 2.4	R336.1205(3)

Testing

2.2 The HAP content of any material as received and as applied, shall be determined using manufacturer's formulation data. Upon request of the AQD District Supervisor, the manufacturer's HAP formulation data shall be verified using EPA Test Method 311. **[R336.1205(3)]**

Recordkeeping / Reporting / Notification

2.3 The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both. 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)]**

2.4 The permittee shall keep the following information on a monthly basis for FG-FACILITY:

- a) Gallons or pounds of each material used.
- b) Where applicable, gallons or pounds of each material reclaimed.
- c) HAP content, in pounds per gallon or pounds per pound, of each material used.
- d) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
- e) Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month.

The records shall be kept in a format acceptable to the AQD District Supervisor. 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)]**