

PERMIT TO INSTALL

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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 ₂ 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 ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	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 ₂	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.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUECOAT	A paint line consisting of an 8-stage parts washer, an electrodeposition (E-Coat) dip tank, 3 post rinses, and a bake oven.	1996	FGNMP
EUOVEN1	A batch type natural gas-fired burn-off oven for use in removing e-coatings from production paint racks. The oven is equipped with a primary chamber of 0.5 MMBtu/hr and a secondary chamber (afterburner) of 0.4 MMBtu/hr.	1996 / 5-23-2023	FGOVENS, FGNMP
EUOVEN2	A batch type natural gas-fired burn-off oven for use in removing e-coatings from production paint racks. The oven is equipped with a primary chamber of 0.5 MMBtu/hr and a secondary chamber (afterburner) of 0.4 MMBtu/hr.	1996 / 5-23/2023	FGOVENS, FGNMP
EUOVEN3	A batch type natural gas-fired burn-off oven for use in removing e-coatings from production paint racks. The oven is equipped with a primary chamber of 0.5 MMBtu/hr and a secondary chamber (afterburner) of 0.4 MMBtu/hr.	1996 / PTI DATE	FGOVENS, FGNMP
EUOVEN4	A batch type natural gas-fired burn-off oven for use in removing e-coatings from production paint racks. The oven is equipped with a primary chamber of 0.5 MMBtu/hr and a secondary chamber (afterburner) of 0.4 MMBtu/hr.	1996 / PTI DATE	FGOVENS, FGNMP

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.

EUECOAT EMISSION UNIT CONDITIONS

DESCRIPTION

A paint line consisting of an 8-stage parts washer, an electrodeposition (E-Coat) dip tank, 3 post rinses, and a bake oven.

Flexible Group ID: FGNMP

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	7.7 pph	Hourly	EUECOAT	SC V.1	R 336.1702(a)
2. VOCs	21.5 tpy	12-month rolling time period determined at the end of each calendar month	EUECOAT	SC VI.1	R 336.1702(a)

3. There shall be no visible emissions from any portion of the E-Coat paint line. **(R 336.1301)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOCs	3.5 lb/gal (minus water)	Instantaneous	EUECOAT	SC V.1	R 336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The disposal of collected sludge and waste coatings shall be performed in a manner which minimizes the introduction of air contaminants to the outer air. **(R 336.1370(1))**

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))**

1. Upon request of the AQD District Supervisor, the permittee shall verify VOC emission rates from EUECOAT by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed

after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1702, R 336.2001, R 336.2003, R 336.2004)**

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 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1702(a))**
2. The permittee shall keep the following information on a monthly basis for EUECOAT:
 - a) Gallons (with water) of each material used.
 - b) VOC content (minus water and with water) of each material, as received and as applied.
 - c) 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 permittee shall keep the records using mass balance, or an alternative method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1702(a))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVECOAT1	16	65	R 336.1901, 40 CFR 52.21(c) & (d)
2. SVECOAT2	16	65	R 336.1901, 40 CFR 52.21(c) & (d)
3. SVECOAT3	16	65	R 336.1901, 40 CFR 52.21(c) & (d)
4. SVECOAT4	12	65	R 336.1901, 40 CFR 52.21(c) & (d)
5. SVWASHER	12	NA	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGOVENS	Four natural gas batch burn-off ovens used for the removal of E-coat from metal production racks. Each oven is controlled by its own secondary chamber (afterburner).	EUOVEN1, EUOVEN2, EUOVEN3, EUOVEN4
FGNMP	Conditions relating to the minimization of nuisance odors.	EUECOAT, EUOVEN1, EUOVEN2, EUOVEN3, EUOVEN4

FGOVENS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Four natural gas batch burn-off ovens used for the removal of E-coat from metal production racks. Each oven is controlled by its own secondary chamber (afterburner).

Emission Unit: EUOVEN1, EUOVEN2, EUOVEN3, EUOVEN4

POLLUTION CONTROL EQUIPMENT

Secondary chamber (afterburner) on each burn-off oven.

I. EMISSION LIMIT(S)

1. There shall be no visible emissions from any EU in FGOVENS. **(R 336.1301, R 336.1910)**

II. MATERIAL LIMIT(S)

1. The permittee shall not burn off more than one cart of paint racks at a time in any EU within FGOVENS and no more than 1,920 carts of paint racks in FGOVENS per 12-month rolling time period, as determined at the end of each calendar month. **(R 336.1205(1)(a), R 336.1224, R 336.1225)**
2. The permittee shall burn only natural gas as fuel in any EU in FGOVENS. **(R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
3. The permittee shall not process any material in FGOVENS other than cured paints on metal parts, racks and/or hangers.¹ **(R 336.1224, R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not use any EU in FGOVENS for the thermal destruction or removal of rubber, plastics, uncured paints, or any other materials containing sulfur or halogens (chlorine, fluorine, bromine, etc.) such as plastisol, polyvinyl chloride (PVC), or Teflon with the exception of minimal chlorine present in E-coat materials.¹ **(R 336.1224, R 336.1225)**
2. The permittee shall not load any transformer cores, which may be contaminated with PCB-containing dielectric fluid, wire or parts coated with rubber, or any waste materials such as paint sludge or waste powder coatings into any EU in FGOVENS.¹ **(R 336.1224, R 336.1225)**
3. The permittee shall calibrate the thermocouples associated with the primary and secondary chambers at least once per year. **(R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any EU in FGOVENS unless the secondary chamber (afterburner) is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the secondary chamber (afterburner) includes maintaining a minimum temperature of 1400° F and a minimum retention time of 0.5 seconds. **(R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**
2. The permittee shall not operate any EU in FGOVENS unless an automatic temperature control system for the primary chamber and secondary chamber (afterburner) is installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**

3. The permittee shall not operate any EU in FGOVENS unless an interlock system that shuts down the primary chamber burner when the secondary chamber (afterburner) is not operating properly, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**

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 records in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to continuously monitor the temperature in the secondary chamber (afterburner) of each EU in FGOVENS and record the temperature at least once every 15 minutes. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**
3. The permittee shall keep, in a satisfactory manner, records of the date, duration and description of any malfunction of the control equipment, each thermocouple calibration, and any maintenance performed for each EU in FGOVENS. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1301, R 336.1901, R 336.1910)**
4. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material (cured coating) processed in each EU in FGOVENS, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.¹ **(R 336.1224, R 336.1225)**
5. The permittee shall keep, in a satisfactory manner, records of the number of carts processed in each EU in FGOVENS, on a monthly basis and 12-month rolling time period basis as determined at the end of each calendar month. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVOVEN1	16	30	R 336.1225, 40 CFR 52.21 (c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
2. SVOVEN2	16	30	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SVOVEN3	16	30	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SVOVEN4	16	30	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

FGNMP FLEXIBLE GROUP CONDITIONS
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DESCRIPTION

Conditions relating to the minimization of nuisance odors.

Emission Unit: EUECOAT, EUOVEN1, EUOVEN2, EUOVEN3, EUOVEN4

POLLUTION CONTROL EQUIPMENT

Secondary Chamber (afterburner) on each burn-off oven

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any EU within FGNMP unless a nuisance minimization plan (NMP) for odors is implemented in accordance with its terms. The NMP shall, at minimum, include the following:
 - a) Identification of the sources of potential nuisance odor issues and how the odors from those sources will be minimized and monitored,
 - b) A description of the items or conditions that shall be implemented as part of the plan,
 - c) The timeline for making any physical or operational changes and the frequency of any associated inspections or monitoring,
 - d) Proposed operation and data collection. The data collected by the permittee must be made available to the Department upon request.
 - e) A description of the corrective procedures or operational changes that shall be taken in the event of an elevated odor event.

After submission of the plan by the permittee, the AQD District Supervisor may request modifications to the plan. Within 30 days after a request by the AQD District Supervisor, the permittee shall submit proposed modifications to the plan for consideration by the Department. The permittee shall submit the NMP and any amendments to the plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the NMP or amendments to the plan shall be considered approved.¹ (R336.1901)

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))

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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