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

June 30, 2023

PERMIT TO INSTALL
82-23

ISSUED TO
Belding Tank Technologies, Inc.

LOCATED AT
200 North Gooding Street
Belding, Michigan 48809

IN THE COUNTY OF
Ionia

STATE REGISTRATION NUMBER
N3748

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: **May 25, 2023**	
DATE PERMIT TO INSTALL APPROVED: **June 30, 2023**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

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_2e	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_2S	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 condition 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
EUMOLDROOM5	Two tank molds located in Mold Room 5 with one exhaust stack.	04-30-2007 / 10-18-2016 / 09-01-2018 / TBD	FGCOMPOSITESMACT
EUMOLDROOM6	Two tank molds located in Mold Room 6 with one exhaust stack.	TBD	FGCOMPOSITESMACT
EUTANKASSEMBLY3	Assembly of tank components in this Assembly Building.	TBD	FGCOMPOSITESMACT

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.

EUMOLDROOM5
EMISSION UNIT CONDITIONS

DESCRIPTION

Two (2) tank molds located in Mold Room 5 with one exhaust stack.

Flexible Group ID: FGCOMPOSITESMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs	391 pounds per day	Calendar day	EUMOLDROOM5	SC VI.1 SC VI.2	R 366.1205 R 336.1225 R 336.1702(a)
2. VOCs	24.8 tons per year	Based on a 12-month rolling time period as determined at the end of each calendar month	EUMOLDROOM5	SC VI.1 SC VI.2	R 366.1205 R 336.1225 R 336.1702(a)
3. Styrene	15.8 pounds per hour	Based on a calendar day average as determined by material usage and hours of operation for the day	EUMOLDROOM5	SC VI.1 SC VI.2	R 366.1205 R 336.1225 R 336.1702(a)
4. Styrene	23.6 tons per year	Based on a 12-month rolling time period as determined at the end of each calendar month	EUMOLDROOM5	SC VI.1 SC VI.2	R 366.1205 R 336.1225 R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

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 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1225, R 336.1702)**

2. The permittee shall keep records in the approved formats and procedures in Appendix 4. **(R 336.1205, 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. SVENESTACK-0006	36	60	R 336.1225 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart WWWW for Reinforced Plastic Composites Production. **(40 CFR Part 63, Subparts A and WWWW)**

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

EUMOLDROOM6
EMISSION UNIT CONDITIONS

DESCRIPTION

Two (2) tank molds located in Mold Room 6 with one exhaust stack.

Flexible Group ID: FGCOMPOSITESMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs	391 pounds per day	Calendar day	EUMOLDROOM6	SC VI.1 SC VI.2	R 366.1205 R 336.1225 R 336.1702(a)
2. VOCs	24.8 tons per year	Based on a 12-month rolling time period as determined at the end of each calendar month	EUMOLDROOM6	SC VI.1 SC VI.2	R 366.1205 R 336.1225 R 336.1702(a)
3. Styrene	15.8 pounds per hour	Based on a calendar day average as determined by material usage and hours of operation for the day	EUMOLDROOM6	SC VI.1 SC VI.2	R 366.1205 R 336.1225 R 336.1702(a)
4. Styrene	23.6 tons per year	Based on a 12-month rolling time period as determined at the end of each calendar month	EUMOLDROOM6	SC VI.1 SC VI.2	R 366.1205 R 336.1225 R 336.1702(a)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

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 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1225, R 336.1702)**

2. The permittee shall keep records in the approved formats and procedures in Appendix 4. **(R 336.1205, 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. SVMRSTACK9	60	40	R 336.1225 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart WWWW for Reinforced Plastic Composites Production. **(40 CFR Part 63, Subparts A and WWWW)**

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

EUTANKASSEMBLY3
EMISSION UNIT CONDITIONS

DESCRIPTION

Assembly of tank components in this Assembly Building.

Flexible Group ID: FGCOMPOSITESMACT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs	62.2 pounds per calendar day	Calendar day	EUTANKASSEMBLY3	SC VI.1 SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)
2. VOCs	3.6 tons per year	Based on a 12-month rolling time period, as determined at the end of each calendar month	EUTANKASSEMBLY3	SC VI.1 SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)
3. Styrene	2.6 pounds per hour	Based on a calendar day average, determined by calendar day material usage and hours of operation	EUTANKASSEMBLY3	SC VI.1 SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)
4. Styrene	3.6 tons per year	Based on a 12-month rolling time period, as determined at the end of each calendar month	EUTANKASSEMBLY3	SC VI.1 SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)

II. MATERIAL LIMITS

1. The styrene content of any resin that does not contain a vapor suppressant used for tank assembly purposes shall not exceed 35% by weight. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1901)**

2. The styrene content of any resin that contains a vapor suppressant used for tank assembly purposes shall not exceed 45% by weight. **(R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Resin used for tank assembly purposes shall be applied by bucket and brush, mechanical non-atomized application techniques, or other technology that produces equivalent or lower styrene emission rates. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1901)**

IV. DESIGN/EQUIPMENT PARAMETERS

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 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1225, R 336.1702)**

2. The permittee shall keep records in the approved formats and procedures in Appendix 4. **(R 336.1205, R 336.1225, R 336.1702)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart WWWW for Reinforced Plastic Composites Production. **(40 CFR Part 63, Subparts A and WWWW)**

Footnotes:
[1] 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. VOCs	89.9 tons per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
2. Styrene	57.6 pounds per hour	Calendar day average as determined daily by facility-wide emissions and calendar day hours of operation	FGFACILITY	SC VI.2	R 336.1225, R 336.1901
Styrene	76.0 tons per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1225

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Styrene	50% by weight for resins applied using the chop/hoop winding technique	Instantaneous	FGFACILITY	SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)
2. Styrene	35% by weight for vinyl ester lamination resins that do not contain vapor suppressants	Instantaneous	FGFACILITY	SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)
3. Styrene	45% by weight For vinyl ester lamination resins that contain vapor suppressants	Instantaneous	FGFACILITY	SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)
4. Styrene	50% by weight for resins applied using wet filament winding technique	Instantaneous	FGFACILITY	SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)
5. Styrene	50% by weight for isophthalic lamination resins	Instantaneous	FGFACILITY	SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)
6. Styrene	37% by weight of all gelcoats	Instantaneous	FGFACILITY	SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)
7. Styrene	42% by weight of tooling gelcoats	Instantaneous	FGFACILITY	SC VI.2	R 336.1205 R 336.1225 R 336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall dispose of spent filters in a manner which minimizes the introduction of air contaminants to the outer air. **(R 336.1224, R 336.1370)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall only spray apply resins by means of non-atomizing mechanical applicator guns or technology that produces equivalent or lower styrene emission rates. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1901)**

2. Filament chop/hoop winding shall be carried out by use of dry winding of fiberglass together with application of chopped fiberglass and resin by use of non-atomizing mechanical applicator guns or other technology that produces equivalent or lower styrene emission rates. **(R 336.1205, R 336.1225, R 336.1702(a))**

3. The permittee shall not operate any mold room unless its respective exhaust filters are installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1301, R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

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

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 336.1205, R 336.1225, R 336.1702)**

2. The permittee shall keep the following information for FGFACILITY:
   a) A current listing from the manufacturer of the chemical composition of each resin, gelcoat and catalyst including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both.
   b) The as-supplied and as-applied styrene and methyl methacrylate content of each lamination resin, gelcoat, tooling gelcoat used and the methyl ethyl ketone content of each catalyst used.
   c) Styrene mass emission calculations determining the overall average hourly emission rate facility-wide in pounds per hour of operation for each calendar day. The overall average hourly styrene emission rate shall be determined based on the arithmetic sum of the individual emission unit hourly emission rates for each calendar day.
   d) Styrene mass emission calculations determining the annual emissions in tons per 12-month rolling time period as determined at the end of each calendar month.
   e) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
   f) 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 the formats specified in Attachments A, B, C, D & E of Appendix 4, or an alternate format that has been approved by the AQD District Supervisor. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1901)**

3. The permittee shall maintain a current listing from the manufacturer of the vapor suppressant effectiveness factor, as determined per the test method in 40 CFR 63 Subpart WWWW, Appendix A, for resins containing vapor suppressants. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702(a), 40 CFR 63 Subpart WWWW)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. All waste resins, gelcoats, catalysts and acetone shall be captured and stored in closed containers and disposed of in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1205, R 336.1225, R 336.1702(a))**

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

APPENDIX 4

The permittee shall use the following approved formats and procedures for the recordkeeping requirements. Alternative formats must be approved by the AQD District Supervisor.

4.1 - EUMOLDROOM1, EUMOLDROOM2, EUMR3&4NORTHMOLD, EUMR3&4MIDMOLD, EUMOLDROOM5, EUMOLDROOM6, EUTANKASSEMBLY, EUMR3&4SOUTHMOLD, EUTANKASSEMBLY2 and EUTANKASSEBMLY3.

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in EUMOLDROOM1, EUMOLDROOM2, EUMR3&4NORTHMOLD, EUMR3&4MIDMOLD, EUMR3&4SOUTHMOLD, EUMOLDROOM5, EUMOLDROOM6, EUTANKASSEMBLY, EUTANKASSEMBLY2 and EUTANKASSEMBLY3.

1. The permittee shall keep the following information for the fiberglass molding processes:
   a) Pounds of each lamination resin, gelcoat, tooling gelcoat and catalyst used on a calendar day, calendar month and 12-month rolling time period basis separately for EUMOLDROOM1, EUMOLDROOM2, EUMR3&4NORTHMOLD, EUMR3&4MIDMOLD, EUMR3&4SOUTHMOLD, EUMOLDROOM5, EUMOLDROOM6, EUTANKASSEMBLY, EUTANKASSEMBLY2 and EUTANKASSEMBLY3.
   b) Styrene and VOC mass emission calculations determining the daily emission rate in pounds per calendar day for EUMOLDROOM1, EUMOLDROOM2, EUMR3&4NORTHMOLD, EUMR3&4MIDMOLD, EUMR3&4SOUTHMOLD, EUMOLDROOM5, EUMOLDROOM6, EUTANKASSEMBLY, EUTANKASSEMBLY2 and EUTANKASSEMBLY3.
   c) Styrene mass emission calculations determining the average hourly emission rate in pounds per hour of operation for each calendar day separately for EUMOLDROOM1, EUMOLDROOM2, EUMR3&4NORTHMOLD, EUMR3&4MIDMOLD, EUMR3&4SOUTHMOLD, EUMOLDROOM5, EUMOLDROOM6, EUTANKASSEMBLY, EUTANKASSEMBLY2 and EUTANKASSEMBLY3.
   d) Styrene and 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 separately for EUMOLDROOM1, EUMOLDROOM2, EUMR3&4NORTHMOLD, EUMR3&4MIDMOLD, EUMR3&4SOUTHMOLD, EUMOLDROOM5, EUMOLDROOM6, EUTANKASSEMBLY, EUTANKASSEMBLY2 and EUTANKASSEMBLY3.
   e) Hours of operation for each calendar day separately for EUMOLDROOM1, EUMOLDROOM2, EUMR3&4NORTHMOLD, EUMR3&4MIDMOLD, EUMR3&4SOUTHMOLD, EUMOLDROOM5, EUMOLDROOM6, EUTANKASSEMBLY, EUTANKASSEMBLY2 and EUTANKASSEMBLY3.

   The records shall be kept in the formats specified in Attachments A, B and C, or an alternate format that has been approved by the AQD District Supervisor. **(R 336.1201, R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1901)**

4.2 – EUCLEANUP

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in EUCLEANUP.

1. The permittee shall keep the following information for the use of cleanup and purge solvent:
   a) Gallons of solvent used on a calendar month basis.
   b) Gallons of solvent reclaimed on a calendar month basis.
   c) Density, in pounds per gallon, of each solvent.
   d) Mass emission calculations determining the acetone calendar month emission rate in tons per month.
   e) Mass emission calculations determining the acetone 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 the format specified in Attachment D or an alternate format that has been approved by the AQD District Supervisor. **(R 336.1201, R 336.1224, R 336.1225)**

Attachment A

Emission Unit: _____, Date: _____

Calendar Day Summary -- Styrene and VOC Process Emissions

GELCOATS	A	B	C	D_{ST}	D_{MMA}	E =(A x D_{ST}) /2000	F = A x (D_{ST}+ D_{MMA}) /2000
GELCOAT DESCRIPTION (INCLUDING TOOLING GELCOATS)	**GELCOAT USAGE (LB/DAY)**	**STYRENE CONTENT (% BY WEIGHT)**	**MMA CONTENT (% BY WEIGHT)**	**STYRENE EMISSION FACTOR PER ATTACHMENT E (LB/TON GELCOAT)**	**MMA EMISSION FACTOR PER ATTACHMENT E (LB/TON GELCOAT)**	**CALENDAR DAY STYRENE EMISSIONS (LB/DAY)**	**CALENDAR DAY VOC EMISSIONS (LB/DAY)**
TOTAL POUNDS STYRENE EMITTED PER CALENDAR DAY FROM GELCOAT, **G** = (sum of all E's) **G**							
TOTAL POUNDS VOC EMITTED PER CALENDAR DAY FROM GELCOAT, **H** = (sum of all F's) **H**							

SPRAY-APPLIED RESINS	I	J	K	L = (IxK)/2000
RESIN DESCRIPTION	**RESIN USAGE (LB/DAY)**	**STYRENE CONTENT (% BY WT)**	**STYRENE EMISSION FACTOR PER ATTACHMENT E (LB/TON RESIN)**	**CALENDAR DAY STYRENE/VOC EMISSIONS (LB/DAY)**
TOTAL POUNDS STYRENE/VOC EMITTED PER CALENDAR DAY FROM RESIN, **Q** = (sum of all L's) **M**				

FILAMENT WINDING RESINS	M	N	O	P = (MxO)/2000
RESIN DESCRIPTION	**RESIN USAGE (LB/DAY)**	**STYRENE CONTENT (% BY WT)**	**STYRENE EMISSION FACTOR PER ATTACHMENT E (LB/TON RESIN)**	**CALENDAR DAY STYRENE/VOC EMISSIONS (LB/DAY)**
TOTAL POUNDS STYRENE/VOC EMITTED PER CALENDAR DAY FROM RESIN, **Q** = (sum of all P's) **Q**				

CATALYSTS	R	S	T = (RxS)/100
CATALYST DESCRIPTION	**CATALYST USAGE (LB/DAY)**	**VOC* (% BY WEIGHT)**	**CALENDAR DAY VOC EMISSIONS (LB/DAY)**
TOTAL POUNDS VOC EMITTED FROM CATALYST, **U** = (sum of all T's) **U**			

EMISSION UNIT HOURS OPERATION/CALENDAR DAY, **V**	**V**	
EMISSION UNIT TOTAL STYRENE EMITTED PER CALENDAR DAY, **W** = G + M + Q	**W**	
EMISSION UNIT TOTAL VOC EMITTED PER CALENDAR DAY, **X** = H + M + U	**X**	
EMISSION UNIT TOTAL STYRENE EMITTED PER HOUR, **Y** = W/V	**Y**	

***Determine voc content for catalyst (NOROX MEKP-925H FRED) as follows:**
catalyst voc = 6% wt. (based on maximum methyl ethyl ketone and N-Methyl-2-pyrrolidone content per supplier msds)

Note: The other organic ingredients in the catalyst may be considered as either totally consumed in the cross-linking reactions or non-volatile, including methyl ethyl ketone peroxides and, 2,2,4-trimethylpentanediol-1,3-diisobutyrate. Also, hydrogen peroxide is not an organic compound as it contains no carbon and is not anticipated to be emitted.

Attachment B

Emission Unit: _____, Month/Year: _____/_____

Calendar Month Summary -- Styrene and VOC Process Emissions

GELCOATS	A	B	C	D_{ST}	D_{MMA}	E =(A x D_{ST}) /2000	F = A x (D_{ST}+D_{MMA})/ 2000
GELCOAT DESCRIPTION (INCLUDING TOOLING GELCOATS)	**GELCOAT USAGE (LB/Month)**	**STYRENE CONTENT (% BY WEIGHT)**	**MMA CONTENT (% BY WEIGHT)**	**STYRENE EMISSION FACTOR PER ATTACHMENT E (LB/TON GELCOAT)**	**MMA EMISSION FACTOR PER ATTACHMENT E (LB/TON GELCOAT)**	**CALENDAR MONTH STYRENE EMISSIONS (LB/Month)**	**CALENDAR MONTH VOC EMISSIONS (LB/Month)**
TOTAL POUNDS STYRENE EMITTED PER CALENDAR MONTH FROM GELCOAT, **G** = (sum of all E's) **G**							
TOTAL POUNDS VOC EMITTED PER CALENDAR MONTH FROM GELCOAT, **H** = (sum of all F's) **H**							

SPRAY APPLIED RESINS	I	J	K	L = (Ix K)/2000
RESIN DESCRIPTION	**RESIN USAGE (LB/Month)**	**STYRENE CONTENT (% BY WEIGHT)**	**STYRENE EMISSION FACTOR PER ATTACHMENT E (LB/TON RESIN)**	**CALENDAR MONTH STYRENE/VOC EMISSIONS (LB/Month)**
TOTAL POUNDS STYRENE/VOC EMITTED PER CALENDAR MONTH FROM RESIN, **M** = (sum of all L's) **M**				

FILAMENT WINDING RESINS	M	N	O	P = (MxO)/2000
RESIN DESCRIPTION	**RESIN USAGE (LB/Month)**	**STYRENE CONTENT (% BY WEIGHT)**	**STYRENE EMISSION FACTOR PER ATTACHMENT E (LB/TON RESIN)**	**CALENDAR MONTH STYRENE/VOC EMISSIONS (LB/Month)**
TOTAL POUNDS STYRENE/VOC EMITTED PER CALENDAR MONTH FROM RESIN, **Q** = (sum of all P's) **Q**				

CATALYSTS	R	S	T = (RxS)/100
CATALYST DESCRIPTION	**CATALYST USAGE (LB/Month)**	**VOC* (% BY WEIGHT)**	**CALENDAR MONTH VOC EMISSIONS (LB/Month)**
TOTAL POUNDS VOC EMITTED FROM CATALYST, **U** = (sum of all T's) **U**			

TOTAL TONS STYRENE EMITTED/CALENDAR MONTH, **V** = (G + M + Q) / 2000 **V**	

12-MONTH ROLLING PERIOD STYRENE (TONS), **W**= V + TOTAL OF 11 PREVIOUS MONTHS **W**	

TOTAL TONS VOC EMITTED/CALENDAR MONTH, **X** = (H + M + Q +U)/2000 **X**	

12-MONTH ROLLING PERIOD VOC (TONS), **Y** = X + TOTAL OF 11 PREVIOUS MONTHS **Y**	

***Determine voc content for catalyst (NOROX MEKP-925H FRED) as follows:**
catalyst voc = 6% wt. (based on maximum methyl ethyl ketone and N-Methyl-2-pyrrolidone content per supplier msds)

Note: The other organic ingredients in the catalyst may be considered as either totally consumed in the cross-linking reactions or non-volatile, including methyl ethyl ketone peroxides and, 2,2,4-trimethylpentanediol-1,3-diisobutyrate. Also, hydrogen peroxide is not an organic compound as it contains no carbon and is not anticipated to be emitted.

Attachment C

Date: _____

TOTAL FACILITY-WIDE CALENDAR DAY STYRENE EMISSION RATE CALCULATION

	A
Emission Unit	Styrene Emission Rate (lbs/hr)
EUMOLDROOM1	
EUMOLDROOM2	
EUMR3&4NORTHMOLD	
EUMR3&4MIDMOLD	
EUMR3&4SOUTHMOLD	
EUMOLDROOM5	
EUMOLDROOM6	
EUTANKASSEMBLY	
EUTANKASSEMBLY2	
EUTANKASSEMBLY3	
TOTAL FACILITY-WIDE CALENDAR DAY STYRENE EMISSION RATE, **B** = (sum of all A's)	

Attachment D

Monthly Summary -- Cleanup/Purge Acetone Emissions

	A	B	C	D = B (A-C)
Month: Year: Date:	Actual Gallons of Acetone Used	Lbs per Gallon of Solvent	Gallons of Acetone Reclaimed	Lbs of Acetone Emitted
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
Total gallons used per month, E = (sum of all A's) **E**				
Total gallons reclaimed per month, F = (sum of all C's) **F**				
Total tons solvent emitted per month, G = (sum of all D's/2000) **G**				

12-month rolling period emissions (tons), H = (total of 11 previous months + E)/2000 **H**	

Attachment E

Styrene/MMA Emission Factors

1. The permittee shall use styrene and MMA emission factors and/or calculations from “EF Table 1: Unified Emission Factors for Open Molding of Composites,” as revised and approved on October 13, 2009, for calculating emissions.