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

November 15, 2024

PERMIT TO INSTALL
207-04F

ISSUED TO
Bradford White Corporation

LOCATED AT
200 Lafayette Street
Middleville, Michigan 49333

IN THE COUNTY OF
Barry

STATE REGISTRATION NUMBER
A0169

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: **September 23, 2024**	
DATE PERMIT TO INSTALL APPROVED: **November 15, 2024**	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	Michigan Department of Environmental Quality
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
MDEQ	Michigan Department of Environmental Quality
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 Environmental Quality, 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 Environmental Quality. **(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))	Flexible Group ID
EUSOUTHPLANTCOM	Porcelain enamel application line. Four spray booths controlled by dust collector DC 2853.	FGENAMEL
EUSOUTHPLANTRES	Porcelain enamel application line. Four spray booths controlled by dust collector DC 2854.	FGENAMEL
EUNORTHPLANTSHEL	Porcelain enamel application line. Three spray booths controlled by dust collector DC 1774.	FGENAMEL
EU-TRAYSTRIPPER	A tray type air stripping unit used to treat groundwater.	NA
EUNORTHPLANTBASE	Porcelain enamel application line. Two spray booths controlled by dust collector DC 0120.	FGENAMEL
EURESFOAM1	Residential water heater cyclopentane-based polyurethane foam insulation line 1, consisting of two polyol day tanks, two isocyanate day tanks, and two dispensing units. This line shares five 7,000 gallon bulk polyol storage tanks with the other residential lines and shares two 10,000 gallon bulk isocyanate storage tanks with the other residential lines and the commercial line.	FGFOAMLINES
EURESFOAM2	Residential water heater cyclopentane-based polyurethane foam insulation line 2, consisting of two polyol day tanks, two isocyanate day tanks, and two dispensing units. This line shares five 7,000 gallon bulk polyol storage tanks with the other residential lines and shares two 10,000 gallon bulk isocyanate storage tanks with the other residential lines and the commercial line.	FGFOAMLINES
EURESFOAM3	Residential water heater cyclopentane-based polyurethane foam insulation line 3, consisting of two polyol day tanks, two isocyanate day tanks, and two dispensing units. This line shares five 7,000 gallon bulk polyol storage tanks with the other residential lines and shares two 10,000 gallon bulk isocyanate storage tanks with the other residential lines and the commercial line.	FGFOAMLINES
EURESFOAM4	Residential water heater cyclopentane-based polyurethane foam insulation line 4, consisting of one polyol day tank, one isocyanate day tank, and one dispensing unit. This line shares five 7,000 gallon bulk polyol storage tanks with the other residential lines and shares two 10,000 gallon bulk isocyanate storage tanks with the other residential lines and the commercial line.	FGFOAMLINES
EUCOMFOAM1	Commercial water heater cyclopentane-based polyurethane foam insulation line 1, consisting of one polyol day tank, one isocyanate day tank, and one dispensing unit. This line has a 7,000 gallon bulk polyol storage tank that could be shared with future commercial lines and shares two 10,000 gallon bulk isocyanate storage tanks with the residential lines.	FGFOAMLINES
EU-BRUSHERBOOTH	One porcelain enamel brushing booth with externally vented dust collector DC 0417.	NA

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

EU-TRAYSTRIPPER
EMISSION UNIT CONDITIONS

DESCRIPTION

A tray type air stripping unit used to treat groundwater.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	0.58 lb/hr	hourly based upon a monthly average	EU-TRAYSTRIPPER	SC VI.1, SC VI.2	R 336.1702(a)
2. Cis-1,2-dichloroethylene	0.27 lb/hr	hourly based upon a monthly average	EU-TRAYSTRIPPER	SC VI.1, SC VI.2	R 336.1225(1)
3. Trichloroethylene	0.28 lb/hr	hourly based upon a monthly average	EU-TRAYSTRIPPER	SC VI.1, SC VI.2	R 336.1225(1)
4. Vinyl Chloride	0.026 lb/hr	hourly based upon a monthly average	EU-TRAYSTRIPPER	SC VI.1, SC VI.2	R 336.1225(1)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor, in a satisfactory manner, the flow rate, the total VOC concentration and the trichloroethylene, cis-1,2-dichloroethylene, and vinyl chloride concentrations in the effluent/influent streams to EU-TRAYSTRIPPER. This shall be done on a monthly basis until valid samples, which pass all quality assurance and quality control requirements have been obtained. Thereafter, effluent/influent streams to the EU-TRAYSTRIPPER shall be monitored for these parameters on a monthly basis. **(R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall record the flow rate, the total VOC concentration, and the trichloroethylene, cis-1,2-dichloroethylene, and vinyl chloride concentrations of the effluent/influent streams to EU-TRAYSTRIPPER. This shall be done on a monthly basis until valid samples have been obtained. Thereafter, these parameters shall be recorded on a monthly basis. All data, including calculation of VOC emission rates, shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1225, R 336.1702(a), R 336.1910)**

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. SV-TRAYSTRIP	10.0	40.0	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).

EU-BRUSHERBOOTH
EMISSION UNIT CONDITIONS

DESCRIPTION

Porcelain enamel brushing booth with externally vented dust collector.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Dust collector.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.05 lb per 1000 lb exhaust gas calculated on a dry gas basis	Hourly	EU-BRUSHERBOOTH	SC V.1	R 336.1331
2. PM	8.10E-05 lb/hr	Hourly	EU-BRUSHERBOOTH	SC V.1	R 336.1225,
3. PM10	8.10E-05 lb/hr	Hourly	EU-BRUSHERBOOTH	SC V.1	R 336.1225, 40 CFR 52.21 (c) & (d)
4. PM2.5	8.10E-05 lb/hr	Hourly	EU-BRUSHERBOOTH	SC V.1	R 336.1225, 40 CFR 52.21 (c) & (d)
5. Opacity	10%	6-Minute Average	EU-BRUSHERBOOTH	SC V.1	R 336.1301

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU-BRUSHERBOOTH unless the dust collector is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, RR 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**

2. The permittee shall not operate EU-BRUSHERBOOTH unless a malfunction abatement plan (MAP), as described in Rule 911(2), for the dust collector, has been submitted within 60 days of the issuance of the permit to install, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed, or upon request from the District Supervisor. The permittee shall submit the MAP, and any amendments to the MAP, to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a differential pressure gauge on the dust collector in EU-BRUSHERBOOTH. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

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 PM, PM10, and/or PM2.5 emission rates and/or visible emissions from EU-BRUSHERBOOTH by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10, PM2.5	40 CFR Part 51, Appendix M
Visible Emissions	40 CFR Part 51, Appendix M; 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. 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 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor in a satisfactory manner the condition of the dust collector through visual inspection on a weekly basis during operations. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

2. The permittee shall keep in a satisfactory manner records of visual inspections of the dust collector which includes the dates and results of the inspections and the dates and reasons for repairs. The permittee shall keep all 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 336.1331)**

3. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across the cartridge filter at least once per calendar day, during operation. Each entry shall include the date, time, pressure drop, and initials of the person making the record. The permittee shall keep all 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 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

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. SV-0417	20	50.0	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).

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
FGFOAMLINES	Four residential water heater cyclopentane-based polyurethane foam insulation lines and one commercial water heater cyclopentane-based polyurethane foam insulation line. All lines share two 10,000 gallon bulk isocyanate tanks. The residential lines share five 7,000 gallon bulk polyol storage tanks and there is one 7,000 gallon bulk polyol storage tank for the commercial line.	EURESFOAM1, EURESFOAM2, EURESFOAM3, EURESFOAM4, EUCOMFOAM1
FGENAMEL	Four porcelain enamel application lines each with baghouse control.	EUSOUTHPLANTCOM EUSOUTHPLANTRES EUNORTHPLANTSHEL EUNORTHPLANTBASE

FGFOAMLINES
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Four residential water heater cyclopentane-based polyurethane foam insulation lines and one commercial water heater cyclopentane-based polyurethane foam insulation line. All lines share two 10,000 gallon bulk isocyanate tanks. The residential lines share five 7,000 gallon bulk polyol storage tanks and there is one 7,000 gallon bulk polyol storage tank for the commercial line.

Emission Unit: EURESFOAM1, EURESFOAM2, EURESFOAM3, EURESFOAM4, EUCOMFOAM1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	16 tpy	12-month rolling time period as determined at the end of each calendar month	EURESFOAM1	SC VI.4	R 336.1205 R 336.1702(a)
2. VOC	16 tpy	12-month rolling time period as determined at the end of each calendar month	EURESFOAM2	SC VI.4	R 336.1205 R 336.1702(a)
3. VOC	16 tpy	12-month rolling time period as determined at the end of each calendar month	EURESFOAM3	SC VI.4	R 336.1205 R 336.1702(a)
4. VOC	12 tpy	12-month rolling time period as determined at the end of each calendar month	EURESFOAM4	SC VI.4	R 336.1205 R 336.1702(a)
5. VOC	16 tpy	12-month rolling time period as determined at the end of each calendar month	EUCOMFOAM1	SC VI.4	R 336.1205 R 336.1702(a)
6. VOC	31.1 tpy	12-month rolling time period as determined at the end of each calendar month	FGFOAMLINES	SC VI.4	R 336.1205 R 336.1702(a)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Resin usage	4,270,000 pounds per year	12-month rolling time period as determined at the end of each calendar month	Each emission unit in FGFOAMLINES except EURESFOAM4	SC VI.3	R 336.1205 R 336.1225 R 336.1702(a)
2. Resin usage	3,200,000 pounds per year	12-month rolling time period as determined at the end of each calendar month	EURESFOAM4	SC VI.3	R 336.1225 R 336.1702(a)
3. Resin usage	8,300,000 pounds per year	12-month rolling time period as determined at the end of each calendar month	FGFOAMLINES	SC VI.3	R 336.1205 R 336.1225 R 336.1702(a)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
4. Cyclopentane content of resin	Maximum 15% by weight	Instantaneous	FGFOAMLINES	SC VI.2	R 336.1205 R 336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not transfer material into any polyol day tank unless the closed loop system is installed, maintained and operated in a satisfactory manner. Satisfactory operation includes using the temperature interlock system. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall not transfer material into any polyol bulk tank from a day tank unless the closed loop system is installed, maintained and operated in a satisfactory manner. Satisfactory operation includes using the temperature interlock system. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910)**

3. The permittee shall not transfer material into any polyol bulk tank from a tank truck unless the vapor balance system is installed, maintained and operated in a satisfactory manner. Satisfactory operation includes using the temperature interlock system. **(R 336.1205, R 336.1225, R 336.1702(a), 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. All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205, R 336.1225, R 336.1702(a))**

2. 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 Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a))**

3. The permittee shall monitor and record, in a satisfactory manner, the resin usage rate, in pounds, for each emission unit in FGFOAMLINES and the total usage rate for FGFOAMLINES for each month and 12-month rolling time period, as determined at the end of each calendar month. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a))**

4. The permittee shall calculate the VOC emission rate from each emission unit in FGFOAMLINES and the total VOC emission rate for FGFOAMLINES monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, 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. SVRESFOAM1[a]	NA	24	40 CFR 52.21(c)&(d)
2. SVRESFOAM2[a]	NA	24	40 CFR 52.21(c)&(d)
3. SVRESFOAM3[a]	NA	24	40 CFR 52.21(c)&(d)
4. SVRESFOAM4[a]	16	24	40 CFR 52.21(c)&(d)
5. SVCOMFOAM1[a]	NA	24	40 CFR 52.21(c)&(d)
[a] This stack is not required to be discharged unobstructed vertically upwards to the ambient air.			

IX. OTHER REQUIREMENT(S)

NA

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

FGENAMEL
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Four porcelain enamel application lines each with baghouse control.

Emission Units: EUSOUTHPLANTCOM, EUSOUTHPLANTRES, EUNORTHPLANTSHEL, EUNORTHPLANTBASE

POLLUTION CONTROL EQUIPMENT

Dust Collector 2853, Dust Collector 2854, Dust Collector 1774, Dust Collector 0120

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.05 lb per 1000 lb of exhaust gas, calculated on a dry gas basis	Hourly	FGENAMEL	SC V.1	R 336.1331
2. PM	1.26E-02 lb/hr	Hourly	FGENAMEL	SC V.1	R 336.1225, 40 CFR 52.21 Subparts (c) & (d)
3. PM10	1.26E-02 lb/hr	Hourly	FGENAMEL	SC V.1	R 336.1225, 40 CFR 52.21 Subparts (c) & (d)
4. PM2.5	1.26E-02 lb/hr	Hourly	FGENAMEL	SC V.1	R 336.1225, 40 CFR 52.21 Subparts (c) & (d)
5. Opacity	10%	6-Minute Average	Each stack in FGENAMEL	SC V.1	R 336.1301

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any emission unit in FGENAMEL unless its associated dust collector is installed, maintained and operated in a satisfactory manner. **(R 336.1301, R 336.1331, R 336.1910)**

2. The permittee shall not operate FGENAMEL unless a malfunction abatement plan (MAP), as described in Rule 911(2), for the dust collectors, is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.

c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed, or upon request from the District Supervisor. The permittee shall submit the MAP, and any amendments to the MAP, to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a differential pressure gauge on each dust collector in FGENAMEL. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

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 PM, PM10, and PM2.5 emission rates and visible emissions from FGENAMEL by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10, PM2.5	40 CFR Part 51, Appendix M
Visible Emissions	40 CFR Part 51, Appendix M; 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. 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 336.1205, R 336.1225, R 336.1301, R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor in a satisfactory manner the condition of each dust collector through visual inspection [or other monitoring program proposed by the permittee and approved in writing by the District Supervisor] on a weekly basis during operations. **(R 336.1331)**

2. The permittee shall keep in a satisfactory manner records of visual inspections of each dust collector which includes the dates and results of the inspections and the dates and reasons for repairs. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1331)**

3. The permittee shall monitor and record, in a satisfactory manner, at least once per calendar day, during operation, the pressure drop across each cartridge filter [or other monitoring program proposed by the permittee and approved in writing by the District Supervisor]. Each entry shall include the date, time, pressure drop, and initials of the person making the record. **(R 336.1910)**

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. SV-0120	32	48	R 336.1225, 40 CFR 52.21(c)&(d)
2. SV-1774	28	50	R 336.1225, 40 CFR 52.21(c)&(d)
3. SV-2853	28	50	R 336.1225, 40 CFR 52.21(c)&(d)
4. SV-2854	28	50	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).

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. Cobalt Oxide	Less than 0.99 lb/yr	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1225(2)
2. VOC	Less than 90 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC V.2, SC VI.3	R 336.1205(3)
3. Each individual HAP	Less than 9.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC V.1, SC VI.3	R 336.1205(3)
4. Aggregate HAPs	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC V.1, SC VI.3	R 336.1205(3)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. 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. **(R 336.1205(3))**

2. The VOC content, water content, and density of any material as applied and as received, shall be determined using federal Reference Test Method 24 or manufacturer's formulation data. If the Method 24 and the formulation values should differ, the Method 24 results shall be used to determine compliance. **(R 336.1205(3))**

VI. MONITORING/RECORDKEEPING

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

1. All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(3))**

2. The permittee shall keep the following information on a monthly basis for FGFACILITY:
   a. Pounds of each cobalt oxide containing material used.
   b. Cobalt oxide content, in wt%, of each cobalt oxide containing material used.
   c. Cobalt oxide emission calculations determining the monthly emission rate in pounds per calendar month.
   d. Cobalt oxide emission calculations determining the annual emission rate in pounds 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 and made available to the Department upon request. **(R 336.1225(2))**

3. The permittee shall keep the following information on a monthly basis for FGFACILITY:
   a. Gallons or pounds of each VOC and HAP containing material used.
   b. Where applicable, gallons or pounds of each VOC and HAP containing material reclaimed.
   c. VOC and HAP content, in pounds per gallon or for HAP, pounds per pound, of each HAP containing material used.
   d. VOC emission calculations determining the monthly emission rate in tons per calendar month.
   e. Individual and aggregate and HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
   f. VOC emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   g. 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 and made available to the Department upon request. **(R 336.1205(3))**

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).