

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection**

N651547739

FACILITY: ADVANCED FIBERMOLDING INC		SRN / ID: N6515
LOCATION: 23095 14 MILE RD, LEROY		DISTRICT: Cadillac
CITY: LEROY		COUNTY: OSCEOLA
CONTACT:		ACTIVITY DATE: 01/28/2019
STAFF: Chance Collins	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection and Review of Records for FCE		
RESOLVED COMPLAINTS:		

On January 28, 2019, AQD staff traveled to Osceola County to perform an inspection of Advanced Fibermolding. The purpose of the inspection was to determine the facility's compliance with MI-ROP-N6515-2017 and applicable state and federal air pollution control regulations 40 CFR part 63 Subpart WWW. AQD staff noted that the facility production processes include Mold production, gel coating, Resin Transfer Molding (RTM), resin lay-up (chopped and mat), finishing and packaging.

AQD staff arrived on site at 8:50 a.m. to snowy conditions with a temperature of 1°F and an E wind of 16 mph. There were no noticeable odors upon arrival. At the time of inspection, the facility was in operation. Mr. Dennis Webster walked AQD staff around the facility answering any questions and supplied AQD staff with all required records. The following discusses the findings of the inspection and review of records.

A. Source Wide Conditions

I. Emission Limits

Pollutant	Emission Limit	Calculated Emission Range	Compliant?
Acetone PPH	21.8 PPH	10.3-19.3 PPH	Yes
Acetone TPY (12 month rolling time period)	22.6 TPY	18.8 TPY	Yes
VOC PPH	58.9 PPH	14.2-22.8 PPH	Yes
VOC TPY (12-month rolling time period)	79.6 TPY	22.1 TPY	Yes

II. Material Limit

NA

III. Process/Operational Restriction

NA

IV. Design/Equipment Parameter

NA

V. Testing/Sampling

NA

VI. Monitoring/Recordkeeping

Permittee shall calculate and record the VOC (including styrene), and acetone emissions in pounds per hour, based on a calendar month average; tons per month, and tons per year based on a 12-month rolling time period using equations listed in Appendix 7. This requirement is

being met.

VII. Reporting

1., 2., 3., ROP deviation, semiannual and annual reporting. All reports have been submitted in a timely manner and with proper certification. Reports were reviewed as they were received.

VIII. Stack/Vent Restrictions

NA

IX. Other Requirements

All waste resins, gelcoat, catalysts, glue and purge/cleanup solvents shall be captured and stored in closed containers and disposed of in an acceptable manner in compliance with applicable rules. This requirement is being met as seen during inspection.

EURTM – RTM closed mold process in which resin is injected into molds.

I. Emission Limits

Pollutant	Emission Limit	Calculated Emission Range	Compliant?
Styrene PPH	5.1 PPH	0.31-0.49 PPH	Yes
Styrene TPY (12-month rolling time period)	7.8 TPY	0.5 TPY	Yes

II. Material Limit

NA

III. Process/Operational Restrictions

NA

IV. Design/Equipment Parameters

NA

V. Testing/Sampling

NA

VI. Monitoring/Recordkeeping

Permittee shall record the hours of operation on monthly basis. This requirement is being met.

Permittee shall record the styrene content and monthly material usage rates of all resins. This requirement is being met.

Permittee shall calculate and record the styrene emissions in pounds per hour based on a calendar month average; tons per month and tons per year based on a 12-month rolling time period as determined at the end of each calendar month using the equations listed in Appendix 7. This requirement is being met.

VII. Reporting

1., 2., 3., ROP deviation, semiannual and annual reporting. All reports have been submitted in a timely manner and with proper certification. Reports were reviewed as they were received.

VIII. Stack/Vent Restrictions

NA

IX. Other Requirements

NA

FGLAYUP – Spray lay-up operations consisting of handheld and robotic spray booths and associated application equipment. Resin application on parts too large to fit inside the booths is performed in the area directly outside of the booths.

Emission Units: EULAYUP1, EULAYUP2, EUROBOTLAYUP

I. Emission Limit

Pollutant	Emission Limit	Calculated Emission Range	Compliant?
VOC (including styrene)	22.7 TPY	11.1 TPY	Yes

II. Material Limit

Material Styrene Content Limit	Limit	Recorded Content	Compliant?
Tooling Resin	45.0% by weight	43.96	Yes
Corrosion Resistant Resin	45.0% by weight	43.96	Yes
Non-Corrosion Resistant Resin	37.0% by weight	33.53	Yes

III. Process/Operational Restrictions

Permittee shall capture all waste cleanup solvents, catalysts, and resins used in FGLAYUP and store them in closed containers. This requirement is being met as seen during inspection.

Permittee shall not operate any booth in FGLAYUP unless its respective exhaust filter is installed, maintained, and operated in a satisfactory manner. All exhaust filters were installed, maintained, and operating in a satisfactory manner as seen during inspection.

Permittee shall not operate EULAYUP2 and EUROBOTLAYUP simultaneously and shall cease operation and remove from service EULAYUP2 upon commencement of trial operation of EUROBOTLAYUP. EUROBOTLAYUP has not began operation at this time. EULAYUP2 is still in full operation and will continue to be in operation until EUROBOTLAYUP is placed in operation.

IV. Design/Equipment Parameters

Permittee shall equip and maintain the spray booths in FGLAYUP with mechanical non-atomized applicators or technology with equivalent or lower styrene emission rates. This requirement is being met as seen during inspection.

V. Testing/Sampling

NA

VI. Monitoring/Recordkeeping

Permittee shall maintain current listing from the manufacturer of the VOC (including styrene monomer) content for each resin and catalyst as received. This requirement is being met as seen in the records submitted for review period.

Permittee shall keep the following information for each calendar month for FGLAYUP: Identity and amount (in pounds) of each resin and cleanup material used. Styrene content and total VOC content (including styrene) of each resin clean-up material used. Appropriate emission factor for each raw material used (UEF). VOC emission calculations determining the monthly emission rate in tons per calendar month, and the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month. This requirement is being met. These records are being kept and were reviewed.

VII. Reporting

1., 2., 3., ROP deviation, semiannual and annual reporting. All reports have been submitted in a timely manner and with proper certification. Reports were reviewed as they were received.

4., 5., EUROBOTLAYUP installation, construction, reconstruction, relocation, or modification authorized by PTI 126-12B has yet to be completed.

VIII. Stack/Vent Restriction

SVLAYUP1 and SVLAYUP2 exhaust dimensions and stack height appeared to meet the requirements of the ROP during inspection.

EUROBOTLAYUP stack will be installed at the end of the construction of EUROBOTLAYUP.

IX. Other Requirements

NA

FGGELCOAT – Spray gel coating operation consisting of two spray booths and associated application equipment. Gel coat application on parts too large to fit inside the booths is performed in the area directly between the two booths.

Emission Units: EUGELCOAT1, EUGELCOAT2

I. Emission Limit

Pollutant	Emission Limit	Calculated Emission Range	Compliant?
VOC TPY (including styrene and MMA, 12-month rolling time period)	17.4 TPY	10.5 TPY	Yes

II. Material Limits

Gel Coat	Styrene Content Limit %	VOC Content Limit %	Maximum Styrene Content Actual %	Maximum VOC Content Actual %
White	31	37	30	33.17
Pigmented	40	45	37.86	37.86
Clear	39	49	38.49	48.49
Tooling	44	45	39.47	39.47

III. Process/Operational Restrictions

EUGELCOAT1 and EUGELCOAT2 spray booth exhaust filters were installed, maintained, and operating in a satisfactory manner at time of inspection.

IV. Design/Equipment Parameters

NA

V. Testing/Sampling

NA

VI. Monitoring/Recordkeeping

Permittee shall maintain current listing from the manufacturer of the VOC (including styrene monomer and MMA monomer) content for each gel coat and catalyst as received. Records were provided showing the required information. This requirement is being met.

Identity of each gel coat and catalyst used in the process, Styrene, MMA and VOC content, and emission calculations are recorded on a monthly basis. Records were provided showing the required information. This requirement is being met.

VII. Reporting

1., 2., 3., ROP deviation, semiannual and annual reporting. All reports have been submitted in a timely manner and with proper certification. Reports were reviewed as they were received.

VIII. Stack/Vent Restrictions

SVGELCOAT1 and SVGELCOAT2 exhaust dimensions and stack height appeared to meet the requirements of the ROP at time of inspection.

IX. Other Requirements

NA

FGMACT – All parts of the facility engaged in open molding, closed molding, mixing, cleaning of equipment used in reinforced plastic composites manufacture, HAP containing materials storage, and repair on parts that the facility manufactures.

Emission Units: EURTM, EULAYUP1, EULAYUP2, EUROBOTLAYUP, EUGELCOAT1, EUGELCOAT2

I. Emission Limits

Organic HAP emission limits vary based on the type of resin or gelcoat used and the type of application. For the resins, the facility is taking a weighted average approach as allowed by 40 CFR Part 63 Subpart WWWW. The facility is responsible for calculating the weighted average emission limit and weighted average emission each month. The weighted average emission limit for this is 88 pounds per ton. For the review period of January 2018 - December 2018, the actual weighted average ranged between 72-74 pounds per ton.

Compliance with Gelcoat emission limits is demonstrated by using the individual gelcoat demonstration method 63.5810(a). Based on the styrene and MMA % content and material usage an emission factor is calculated using the equation in Table 1(g) of Subpart WWWW. The provided records show the calculated emission factor to be below the emission limit for each gelcoat.

II. Material Limits

NA

III. Process/Operational Restrictions

The facility only uses acetone for cleaning purposes. During the inspection, the facility appeared to be clean and well maintained. HAP storage materials appeared to be stored properly. There were no visible gaps observed in the mixers, and no mixer lids were open.

IV. & V. Design/Equipment Parameters and Testing/Sampling

NA

VI. Monitoring/Recordkeeping

All required records and calculations required by 40 CFR Part 63 Subpart WWWW were maintained and made available. The records were up to date, complete, and contained the necessary information to demonstrate compliance with record keeping requirements and emission limits.

VII. Reporting

1., 2., 3., ROP deviation, semiannual and annual reporting. All reports have been submitted in a timely manner and with proper certification. Reports were reviewed as they were received.

4., 5. 40 CFR Part 63 Subpart WWWW reports were submitted in a timely manner with proper certification. The reports were reviewed as they were received.

VIII. Stack/Vent Restriction

NA

IX. Other Requirements

Based on the inspection and review of records, the facility appeared to be in compliance with safe work practices and in compliance with the organic HAP limits of 40 CFR Part 63 Subpart WWWW.

NAME



DATE

2/7/2019

SUPERVISOR

