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

N651524405

FACILITY: ADVANCED FIBERMOLDING INC		**SRN / ID:** N6515
LOCATION: 23773 14 MILE RD, LEROY		**DISTRICT:** Cadillac
CITY: LEROY		**COUNTY:** OSCEOLA
CONTACT: Dennis Webster , President		**ACTIVITY DATE:** 02/04/2014
STAFF: Caryn Owens	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Field Inspection and Records Review		
RESOLVED COMPLAINTS:		

On February 4, 2014, Ms. Caryn Owens and Mr. Jeremy Howe of the DEQ-AQD inspected Advanced Fibermolding, Inc. (N6515) located at 23773 14 Mile Road, Leroy, Osceola County, Michigan. The site on the south side of 14 Mile Road, and consists of one building on the property. The field inspection and records review were to determine compliance with the Renewable Operating Permit (ROP) MI-ROP-N6515-2012. The site is currently a major source for hazardous air pollutants (HAPs) because the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is equal to or more than 10 tons per year and/or the potential to emit of all HAPs combined is more than 25 tons per year. The site is a major source for National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart WWWW for Reinforced Plastic Composites Production. An inspection brochure was given to Mr. Dennis Webster, President of Advanced Fibermolding, Inc. at the time of the inspection.

On-site Inspection:

During the field inspection it was partly sunny and approximately 15°F, and calm. DEQ met with Mr. Webster for a facility inspection and records review process. Mr. Webster escorted DEQ through the facility to observe the permitted emission units and associated processes. Advanced Fibermolding, Inc. manufactures various fiberglass products ranging from boat lids, to agricultural fans, to restaurant seats. The production of these products requires the operation of RTM injection, gel coat, and spray lay-up processes. The RTM injection process is used to mold the parts. After the parts are removed from the molds, they are transferred to one of the two gel coat booths. A gel coat, which provides the color, is sprayed onto the parts while in the booths. The parts are then transferred to another set of booths where fiberglass is applied to add structural strength. The parts are then sanded, cut, and drilled at different workstations to produce a completed part. Storage of the gel coats and resins are located in the western portion of the building. The gel coats are stored in a concrete room in a separate area from the resin.

Records Review:

A. Source-Wide Conditions

I. Emission Limits

Acetone usage for the facility is limited to 21.8 pounds per hour and 22.6 tons per year based on 12-month rolling time period. Based on the records reviewed the acetone usage ranged between 7.8 and 16.3 pounds per hour from January 2013 – December 2013. Acetone emissions ranged between 13.1 - 18.3 tons per year based on 12-month rolling time period.

Emission limits for volatile organic compounds (VOCs), including styrene, are limited to 58.9 pounds per hour and 79.6 tons per year based on 12-month rolling time period. Total VOC emissions ranged between 6.4 - 12.9 pounds per hour, and the 12-month rolling time period VOC emissions ranged between 13.2 - 14.6 tons per year. The facility is in compliance with the source-wide emission limits for acetone and VOCs.

II. – V. Material Limits, Process Operational Restrictions, Design/Equipment Parameters, and Testing/Sampling

There are no applicable conditions for Material Limits, Process Operational Restrictions, Design/Equipment Parameters, and Testing/Sampling conditions.

VI. Monitoring/Recordkeeping

VI.1: Records of VOCs (including styrene) and acetone from all processes are being recorded in pounds per hour and tons per year based on a 12-month rolling time period. The emissions are recorded at the end of each month.

VII. Reporting

Reporting of any deviations, semi-annual reports, and annual compliance reports for ROP certification were submitted to the DEQ in timely manner.

VIII. Stack/Vent Restrictions

Stack/ vent restrictions are not applicable under Source-Wide Conditions.

IX. Other Requirements

All waste containing VOCs and acetone was collected in closed containers and properly disposed.

B. EURTM: RTM closed mold processes where resin is injected into molds.

I. Emission Limits

I.1 & I.2: Styrene emissions for the RTM process cannot exceed 5.1 pounds per hour or 7.8 tons year on a 12-month rolling time period. Based on the records reviewed, styrene emissions ranged from 0.08 to 0.38 pounds per hour ~~year~~ and 0.3-0.4 tons per year based on a 12-month rolling average. The facility is in compliance with EURTM emission limits for styrene.

II. – V. Material Limits, Process Operational Restrictions, Design/Equipment Parameters, and Testing/Sampling

There are no applicable conditions for EURTM for Material Limits, Process Operational Restrictions, Design/Equipment Parameters, and Testing/Sampling conditions.

VI. Monitoring/Recordkeeping

VI.1 & VI.2: Hours of operation, resin usage, and styrene content are recorded on a daily basis. Those records were available to the DEQ for review. DEQ reviewed the monthly records indicating the hours of operation, resin usage, and styrene content. The records obtained from the facility are completed in accordance with DEQ standards.

VII. Reporting

VII.1 – VII.3: Reporting of any deviations, semi-annual reports, and annual compliance reports for ROP certification were submitted to the DEQ in timely manner.

VIII. & IX. Stack/Vent Restrictions and Other Requirements

Stack/ Vent Restrictions and Other Requirements are not applicable for the EURTM process.

C. FGLAYUP: Spray Lay-up operations consisting of two spray booths and associated application equipment. Resin application for parts too large to fit in the spray booths is performed in an area directly between the two lay-up spray booths.

I. Emission Limits:

I.1: VOC (including styrene) emissions for FGLAYUP cannot exceed 22.7 tons per year based on a 12-month rolling time period. Based on the records reviewed, VOC (including styrene) emissions ranged from 6.9 – 7.4 tons per year based on a 12-month rolling average. The facility is in compliance with FGLAYUP emission limits for VOCs.

II. Material Limits

There are no applicable conditions for Material Limits for the FGLAYUP process.

III. Process Operational Restrictions

III.1: At the time of the inspection, the spray booths appeared to be in good condition and maintained well. According to Mr. Webster, the filters for the spray booths are changed approximately once per month, but it depends on the usage of the spray booth. The spray booths are equipped with a pressure drop gauge that indicates when the filters need to be changed.

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

There are no applicable conditions for Design/Equipment Parameters and Testing/Sampling for the FGLAYUP process.

VI. Monitoring/Recordkeeping

VI.1 – 3: Monthly records which identified: each resin; catalyst used in the process; VOC content; and emission calculations were reviewed by the DEQ between January 2013 – December 2013. The records obtained from the facility are completed in accordance with DEQ standards.

VII. Reporting

VII.1 – 3: Reporting of any deviations, semi-annual reports, and annual compliance reports for ROP certification were submitted to the DEQ in timely manner.

VIII. Stack/Vent Restrictions

VIII.1 & 2: During the inspection, the stack associated with FGLAYUP appeared to be at least 60 feet above ground surface and not greater than 24 inch diameter, which is in accordance with the ROP. No visible emissions or odors were present outside of the facility.

IX. Other Requirements

Other Requirements are not applicable for the FGLAYUP process.

D. **FGGELCOAT:** The spray gel coating operation consisting of two spray booths and associated application equipment. Gel coat application on parts too large for the spray booths is performed in the area between the two spray booths.

I. Emission Limits:

I.1: VOC (including styrene and MMA) emissions for FGGELCOAT cannot exceed 17.4 tons per year based on a 12-month rolling time period. Based on the records reviewed, VOC (including styrene and MMA) emissions ranged from 5.9 – 7.0 tons per year based on a 12-month rolling average. The facility is in compliance with FGGELCOAT emission limits for VOCs.

II. Material Limits

Material – Gel coat	Styrene Content Limit %	VOC Content Limit %	Styrene Content Actual %	VOC Content Actual %
White	31	37	30	36.9
Pigmented	40	45	37.9	40.3
Clear	39	49	38.5	48.5
Tooling	44	45	39.5	39.5

Monthly records for the gel coats used from January 2013 – December 2013 are attached.

III. Process Operational Restrictions

III.1 As stated above in Condition III.1 in FGLAYUP, the spray booths appeared to be in good condition and maintained well. The filters for the spray booths are changed approximately once per month, but it depends on the usage of the spray booth. The spray booths are equipped with a pressure drop gauge that indicates when the filters need to be changed.

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

There are no applicable conditions for Design/Equipment Parameters and Testing/Sampling for FGGELCOAT.

VI. Monitoring/Recordkeeping

VI.1-3: Identity of each gel coat and catalyst used in the process, VOC content, and emission calculations are recorded on a monthly basis. DEQ reviewed the associated records from January 2013 – December 2013 which are attached. The records obtained from the facility are completed in accordance with DEQ standards.

VII. Reporting

VII.1 – 3: Reporting of any deviations, semi-annual reports, and annual compliance reports for ROP certification were submitted to the DEQ in timely manner.

VIII. Stack/Vent Restrictions

VIII.1 & 2: During the inspection, the stack associated with FGGELCOAT appeared to be at least 60 feet above ground surface and not greater than 24 inch diameter, which is in accordance with the ROP. No visible emissions or odors were present outside the facility.

IX. Other Requirements

Other Requirements are not applicable for the FGGELCOAT process.

E. **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 the facility manufacturers.

I. Emission Limits

I.1-12: The HAP emissions for any open molding processes for the facility are limited to 88 pounds per ton. The facility is using the weighted average method to determine compliance with the FGMACT emission limit. Based on the records reviewed, the weighted average ranged between 50-75 pounds per ton from January 2013 – December 2013.

II. Material Limits

There are no applicable conditions for Material Limits for FGMACT.

III. Process/Operational Restrictions:

III.1-8: The facility only uses acetone for cleaning purposes. During the site inspection, the facility appeared to be clean, and maintained. HAP storage materials were stored properly in the western portion of the building, no visible gaps were observed in the mixers, and no mixer lids were open.

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

There are no applicable conditions for Design/Equipment Parameters and Testing/Sampling for FGMACT.

VI. Monitoring/Recordkeeping

All required records and calculations required by 40 CFR Part 63, Subpart WWWW were maintained and were made available to the DEQ. These records were completed in accordance with DEQ standards demonstrating compliance with record keeping requirements and emission limits.

VII. Reporting

VII.1 – 3: Reporting of any deviations, semi-annual reports, and annual compliance reports for 40 CFR Part 63 Subpart WWWW were submitted to the DEQ in timely manner.

VIII. Stack/Vent Restrictions

Stack/vent restrictions are not applicable for FGMACT.

IX. Other Requirements

IX. 1 & 2: Based on the field inspection and records review, the facility appears to be in compliance with the organic HAP limits and in compliance with 40 CFR 63 Subpart WWWW.

Summary:

The activities covered during the field inspection and records review for the facility indicate the facility was in compliance with ROP MI-PTI-N6515-2012 and 40 CFR Part 63 Subpart WWWW.

NAME Carryn Owens DATE 2/28/14 SUPERVISOR