

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection**

B620271089

FACILITY: E-T-M Enterprises, Inc.		SRN / ID: B6202
LOCATION: 920 N. Clinton St., GRAND LEDGE		DISTRICT: Lansing
CITY: GRAND LEDGE		COUNTY: EATON
CONTACT: Steven Mohnke , President		ACTIVITY DATE: 02/27/2024
STAFF: Matthew Karl	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: The purpose of this on-site inspection was to determine compliance with permit MI-ROP-B6202-2023 as part of a full compliance evaluation (FCE).		
RESOLVED COMPLAINTS:		

Staff:

Steven R. Mohnke, President, (517) 925-1207, steve.mohnke@etmenterprises.com

Kelly Lewandowski, Human Resource Manager, (517) 925-1108, kelly.lewandowski@etmenterprises.com

Todd Thelen, Quality Manager, (517) 925-1303, todd.thelen@etmenterprises.com

Purpose:

The purpose of this on-site inspection was to determine compliance with permit MI-ROP-B6202-2023 as part of a full compliance evaluation (FCE).

Background:

E-T-M Enterprises, Inc. where E-T-M stands for Engineering, Tooling and Manufacturing of fiberglass reinforced plastics manufactures and coats reinforced composite parts for trucks and agricultural machinery. Manufacturing processes include resin storage and preparation, compression molding of resins into plastic parts, parts trimming and sanding, and surface coating and drying. VOCs are emitted from the coating of the plastic exterior parts, and from manufacture of the plastic parts.

There are 4 kinds of processes for manufacturing parts:

1. Cold molding (liquid compression molding)
2. Sheet Molding Compound (SMC)
3. Bulk Molding Compound (BMC)
4. Vacuum Assisted Resin Transfer Molding (VARTM)

ETM is located on the north end of Grand Ledge, in Eaton County. Residential areas are located mainly to the south and west of the facility. To the north and northeast of the plant is a mostly industrial area, followed by fields and a few residences. The closest residences to ETM are about 175 feet to the south of the plant, 125 feet to the west, 630 feet to the north, and about 800 feet to the east or southeast, as measured in Google Maps.

Regulatory Determination:

ETM is considered a major source of hazardous air pollutants (HAPs) because the potential to emit of any single HAP (styrene) is equal to more than 10 tons per year. ETM is a synthetic minor

or “opt out” source regarding volatile organic compounds (VOC) because ETM accepted VOC emission limits less than 100 tons per year.

Emission Unit/ Flexible Group	Control Equipment	State or Federal Rule	Compliance Status (Y/N)
EUFLINERBOOTH	Exhaust fabric filters on each spray booth for particulate control	Rule 702; 40 CFR Part 63, Subpart PPPP	Y
FGPRESSANDMIXING	NA	Rule 702, 225; 40 CFR Part 63, Subpart WWWW	Y
FGMACTPPPP	NA	40 CFR Part 63, Subpart PPPP	Y
FGFIBERGLASS	Dry filters on spray booths	Rule 224, 225, 702(a); 40 CFR Part 63, Subpart WWWW	Y
FGMACTWWWW	NA	40 CFR Part 63, Subpart WWWW	Y
EUSEALER/ FGRULE290	NA	Rule 290	Y (not being used)
FGSANDGRINDROUT (EUSANDBOOTH, EURROUTING, EUGRINDING)	Three (3) cartridge filter baghouse controls	Rule 285(2)(l)(vi)(C)	Y
EU001TANKS	NA	Rule 212(4)(b), 284(2)(i)	Y
EU001BAKEOVEN	NA	Rule 212(4)(c), 282(2)(a)(i)	Y

On-Site Inspection:

I (Matt Karl) arrived on site and signed the sign-in sheet in the front office. I met with Steve Mohnke, President and Kelly Lewandowski, Human Resource Manager. They informed me that Todd Thelen, Quality Manager, was out sick, but would be able to get me requested records later. Steve reminded me that Ron Clewley retired on April 28, 2023. Since then, E-T-M Enterprises hired Cornerstone Environmental Services to help Todd Thelen with the recordkeeping and reporting requirements in their permit.

Kelly Lewandowski agreed to walk with me around the facility so that I could observe the permitted equipment. As we left the front office area and entered the production area, I did notice a solvent odor from the fiberglass resin used. The odors were not apparent outside the production area or outside the building.

I observed the fiberglass manufacturing process which consists of 18 hydraulic presses (EUHYDPRESSES, FGPRESSANDMIXING/FGMACTWWW). The presses range in size from 50-1,000 tons. Presses utilize gelcoat, fiberglass mat, and a catalyzed resin system to manufacture reinforced plastic composite parts. The process involves placing a fiberglass cloth in the mold press. Resin is transferred from a 55-gallon drum to a smaller ~5-gallon bucket which is mixed with a catalyst and then is poured onto the fiberglass cloth in the mold. The press is lowered and compresses the contents while the reaction takes place. The presses have ID numbers on them. They were operating during my inspection. Kelly informed me that there have been no changes to the EUHYDPRESSES operations since my last inspection.

Next to the presses is the resin mixing area, which consists of two (2) 300-lb capacity barrel mixers (EUBARRELMIXERS, FGPRESSANDMIXING/FGMACTWWW). The resin mixing area is labeled with a sign, and the mixers are identified as "A" and "B". There is a desk in the resin mixing area where records are kept.

Kelly showed me the chemical storage area, which is in a separate room adjacent to the hydraulic press production area. It contained ~30 sealed 55-gallon drums on pallets. I noted that throughout the production area the 55-gallon drums in use all had lids.

Kelly and a production area manager showed me the adhesive coating operation (EUADHESIVE, FGFIBERGLASS). It consists of a mobile cart that contains a 55-gallon drum of adhesive and a spray applicator. The adhesive is applied in the open to glue fiberglass parts to other fiberglass parts.

We proceeded to the gel coat booths (EUGELCOAT, EUGELCOAT2, FGFIBERGLASS). Neither of the booths were currently in operation during my inspection. I noted that gel coat booth 2 had a pressure drop monitor, and a meter that recorded operating hours (8398 hours at the time of my inspection). In the area next to booth 2 that contained the 55-gallon drums hooked into the gel coat spray gun system, there were start up instructions for operating the booths, and the gel coat gun operating procedure. Respirators are required for staff in the gel coat booths. Kelly informed me that the filters in the booths are changed out at least every 6 months or more frequently depending on use.

At the back of the facility is the sanding, grinding and routing booth (EUSANDBOOTH, EUROUTING, EUGRINDING, FGSANDGRINDROUT). This flexible group was determined to be exempt from the requirements requiring a permit to install (PTI) under exemption Rule 336.1285

(2)(l)(vi)(C) and had no applicable requirements under the renewable operating permit (ROP) during the last ROP renewal. The sanding, grinding and routing booth have particulate emission controls that consist of three (3) Torit downflo cartridge filter baghouses. They are identified as #1, #2 and #3. #1 and #2 are smaller units with one 55-gallon drum, and #3 is larger with three 55-gallon drums for collecting particulate matter.

The freight liner booth (EUFLINERBOOTH, FGMACTPPPP) is a coating paint system consisting of solvent wipe/tack off, a spray booth, a flash off booth and oven. The coating line is used to coat plastic exterior automotive parts. The booth is designed like a tunnel and has a floor-mounted chain on edge conveyor system to move parts through the booth. Parts are sprayed by hand in the spray booth. Staff wear half face respirators and Tyvek paint suits. The spray booth is a downdraft booth, with air intake filters in the ceiling and exhaust filters in the floor. The filters are used for particulate matter control. Todd Thelen informed me that the filters are replaced every other month by the paint department. The condition of the filters is noted by the paint department daily. However, I discussed with Todd the requirement to keep records of the dates that the filters are changed as required by EUFLINERBOOTH SC VI.4. Todd informed me that E-T-M will start recording the specific change out dates of the filters going forward.

For the sealing operations (EUSEALER, FGRULE290) where a sealer was applied to plastic parts, Todd informed me that E-T-M no longer uses the sealer. This emission unit/flexible group should be removed in future ROP renewals unless the facility resumes sealing operations.

Records Review:

Todd Thelen sent me spreadsheets which are prepared by Cornerstone Environmental Services. The following table includes the information contained in the excel spreadsheet "January 2024 Compliance Summary.xlsx".

Emission Unit/ Flexible Group	Parameter	Limit	Actual Reported	% of Limit	Source
Source-Wide	VOC	99.0 tons/year	11.0 tons/year (rolling 12-month total updated January 2024)	11	January 2024 Compliance Summary
Source-Wide	Styrene	40.6 tons/year	7.6 tons/year (rolling 12-month total updated January 2024)	19	January 2024 Compliance Summary

EUFLINERBOOTH	VOC	63.3 lbs/hour	1.1 lbs/hour (Average pounds per hour in 2024)	2	January 2024 Compliance Summary
EUFLINERBOOTH	VOC	8.0 tons/month	0.3 tons/month (January 2024)	4	January 2024 Compliance Summary
EUFLINERBOOTH	VOC	85.0 tons/year	2.1 tons/year (rolling 12-month total updated January 2024)	3	January 2024 Compliance Summary
FGPRESSANDMIXING	VOC	16.5 lbs/hour	0.2 lbs/hour (Average pounds per hour in January 2024)	1	January 2024 Compliance Summary
FGPRESSANDMIXING	VOC	17.4 tons/year	0.5 tons/year (Rolling 12-month total updated January 2024)	3	January 2024 Compliance Summary
FGPRESSANDMIXING	Styrene	10.5 lbs/hour	1.5 lbs/hour (Average pounds per hour in January 2024)	14	January 2024 Compliance Summary
FGPRESSANDMIXING	Styrene	26.3 tons/year	1.6 tons/year (Rolling 12-month total updated January 2024)	6	January 2024 Compliance Summary
FGPRESSANDMIXING	Resin Throughput	28000 lbs/day	8473 lbs/day (Average pounds per day)	30	January 2024 Compliance Summary

			in January 2024)		
FGMACTPPPP	Organic HAP	0.16 lb/lb	0.10 lb/lb (Rolling 12-month average updated January 2024, includes bonding and gluing)	63	January 2024 Compliance Summary
FGFIBERGLASS	VOC	14.3 tons/year	5.8 tons/year (Rolling 12-month total updated January 2024)	41	January 2024 Compliance Summary
FGFIBERGLASS	Acetone	9.5 tons/year	5.8 tons/year (Rolling 12-month total updated January 2024)	61	January 2024 Compliance Summary
FGFIBERGLASS	Resin Throughput	723624 lbs/year	265050 lbs/year (Rolling 12-month total updated in January 2024)	37	January 2024 Compliance Summary

I reviewed the spreadsheet “2024 Gel Coat VARTM Reporting System.xlsx”. This spreadsheet contained records for the emissions from gel coat (EUGELCOAT, EUGELCOAT2) and the vacuum resin transfer molding (VARTM) identified in the permit as EURTM. These emission units all have their conditions under the flexible group FGFIBERGLASS. This spreadsheet uses the American National Standards Institute – Estimating Emission Factors of Open Molding of Composites for gel coat and Section 8 for the vacuum RTM operations (Revised and Approved 10/5/2011) aka ACMA UEF-1-2011a to determine emission factors (EF) for the gel coat and VARTM operations.

“2024 Maers & 99 Ton Info.xlsx” This spreadsheet contains information on the annual and 12-month rolling totals required by the permit. The spreadsheet includes monthly totals and then sums them for the annual and 12-month rolling totals.

"2024 Master Paint Compliance Tracking.xlsx" This spreadsheet contains information for FGMACTPPPP (EUFLINERBOOTH and EUBONDING) to show compliance with 40 CFR Part 63, Subpart PPPP – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Surface Coating of Plastic Parts and Products. It tracks the material usage, density, HAPs contents and solids contents to calculate monthly average pound HAPs per pound solids emissions. This spreadsheet also tracks VOC emissions from the EUFLINERBOOTH. This spreadsheet is used to track the amount of each coating used, as well as the cleanup solvents, the VOC contents in pounds per gallon of each, and the calculated amount of VOC emissions resulting in pounds per month.

"2024 Raw Gel Coat Monthly Data.xlsx" This spreadsheet contains information for the spray gel coat use by day and process (EUGELCOAT and EUGELCOAT2). The spreadsheet identifies the part #, the gelcoat ID, the pounds gelcoat per part and then uses the ACMA UEF-1-2011a emission factor to determine emissions of Styrene and VOC.

"2024 Resin Calculations Summary.xlsx" This spreadsheet contains information for resin usage in flexible group FGPRESSANDMIXING. It tracks the pounds of neat resin used per day and the hours worked per day. This spreadsheet also uses ACMA UEF-1 2011a emission factors to calculate Styrene and VOC emissions. The spreadsheet calculates an average hourly emission rate for Styrene and VOC each month.

"2024 SMC BMC Styrene Emissions Report.xlsx" This sheet contains information for Styrene and VOC emissions from the sheet molding compound (SMC) and bulk molding compound (BMC) from FGPRESSANDMIXING and FGFIBERGLASS. It tracks the pounds of material used, the styrene content, uses the ACMA UEF-1-2011a section 6 and 7 emission factors to calculate VOC and styrene emissions per month.

Conclusion:

At the time of this inspection, E-T-M Enterprises, Inc. appeared to be in compliance with MI-ROP-B6202-2023.

NAME Matthew R. Kaul

DATE 3/19/24

SUPERVISOR AB