

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

A280926174

FACILITY: Mold Masters Company		SRN / ID: A2809
LOCATION: 1455 IMLAY CITY ROAD, LAPEER		DISTRICT: Lansing
CITY: LAPEER		COUNTY: LAPEER
CONTACT: Glenn D. Ernst, Chief Executive Officer		ACTIVITY DATE: 07/09/2014
STAFF: Brian Culham	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: This was an unannounced scheduled inspection. A full compliance evaluation is required. The purpose of the inspection was to follow-up on past violations resolved by the issuance of a new PTI 368-06B.		
RESOLVED COMPLAINTS:		

Glenn D. Ernst, Chief Executive Officer gernst@mmasters.org

John Hubbarth, Plant Manager jhubbarth@mmasters.org

This was an unannounced scheduled inspection. A full compliance evaluation is required. The purpose of the inspection was to follow-up on past violations resolved by the issuance of a new PTI 368-06B.

Mold Masters is located directly east of the city of Lapeer. The surrounding area is predominantly agricultural and recreational; however several small residential developments wrap around the plant from north to east.

The main process at Mold Masters is the plastic injection molding of automotive parts. Flocking may be added to some parts with an adhesive coating to give a fuzzy texture. Parts may also be color coated as required by the customer.

This plant has had several names over the years including Voplex, Lapeer Fabricating, Cambridge Industries, and Meridian Automotive. Similar plastic molding and coating processes have been operated by each of these companies.

Mold Masters had violations for exceeding an emission limit on the FGfloc coating line. The violation was cited in a VN dated June 01, 2012. A plan was received from Mold Masters on June 21, 2012 stating that they would submit a permit application for expanded production of their coating lines and for requesting allowances for additional emissions. A PTI 368-06B was issued May 23, 2013.

Because Permit to Install (PTI) 368-06B restricts the facility wide emissions of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) to below Title V Major Source thresholds, Mold Masters is considered a synthetic minor source of these pollutants. Mold Masters is expected to be a minor source for all remaining criteria pollutants as well.

Minor sources of HAP emissions are considered to be Area Sources. Spray application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd), (collectively referred to as the target HAP) to any part or product made of metal or plastic, that are not motor vehicles or mobile equipment, may be subject to 40 CFR 63 subpart HHHHHH, Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources. None of these compounds have been identified by the AQD in coatings used by Mold Masters. However, if coatings containing target HAPs are in use, or are used in the future, Mold Masters may be subject to this federal regulation. The MDEQ/AQD does not have administrative authority for enforcing this regulation at this time.

Mold Masters is required to submit MAERs annually because they are an Opt-Out Minor Source. They are not required to pay fees. A MAERs report was submitted earlier this year.

I attempted to contact personnel at Mold Masters 24 hours prior to the inspection. Chad Britt, my former environmental contact, was no longer with the company.

I arrived in the area of the plant at 8:45 am. I did not experience any odors as I approached Mold Masters, nor did I identify any opacity from any stacks associated with the plant. In the parking lot, occasional paint odors were barely detectable.

I entered and contacted Glenn Haines by internal phone. He met me at the door. I identified myself, showed my credentials, and requested to complete an inspection and record review. I met with Glenn Haines, Maintenance Manager; John Hubbarth, Plant Manager; and Glenn Ernst, CEO. I left an inspection brochure.

No.	Emission Unit or Flexible Group	Description	Permit Number or Exemption	Comp. Status
1	EURobot	Three automatic spray booths and one natural gas curing oven (air-dried) for paint coating of plastic automotive interior parts.	PTI 368-06B	C
2	FGManual	Seven individual hand spray booths with IR ovens.	PTI 368-06B	C
3	FGFloc	Eight separate adhesive application booths of which four were in production.	PTI 368-06B	C
4	FGPurgeSolvents	Purge and clean-up of coating equipment associated with the FGManual and FGRobot lines.	PTI 368-06B	C
5	FGTACs		PTI 368-06B	C
6	FGFacility	Opt-out for HAPs and VOC	PTI 368-06B	C
7	Plastic Injection Molding	48 units of various sizes.	R286(b)	C
8	Solvent Distillation	A small distillation unit for reclaiming cleanup solvents for reuse.	R285(u)	C

Glenn Ernst stated that he had submitted an example of the proposed recordkeeping via e-mail back in September of 2013. He showed me a copy of the submittal. I checked both the paper files and my electronic mailbox when I returned to the office, but could not locate the report. It may have been routed to the AQD Permit Engineer, Vrajesh Patel by mistake.

Coating data is maintained through an electronic system called ProMix. The amount of coating being applied is based on the part identification and the number of units painted. Mold Masters feel that this method is more accurate for them than manual recording of daily paint use.

G. Ernst submitted to me reports of emissions data for the month of April. The individual reports were not titled. I did not receive the report "Prime Mix", nor did I see the balance sheet for "Purge Solvents" in the packet I was given. Some of the data on the summary report did not match the individual report values. Regardless; the coating records that I did review were maintained in accordance with permit requirements. The records were reviewed and compliance values are listed in the corresponding emission units below.

1. EURobot

According to the paint floor manager HVLP was in use in all spray applications at Mold Masters, and air spray had been eliminated from use.

The three EURobot applicators are located in two clean room booths. A single robot applies a prime coat when required. Two robots apply color coat in a second booth. Filters were in place.

An overhead chain moves parts through the booths and in and out of the air dry oven. The oven was operating at between 190 °F and 192 °F during my inspection. Temperature is plotted on disk charts. The chart recorder had a label stating that 194 °F was the maximum allowed.

An MSDS for AkzoNobel 413P Sensol WB 2K was submitted to me. This is a two component polyurethane water based coating and is representative of the most common coatings used at Mold Masters. There is no indication in the MSDS of what the water portion is; however ingredient information suggests that the water portion could be as high as 61%.

Permit 368-06B, condition I.1, limits VOC to 65 tpy on a 12-month rolling time period. Records for the 12-month period ending April indicate VOC emitted at 56.5 tpy.

Permit 368-06B, condition I.2, limits acetone to 3.6 tpy. Glenn Ernst showed me a report for the acetone use for

EURobot and stated that this report is misleading because it shows total use. The report indicated 6.8 tpy. He explained that reclaimed material is processed through the distillation unit and reused. I agreed that the limit allows for credit to be taken for properly disposed of, or reclaimed and reused, acetone that is not lost to ambient air. He will update the report and e-mail the corrected version to me.

Permit 368-06B; condition I.3, limits VOC to 5.0 #/gal minus water as applied per "daily volume weighted average" for EURobot. Records indicated a high value on April 25, 2014 of 4.13 #VOC/gal.

Permit 368-06B; condition II.1, limits VOC content in adhesion promoters to 4.6 #/gal minus water as applied for EURobot. There were no adhesion promoters in use during my inspection.

2. FGManual

This line was not operating during my inspection. I identified seven manual booths and an IR oven. The oven was equipped with a digital temperature display and disk chart plotter. Overspray filters were in place in the booths that I viewed.

Permit 368-06B, condition I.1, limits VOC to 9.1 tpy on a 12-month rolling time period. Records for the 12-month period ending April indicate VOC emitted at 2.2 tpy.

Permit 368-06B; condition I.2, limits VOC to 5.0 #/gal minus water as applied per "daily volume weighted average" for FGManual. Records indicated high values of 4.38 #VOC/gal. for several days in April.

3. FGFloc

The permit identifies eight separate booths. An adhesion promoter/primer is applied in one of the booths. Most of the booths apply a white adhesive to plastic parts. Flock, tiny short strands of polypropylene, is applied in additional booths following the application of adhesive. Ovens cure the adhesive.

The adhesive is white water based glue; however a primer or adhesion promoter is required on some plastic for the adhesive to function. Permit 368-06B, condition I.2, limits VOC to 5.0 #/gal minus water as applied per "daily volume weighted average" for FGFloc. Records indicated a high value on April 1, 2014 of 3.44 #VOC/gal.

Permit 368-06B, condition I.1, limits VOC to 15.1 tpy on a 12-month rolling time period. Records for the 12-month period ending April indicate VOC emitted at 8.33 tpy.

Permit 368-06B, condition I.3, limits xylene to 21.3 pounds per day. Records indicated a high on April 10, 2014 of 9.25 pounds.

Traditionally prime coats generate the majority of VOC being emitted from this process. Thermal etching has been added since my last inspection to help eliminate the need for the prime coat. A steady decrease in 12-month rolling emissions is apparent over the past 12 months.

Low temperature ovens cured the parts and excess flock is removed in a series of vacuuming booths. Excess flock is captured and reused.

4. FGPurgeSolvents

Acetone is used for the purge and clean-up of coating equipment associated with the FGManual and FGRobot lines. Permit 368-06B, condition I.1, limits Acetone to 3.3 tpy. The records I received indicated 1.3 tpy acetone was actually emitted.

The handling of waste coatings and clean-up solvents appeared acceptable. I did not identify any open containers or other unacceptable handling practices anywhere in the plant.

5. FGTACs

Permit 368-06B, condition I.1 limits para-chlorobenzotrifluoride to less than 4.9 tpy. The value reported was 3.2 tpy for the 12 month period ending with April.

Permit 368-06B, condition I.2 limits ter-butyl acetate to less than 17.6 tpy. The value reported was 14.1 tpy for the 12 month period ending with April.

6. FG Facility

Permit 368-06B, condition I.1 limits an individual HAP to less than 9.0 tpy. Toluene was the HAP used in greatest amount at 6.98 tpy for the 12 month period ending with April.

Permit 368-06B, condition I.2 limits aggregate HAPs to less than 22.5 tpy. The value reported was 8.74 tpy for the 12 month period ending with April.

Permit 368-06B, condition I.3 limits VOC to less than 90.0 tpy. The value reported was 67.1 tpy for the 12 month period ending with April.

Permit 368-06B, condition I.4 limits naphthalene to less than 876.0 pounds per year. The value reported was 331.6 pounds per year for the 12 month period ending with April.

Permit 368-06B, condition I.5 limits cumene to less than 1,314.0 pounds per year. The value reported was 423.4 pounds per year for the 12 month period ending with April.

7. Plastic Injection Molding

48 injection molding machines were installed at Mold Masters. At least some of the units are connected to a pneumatic resin storage and delivery system. These processes are exempt from the requirement to obtain a Rule 201 air use permit by Rule 286(b).

8. Solvent Distillation

Mold Masters has installed a solvent distillation unit. Clean-up solvents are cleaned and re-used. Units with a batch capacity less than 55 gallons are exempt from rule 201 permitting requirements. The unit capacity was estimated at about 30 gallons.

I left the facility at approximately 10:30 am.

On 07/30/2014 I received an e-mail from Glenn Ernst responding to several questions that I had about acetone use as a coating additive and a clean-up solvent. Permit 368-06B, Table EUROBOT condition I.2, limits acetone to 3.6 tpy. The e-mail indicates that acetone is added to the coatings and the records are accurate, that the 12-month rolling value was 6.8 tpy, which exceeds the limit. Because Acetone is not considered a VOC, it does not affect the Synthetic Minor Status for VOC. A Notice of Violation will be sent. G. Ernst has already indicated that they will submit a permit application to address the violation.

NAME

[Signature]

DATE

7-31-2014

SUPERVISOR

[Signature]