

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

A280929326

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: 04/29/2015
STAFF: Brian Culham	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: This was an announced 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 368-06C. It was also an opportunity to introduce Nathaniel Hude, who will be their new inspector.		
RESOLVED COMPLAINTS:		

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

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Description - 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 soft 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.

Regulatory Applicability – Because Permit to Install (PTI) 368-06C 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.

History - Mold Masters had violations for exceeding an emission limit on the FGFloc coating line. The violation of permit 368-06 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 resolving the violation.

On November 12, 2014 a violation of 368-06B was issued for acetone use on the Robotic Line that exceeded the 3.6 ton/rolling 12 month period. The amount used was 6.8. As part of their compliance plan, Mold Master submitted an application to extend the limit. Permit 368-06C was issued and extended the acetone limit to 10.2.

Neither of the above violations effected Mold Masters Opt-Out status.

MAERs/Fees – Mold Masters is required to submit MAERs annually because they are an Opt-Out Minor Source.

5/8/2015

They are not required to pay fees. A MAERs report was submitted March 13, 2015.

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 368-06C	C
2	FGManual	Seven individual hand spray booths with IR ovens.	PTI 368-06C	C
3	FGFloc	Eight separate adhesive application booths of which four were in production.	PTI 368-06C	C
4	FGPurgeSolvents	Purge and clean-up of coating equipment associated with the FGManual and FGRobot lines.	PTI 368-06C	C
5	FGTACs		PTI 368-06C	C
6	FGFacility	Opt-out for HAPs and VOC	PTI 368-06C	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

Activity - I arrived in the area of the plant at 9:00 am. Nathaniel Hude of the Lansing District Office was also in attendance. We did not experience any odors as we approached Mold Masters, nor did we identify any opacity from any stacks associated with the plant.

I entered, identified myself, and met with Glenn Ernst and John Hubbarth, the Plant Manager. We discussed the last two violations and the importance of maintaining compliance. J. Hubbarth took us through the plant for our inspection.

1. EURobot

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. Filters are changed at the beginning of every shift.

According to the paint floor manager HVLP was installed and air spray has been completely eliminated from use at Mold Masters. I asked when the last time pressure at the gun tips was measured. They stated that they have not done this as an operational practice and will consider adding to SOPs. I stated that the definition of HVLP is 10 psi at the tip.

An overhead chain moves parts through the booths and in and out of the air dry oven. A digital display indicated oven temperature. The oven was operating at 190.8 °F during my inspection. Temperature is also plotted on disk charts. A temperature of 194 °F is the maximum allowed. J. Hubbarth stated that they have had problems with the pen plotter calibration. There were several areas on the plot that looked like resets had occurred. The plot adjustments appeared to be about 5 °F cooler. The high readings did not appear to extend past 24-hours before corrections were made. I remember seeing three adjustments. J. Hubbarth stated that the digital is accurate.

Permit 368-06C, condition I.1, limits VOC to 65 tpy on a 12-month rolling time period. Records for the 12-month period ending March 2015 indicate VOC emitted at 45.1 tpy.

Permit 368-06C, condition I.2, limits acetone to 10.2 tpy. This was in violation during the last inspection, but since then the permit was amended and the limit was raised from 3.6 to 10.2. The report indicated 6.03 tpy ending March 2015.

Permit 368-06C; 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 March 16, 2015 of 3.69 #VOC/gal. minus water as applied.

A black two component water based coating is the most common coatings used at Mold Masters. I believe it is portrayed in the records a Primer 1003. Records indicate that it is 4.34#/gal minus water as applied.

Permit 368-06C; condition II.1, limits VOC content in adhesion promoters to 4.6 #/gal minus water as applied for EURobot. Sometimes terminology becomes a problem when determining compliance. It is my understanding that the adhesion promoters are called "primers" by Mold Master. The report "Primer Mix" shows compliance with the 4.6 limit. The highest coating is Primemix-1001 at 4.42.

2. FGManual

FG Manual is sometimes called the belt line. Production is down on this line. 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. The display for oven temperature read 150 °F.

Records show that coating use has been less than 200 gallons per month ever the last 12 months for this line. Some of the coatings used are water based.

Permit 368-06C, 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 1.1 tpy.

Permit 368-06C; condition I.2, limits VOC to 5.0 #/gal minus water as applied per "daily volume weighted average" for FGManual. The highest daily value reported was 4.29. Records indicated an average value of 3.3 #VOC/gal. for the month of April.

The primer is the same as reported above.

3. FGFloc

The permit identifies seven separate booths and two ovens. An adhesion promoter/primer is applied in one of the booths. I identified a coating called Polypro Primer. 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. I identified a 2CF1222R Clear Adhesive in one of the east booths on the south line. Ovens cure the adhesive.

Permit 368-06C, 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 March 5, 2015 of 3.12 #VOC/gal.

Permit 368-06C, condition I.1, limits VOC to 15.1 tpy on a 12-month rolling time period. Records for the 12-month period ending March 2015 indicate VOC emitted at 4.78 tpy.

Permit 368-06C, condition I.3, limits xylene to 21.3 pounds per day. Records indicated a high on March 5, 2015 of 3.64 pounds.

Low temperature ovens cured the parts. Temperature was at 185 °F for the disk plotter that I inspected.

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 368-06C, condition I.1, limits Acetone to 3.3 tpy. The records I received indicated 1.5 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 368-06C, condition I.1 limits para-chlorobenzotrifluride to less than 4.9 tpy. The value reported was 2.7 tpy for the 12 month period ending with March.

Permit 368-06C, condition I.2 limits ter-butyl acetate to less than 17.6 tpy. The value reported was 13.4 tpy for the 12 month period ending with March.

6. FGFacility

Permit 368-06C, condition I.1 limits an individual HAP to less than 9.0 tpy. Toluene was the HAP used in greatest amount at 4.1 tpy for the 12 month period ending with March.

Permit 368-06C, condition I.2 limits aggregate HAPs to less than 22.5 tpy. The value reported was 5.2 tpy for the 12 month period ending with March.

Permit 368-06C, condition I.3 limits VOC to less than 90.0 tpy. The value reported was 51.0 tpy for the 12 month period ending with March.

Permit 368-06C, condition I.4 limits naphthalene to less than 876.0 pounds per year. The value reported was 282.9 pounds per year for the 12 month period ending with March.

Permit 368-06C, condition I.5 limits cumene to less than 1,314.0 pounds per year. The value reported was 344.3 pounds per year for the 12 month period ending with March.

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).

We also identified several plastic welders. Some were IR, some were sonic.

8. Solvent Distillation

Mold Masters operates 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 has been estimated at about 30 gallons.

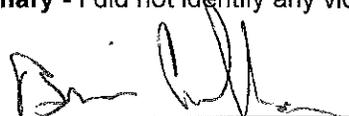
Coating data is maintained through an electronic data system called ProMix. The amount of coating being applied is based on the part identification and the number of units painted. Mold Masters feel that this method is more accurate for them than manual recording of the small daily amounts of paint used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

G. Ernst submitted to me reports of emissions data for the month of March. The coating records that I reviewed were maintained in accordance with permit requirements. The records were reviewed and compliance values are listed in the corresponding emission units.

We left the facility at approximately 10:30 am.

Summary - I did not identify any violations at Mold Masaters.

NAME



DATE

5-8-2015

SUPERVISOR

