

Kent Co.  
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DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Self Initiated Inspection

U4114241842062

FACILITY: Mark-Maker Company, Incorporated		SRN / ID: U41142418
LOCATION: 4157 Stafford Avenue SW, Wyoming		DISTRICT: Grand Rapids
CITY: Wyoming		COUNTY: KENT
CONTACT: Troy Brouwer, Operations Manager		ACTIVITY DATE: 10/05/2017
STAFF: April Lazzaro	COMPLIANCE STATUS: Compliance	SOURCE CLASS: <i>minor</i>
SUBJECT: Unannounced, self-initiated inspection.		
RESOLVED COMPLAINTS: C-18-00017		

Staff, April Lazzaro was investigating an odor complaint that had come in regarding a burnt plastic/wire smell that was attributed to Industrial Container Services on Stafford Avenue. As I drove north on Stafford, no odors were noted downwind of that facility. As I continued to head north, I noted strong odors directly in front of Mark-Maker Company, Inc. I continued around the block to 41<sup>st</sup> Street which is where the complainant lives, and no odors were identified at the end of the cul-de-sac at that time.

I returned to Mark-Maker and again smelled the odor at the north end of the building. At that time, I decided to conduct an unannounced, self-initiated inspection of the facility and was put in contact with Troy Brouwer, Operations Manager who came down from their other facility to meet with me. I explained to him about the complaint and how I smelled a strong burnt plastic type of smell directly in front of his facility.

**FACILITY DESCRIPTION/COMPLIANCE EVALUATION**

Mr. Brouwer led me on a tour of the facility. In the southern front of the building, is a CAD area where a laser conducts wood cutting with a local exhaust. There are other internally vented cutting tables in this area. We discussed the Rule 285(2)(1)(vi) exemption for wood cutting equipment and I explained to Mr. Brouwer that the exhaust needs a filter to meet the requirements. He indicated that he would look into that to see if it has a filter, or get one if necessary.

In the printing plate making area, there is some small glue and solvent use. I inquired into the type of plastic resin polymer used in the manufacture of the photo polymer material and it was received. It is a plastic resin polymer composed of rubber, softeners, monomers, photoinitiators stabilizers and dyes. See attached for additional information.

After the polymer is set, a mask is placed over the area to become the print plate design. The area left unmasked goes through a ultraviolet (UV) light and the print design is cured. The area masked off is uncured. The operator places the print plate into a solvent bath and left in there for a time. During this time, the uncured polymer is dissolved into the solvent. What's then left on the plate is the raised design. The plate then goes into an oven where the remaining solvent is baked off.

The solvent bath consists of a two part mixture by Dupont that consists of an alcohol component and an aliphatic ester component. Eventually, the polymer builds up in the solvent bath and makes it not work as well. When the efficiency is reduced and solids have reached a measured level, the solvent is piped over to a solvent distillation unit that has a size of 300 gallons per batch. It has one 300 gallon tank for dirty solvent and one 300 gallon tank for clean solvent. There is also a 55 gallon drum that is vented to the atmosphere that contains the waste polymer that gets distilled out of the solvent. The company runs a batch of solvent through the distillation unit once or twice a week.

We met with Don Voogd, Plate Supervisor who informed me that they utilize about one drum of each component every 2 months or so, however they do not keep records. It was at that time, I learned that former AQD inspector Denise Plafcan had been there a few years ago and went over all the usage with the company. I asked them if she had discussed the required recordkeeping and I was told she had not. I stated that I would evaluate the documentation in the file, as well as sending the company a copy of all the file information.

In the file, I noted that there was information from 1996 about the printing plate solvent process. In the information, the manufacturer states that the worst cas maximum emission rate would be 1.76 pounds per hour. This includes the solvent bath and the plate drying oven emissions. AQD did not appear to

take action on this information at the time. The plant interior in this area smelled very strongly of solvent.

Based on the amount of solvent used, it appears the emissions are approximately 400 pounds per month. Ms. Plafcan wrote in her report that the Rule 290 exemption was a good fit. There is no documentation that she educated the company on the recordkeeping requirements of the rule.

Information obtained during the inspection indicates that part of the emissions would come from the solvent tank, some from the oven and some from the solvent still and as such could be considered one emission unit. Combined, the emissions appear to fit into the Rule 290 exemption however, the company needs to keep record of this information.

While this could be considered a violation of the requirements, it is noted that the opportunity for education during the 2014 inspection was not utilized. As such, the proper education and requirements for monthly recordkeeping on a material CAS # basis has been relayed to company representatives. The Rule 290 guidance document has been provided and explained via e-mail. If future inspections reveal a lack of recordkeeping, a violation notice will be issued.

We visually inspected the distillation unit ventilation system. It was noted that the fumes are directed by a small fan to a vent out the side of the building wall. The vent is oriented such that the fumes are directed downward. The area at the vent was very odorous of a burnt plastic type odor. Plant representatives stated that they did not notice an odor at all. We walked upwind of the vent and I did not notice any odors, confirming the origin was the downward pointing vent. We talked about one option for improving ground level odors would be to change the configuration of the vent to help with odor dispersion. Mr. Brouwer stated they would do what was necessary. The odor generated by the waste polymer and vented horizontally is believed to be the source of the odor I smelled while driving by and the cause of the odor complaint. When I discussed the probable cause of the odor with the complainant, I mentioned that AQD likes to give the company the opportunity to address the issue by making changes. (in this case the vent orientation) The complainant was willing to give the company a chance to make the change and indicated they would call back if the odors continued.

During the discussion with the polymer manufacturer, Flint Group, I asked if the polymer contains any perfluorinated compounds like PFOA and PFOS. Flint Group representatives confirmed that the polymers do not contain any perfluorinated compounds.

See file for additional email documentation.

#### CONCLUSION

Mark-Maker Company, Incorporated was in compliance at the time of the inspection.

NAME April Lippard

DATE 11-15-17

SUPERVISOR 