

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

U4114241824937

FACILITY: Mark-Maker Company, Incorporated		SRN / ID: U41142418
LOCATION: 4157 Stafford Avenue SW		DISTRICT: Grand Rapids
CITY: Wyoming		COUNTY: KENT
CONTACT: Don Voogd		ACTIVITY DATE: 01/17/2014
STAFF: Denise Plafcan	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT:		
RESOLVED COMPLAINTS:		

Denise Plafcan (DP) conducted an unannounced scheduled inspection to determine compliance with state and federal Air Quality rules and regulations. DP drove around the area extensively prior to entering the facility. There were no odors, fugitive emissions or opacity noted from the facility. DP met with, Bob Pettijohn, Owner and Don Voogd, Plant Supervisor. After a brief introduction and discussion, DP explained the purpose of the inspection (a complaint in the area) and reviewed the Environmental Inspection brochure. Don was then the escort on the inspection.

The company has two plants, this will be considered Plant 1 and a second Plant at 3920 Buchanan considered Plant 2. At Plant 1 they manufacture the flexographic plate that is wrapped around the drum, coated with ink and makes the print at a printing facility. At Plant 2 they do die cutting. They do not do any printing at either location. They have about 40 employees at Plant 1 and 14 at Plant 2 working 2 shifts (1<sup>st</sup> and 3<sup>rd</sup>) 5 days a week. The company manufactures flexible press sheets for flexographic printing. The photopolymer is either a 'true' liquid or a sheet that looks like a solid but is actually a very thick liquid with a peel-off backing paper on it. Both materials, the 'true' liquid (TL) and the more 'solid' liquid (SL) have the substrate removed from the area leaving only the raised printing surface. The liquid material is baked in a heated oven for the SL material or a UV oven for the TL. When the sheet is then removed from the oven the excess material is removed, the TL material is removed with a soap, salt and water bath and the SL material is removed with a solvent. Solvent (Cylosol) containing the residual SL material is what is processed and reclaimed in the 300 gallon still.

The following description was submitted via the attached e-mail explaining the operation of the still.

"...the still that recycles our cylosol solvent here is a little background on how it operates. During the run time it is a totally enclosed system and nothing is exhausted to the outside. At the end of the cycle it goes into a dump mode and at that time a valve opens and it dumps a hot thick liquid into a 55gal. drum the normal drop is about 25 to 35 gal. The dump cycle lasts for 10 minutes and the valve then closes, its during that time that the fumes are exhausted outside. In the year 2013 we did 61 cycles on this unit the majority of the time this dump cycles between 4:00am to 8:00am. The exhaust system on this unit does run all the time even if there are no fumes present. On the plate dryer that we discussed it is normally turned on from 12:00am to approx. 12:00pm."

The company uses 85 gallons of Cylosol per month. The company may be eligible to use a Rule 290 exemption from Rule 201 Permitting requirements. Since both the oven on the SL line and the still do not have any control equipment the company would be allowed up to 1000 pounds per month of emissions. The company reports using 85 gallons per month of Cylosol per month and according to the MSDS the VOC content is 6.82 pounds / gallon estimated. Since the percentage provided is an estimate a standard VOC percentage of 7.36 pounds/gallon will be used. Using the amounts and information provided by the company the entire facility emits 625 pounds of VOC per month. Well below the 1000 pounds emission allowance in Rule 290. The main ingredient in Cylosol is benzyl alcohol with a ITSL of 5000  $\mu\text{m}^3$  which is acceptable for Rule 290 compliance.

Based on the physical inspection and the amount and materials used the facility appears to be in compliance with state and federal Air Quality rules and regulations.

NAME Denise Plafcan DATE 4.23.14 SUPERVISOR PAB