

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

N202070823

FACILITY: Fusion Flexo		SRN / ID: N2020
LOCATION: 156 10TH ST, PLAINWELL		DISTRICT: Kalamazoo
CITY: PLAINWELL		COUNTY: ALLEGAN
CONTACT: Brad Boyd , VP of Techonolgy		ACTIVITY DATE: 12/12/2023
STAFF: Cody Yazzie	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On December 12, 2023 Air Quality Division (AQD) staff (Cody Yazzie, Jared Edgerton, and Mariah Scott) arrived at 156 10<sup>th</sup> Street, Plainwell Michigan at 1:30 PM to conduct an unannounced air quality inspection of Fusion Flexo SRN (N2020). Staff made initial contact with Brad Boyd, Fusion Flexo, VP of Technology, and stated the purpose of the visit. Mr. Boyd is the environmental contact and escorted staff around the facility.

The facility produces printing plates for a variety of companies. These plates are what the companies use to print and label their products. The facility has a photopolymer process (Solvent Based) and "Fast" process (uses heat and pressure) to produce the plates. The photopolymer is dried before being cured with in a UVC machine. The facility does have an air permit for two evaporators under PTI No. 933-89. Only one of the evaporators currently operates. The facility has about 10 staff members that work at the facility. The facility typically operates Monday through Friday for around 8 – 10 hours a day.

Fusion Flexo was last inspected by the AQD on July 30, 2014 and appeared to be in Compliance at that time with PTI No. 933-89 Staff asked, and Mr. Boyd stated that the facility does not have any emergency generators, boilers, or cold cleaners.

Mr. Boyd gave staff a tour of the facility. Required personal protective equipment are safety glasses, and steel toe boots. Staff observations and review of records provided during and following the inspection are summarized below:

**PTI No. 933-89:**

This PTI were approved for two process wastewater evaporators. As noted in the previous inspection report Staff noted that only one wastewater evaporator was operating at the time of the inspection. The evaporator that is being operated evaporates off waste solvent that comes from the photopolymer (Solvent Based) Process. Staff was told that once the photopolymer process waste solvent has reach capacity they run it through the evaporator. Due to the process only operating once the waste solvent has reached capacity the process staff did not observe the evaporator in operation during the inspection.

The only special conditions outlined in PTI No. 933-89 are visible emission restrictions and stack dimensions/restrictions. Special Condition 14 requires that there shall be no visible emissions from the process water evaporators. During the inspection Staff did not observe any visible emissions from the Stack, however the evaporator did not appear to be operating during the inspection. Special condition 15 requires that the process wastewater evaporators shall be discharged unobstructed vertically upwards with a maximum diameter of 8 inches and at an exit

point not less than 15 feet above ground level. During the inspection Staff did not observe any rain cap/obstruction on the stack. The dimensions of the diameter and stack height were not verified with any measurements by staff.

#### Photopolymer Process (Solvent Based):

In the previous inspection it was noted that solvent based photopolymer process operated under rule 290. It would appear that this emission unit includes the solvent-based photopolymer process unit, the dryers used to dry the photopolymer plates, and the UVC exposure units. Stacks are on the each of these steps and some sort of combination of heat, AV Solve II (solvent), and Ozone appear to be emitted from these steps.

Staff was provided with the SDS for the AV Solve II solvent that is used in the process. The SDS indicated that the solvent is composed of 70-90% hydrocarbon mixture CAS # 64742-47-8 and 20-40% phenylmethanol (benzyl alcohol) CAS # 100-51-6. The hydrocarbon mixture had a ITSL of 200  $\mu\text{g}/\text{m}^3$ . Phenylmethanol had an ITSL of 400  $\mu\text{g}/\text{m}^3$ . These screening levels would appear to allow the facility to emit up to 1000 lbs per month of the toxic air contaminants. Staff was provided with purchase records for the solvent used in the process. When using the purchase records the facility should assume that the total amount purchased is used in the month that it is purchased. From this the facility would appear to have gone over the 1000 lb limit in July 2022, October 2022, February 2023, June 2023, and September 2023. In these months the facility purchased 165 gallons or more of the AV Solve II. SDS indicates that the solvent is 100% volatile and 7.308 lb/gal. 165-gallons of the AV Solve II would emit 1205.82 lbs of VOC. This is over the 1000 lb limit. The facility might be able to comply with Rule 290 limits if the facility tracks actual usage. A violation notice will be sent to the facility for the Rule 201 violation.

After the facility processes the plates through the solvent based photopolymer process they are dried and finished with dryers and UVC exposure units. These dryers and UVC exposure units appear to be apart of the same Rule 290 emission unit as they exhaust the AV Solve II solvent used in the process and heat. The facility indicated that the exposure units also exhaust ozone from solvent processed from photopolymer plates. The facility did not provide any ozone calculations. Rule 290 would require that the facility calculate and categorize these emissions to possibly utilize the exemption. Staff plans to note this violation with the Rule 201 violation previously stated.

#### "Fast" Process (DUPONT CYREL PROCESSOR):

The facility uses a dupont cyrel FAST 2000TD is used as another method for producing the photopolymer plates. In this process it was explained to staff that it does the same thing as the solvent-based process except that it uses heat and pressure to do this. The unit appears to be powered electrically. The unit is equipped with an exhaust that is used to ventilate the heat generated to process the photopolymer plates. From description of the unit and how it operates the unit does not appear to emit any air contaminants.

#### Conclusion:

At the time of the inspection and based on a review of records obtained during or following the inspection, the facility appears to be in non-compliance with Rule 201 for not having adequate recordkeeping for ozone emission calculations and exceeding month limit based on purchase

records. Staff stated to Mr. Boyd that a report of the inspection would be sent to the facility for their records. Staff concluded the inspection at 2:00 PM.-CJY

NAME Cody Yoppie

DATE 2/14/24

SUPERVISOR Monte H