

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

A231839079

FACILITY: GRAND RAPIDS LABEL		SRN / ID: A2318
LOCATION: 2351 OAK INDUSTRIAL DR, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Rob Preston ,		ACTIVITY DATE: 03/28/2017
STAFF: David Morgan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

At 10:15 A.M. on March 28, 2017, Air Quality Division staff, Dave Morgan conducted an unannounced scheduled inspection of Grand Rapids Label located at 2351 Oak Industrial Drive, in Grand Rapids. The purpose of the inspection was to determine compliance with State and Federal air quality regulations and Permit to Install (PTI) No.1077-84. Accompanying AQD staff was Rob Preston, Technical Manager.

FACILITY DESCRIPTION

The facility manufactures pressure sensitive labels and does some adhesive coating and laminating. They currently have 10 flexographic presses and 2 digital presses. PTI No. 1077-84 was issued to add the adhesive coating line and the catalytic incinerator. The facility is considered a minor source of VOC emissions.

COMPLIANCE EVALUATION

Flexographic Plate Preparation:

This area consists of an ultraviolet plate exposure unit and a solvent-based plate wash unit.

In the plate wash unit, Dupont Cryel Cylsosal solvent with a VOC content of 7.314 pounds per gallon is used. This product contains benzyl alcohol and other aliphatic hydrocarbons which are not considered HAPs. According to company records, approximately 1,912 pounds of solvent was used in 2016. Because VOC emissions are well below 1,000 pounds per month, this unit can be considered exempt under Rule 290. The company will need to continue to maintain appropriate records.

In addition, there is a small washer for Indigo imaging oil. According to records, this material HP Imaging Oil for use in the HP Indigo Digital Press has a VOC content of 6.34 pounds per gallon. This material contains petroleum hydrocarbons (CAS No. 90622-58-5) which are not considered HAPs. The company uses less than 250 gallons per year of this material and therefore emissions are well below the 1,000 pound per month VOC limit in Rule 290. The company will need to continue to maintain appropriate records.

Flexographic Printing:

There are 10 flexographic printing machines used to apply water-based inks to a substrate through a web. In addition to water-based inks, five of the units can apply solvent-based coatings (primarily a solvent-based primer called Sun Prokote Primer) and six can apply ultraviolet inks. Attached is an equipment inventory. The flexographic print lines were originally permitted under PTI Nos. 126-84 and 126-84A, but were voided by AQD in September 1994 because it was determined that the units could be considered exempt under Rule 290.

Based on company records for 2016, the company had total combined VOC emissions of 3,762.2 pounds from all ten flexographic coating lines. It is noted that lacquer thinner and n-propyl alcohol is used on these lines as cleanup and reducing solvent and VOC emissions from these are included in the above number. Based on the information provided, each line is well under the 1,000 pounds per month limit of Rule 290. Records obtained from the company are attached, however, it is noted that company records should be improved to better track monthly emissions.

Adhesive Coating Line:

The adhesive coating line permitted under PTI No. 1077-84 is used to apply pressure sensitive adhesive coatings to a substrate. This line is controlled by a catalytic oxidizer. The oxidizer is only used when solvent based adhesives are being used on adhesive line.

AQD staff went on the roof to inspect the control equipment and ductwork. Exhaust gases from the catalytic oxidizer were discharged unobstructed vertically through a cylindrical, stainless steel stack which appeared to have a diameter less than 30 inches and was above 35 feet from the ground (in accordance with the permit). It is noted that prior to the exhaust stack, hot exhaust gas from the oxidizer is used to heat makeup air through a heat

exchanger and the heated makeup air is then returned to the plant. AQD staff observed a square, goose neck stack between the oxidizer and the stainless stack. According to company maintenance personnel, the square stack is used to bypass the heat exchanger when certain loads to the oxidizer creates too much heat to be returned to the plant. Mr. Preston was informed that all exhaust gases from the oxidizer needed to meet the stack dimension requirements in the permit. He indicated that a stack extension would be erected to address the stack deficiency. This will occur in May when additional air conditioning units are added to the roof. No visible emissions were observed. Mr. Preston noted that the coating that was responsible for too much heat is no longer applied in an amount that triggers a high temperature event and therefore bypass does not occur.

Based on company records for 2016, total VOC emissions from the adhesive line were 7,807 pounds (3.9 tons) which is below the 5.6 tons per year limit in the permit. VOC emissions from the coating line include controlled emissions using a control efficiency of 10% and also includes toluene, ethyl acetate, heptane, and isopropyl alcohol for cleanup and thinning. Records are attached. It is noted that although sufficient information was available to determine compliance, the company should improve its' recordkeeping to ensure that ongoing compliance can be demonstrated.

SUMMARY

Based on the physical inspection and a review of the records submitted this facility appears to be in compliance with PTI 1077-84. The company will be requested to provide a potential to emit demonstration for VOCs and HAPs.

NAME  DATE 5/24/17 SUPERVISOR 