

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

N190859977

FACILITY: GRANDVILLE PRINTING COMPANY		SRN / ID: N1908
LOCATION: 4719 IVANREST AVE, GRANDVILLE		DISTRICT: Grand Rapids
CITY: GRANDVILLE		COUNTY: KENT
CONTACT: Don Carra , Safety and Training Coordinator		ACTIVITY DATE: 08/26/2021
STAFF: Michael Cox	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Unannounced Inspection		
RESOLVED COMPLAINTS:		

On Thursday August 26, 2021, AQD Staff Michael Cox (MTC) conducted an unannounced scheduled inspection of Grandville Printing Company located at 4719 Ivanrest Avenue, Grandville, MI 49418. The purpose of this inspection was to verify compliance with Opt-Out Permit to Install No. 38-16 and all other applicable air quality rules and regulations. MTC arrived on site at approximately 8:30 am and contacted Mr. Don Carra, Environmental Health and Safety Coordinator, to conduct the inspection. No visible emissions or odors were noted upon arrival.

FACILITY DESCRIPTION

Grandville Printing conducts printing of various media utilizing web, sheetfed and digital operations and currently operates three shifts with around 300 employees. The facility operates pursuant to Opt-out Permit to Install No. 38-16. The permit provides Opt-out limits to Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP).

The facility utilizes a blanket wash and a roller wash that removes inks from the blanket and rollers of the printing presses and utilizes various inks to generate the printed product. Once the inks are applied to the product, an oven is used to dry the inks to the printed product

The facility currently operates 13 emissions units which are included in the FG-Heatset portion of Opt-out Permit to Install No. 38-16. Emissions from the 13 heatset webfed offset lithographic printing presses are controlled by one of two regenerative thermal oxidizers (RTO). There is also an FG-Facility section in Opt-out Permit to Install No. 38-16 that contains facility-wide limits of VOC and HAP emissions.

During the physical inspection of the facility all departments were observed in operation. The Web Press area has a large, elevated tote with a "tap" where the ABC Wash can be accessed. Employees use the solvent with rags to wipe down equipment as necessary, and then used rags are placed in a covered can as required by the permit. This was observed at each press. All waste inks, coatings, fountain solutions, and cleaning solvents, were stored in closed containers.

COMPLIANCE EVALUATION

FG-Heatset:

The thirteen heatset webfed offset lithographic printing presses are limited to 50.0 tons of Volatile Organic Compounds (VOCs) per 12-month rolling time period as determined at the end of each month. The highest 12-consecutive month VOC emissions for the thirteen presses for the time period of January 1, 2020, through

August 2021 was noted to be 8.36 tons during the 12-month period ending in June 2021. The permit also limits emissions from kerosene to 20.8 tons per 12-month rolling time period as determined at the end of each month. The highest 12-consecutive month kerosene emissions occurred during the 12-month period ending in March 2020 when 0.81 ton of kerosene was emitted. The permit has errors where it references the CAS No. for the kerosene on page 11. The correct CAS number as listed in the emission limit table is CAS No. 64742-81-0.

During the inspection, it was confirmed that there were no changes in the blanket wash or roller cleaner since the time of permitting.

The Malfunction Abatement Plan was received within the timeframe the permit required and is considered acceptable at this time.

The ovens for each press are required to operate properly and under negative pressure with an interlock system. During the inspection, dwyer gauges were noted to be on each oven and are used to monitor the differential pressure. These are set to shut down the entire line if the pressure goes positive. Once a year, a third party is contracted to inspect the interlock on the ovens to determine that the interlock system is functioning as well as determining that the pressure drop gauges are operational. Recent inspections were conducted by Durr Systems Inc. on September 10th, 11th, and 14th of calendar year 2020 for oven inspections, and again on September 15, 2020, for testing the interlock system. Durr Systems Inc. also inspected the RTOs on April 21, 2020. The most recent RTO inspection was conducted on May 18, 2021, by Tann Corporation. All equipment was fully operational, and no replacements were needed.

The 13 lines are controlled by one of two RTOs. During the company's annual inspection of the primary RTO (RTO #1= Megtec unit), backup RTO #2 (Airex unit) is utilized. At that time, only 8 web presses were in operation which meets the requirement to run a maximum of 8 presses simultaneously when using the backup RTO. This was verified by the web schedule records which were observed. At the time of the inspection, RTO #1 was in operation and the temperature was 1,627.7°F, which is above the required temperature of 1,525°F. Temperature charts were reviewed on site for both RTO #1 and RTO #2 due to the data set being too large to submit via email to AQD for the time period of January 1, 2020, through August 2021. Grandville Printing Company is keeping records of the combustion zone temperature as required. After a review of the temperature charts, it was noted that RTO #2 was primarily used to control emissions for the time period of October 2020 through June 2021 and was utilizing only 8 web presses as required. During the time period reviewed no instances were noted where the temperature was outside of the minimum set temperature of 1,525°F.

A letter was submitted to ADQ requesting the use of vendor formulation data to determine VOC content and received approval in 2017. Grandville Printing Company is determining VOC content of inks and coating as required. No issues with vapor pressure or VOC content were noted during the review of the materials specification logs.

Stack testing to determine the VOC destruction efficiency of the two RTO's was conducted on October 18, 2016. The results of the stack test were later submitted to AQD on November 21, 2016, and the two RTOs were determined to have an adequate

destruction efficiency of at or above 95%. Two stacks associated with the two RTO's were observed during the inspection. The stacks appeared to be consistent with PTI No. 38-16

Grandville Printing also operates an internally vented 23,000 CFM Donaldson/Torit baghouse for paper scraps. At some of the presses, the edges are cut off and routed to one of two cyclones for baling. There is some dust generation associated with this and the air leaves the cyclones and goes into the baghouse. The baghouse provides building recirculation air 100% of the time. This baghouse appears exempt per Rule 285(2)(l)(vi)(B) based on the size and the fact that the air contaminant is paper.

FG-Facility:

The facility wide emissions are limited for individual HAP to less than 9.0 tons per 12-month rolling time period. The facility wide aggregate HAP emissions are limited to less than 22.5 tons per 12-month rolling time period and the facility wide VOC emissions are limited to 90 tons per 12-month rolling time period. The highest 12-consecutive month individual HAP emission occurred during the 12-month period ending in December 2020 when 0.21 ton of glycol ether was emitted. The highest 12-consecutive month aggregate HAP emissions occurred during the 12-month period ending in February 2020 when 0.47 ton of aggregate HAPs were emitted. The highest 12-consecutive month facility wide VOC emission occurred during the 12-month period ending in February 2020 when 12.58 tons of VOC was emitted.

CONCLUSION

Based on the review of the records provided and on-site observations, Grandville Printing Company is in compliance with Opt Out PTI No. 38-16 and all applicable air quality rules and regulations.

NAME Michael T. Cox

DATE 9/21/2021

SUPERVISOR HH