

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

N083066233

FACILITY: QG Printing II LLC		SRN / ID: N0830
LOCATION: 1321 Van Deirse Street, GREENVILLE		DISTRICT: Grand Rapids
CITY: GREENVILLE		COUNTY: MONTCALM
CONTACT: Dan Nichols , Maintenance Manager		ACTIVITY DATE: 01/10/2023
STAFF: Scott Evans	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On-site inspection to assess compliance with air quality rules and regulations.		
RESOLVED COMPLAINTS:		

Introduction

On January 10, 2023, State of Michigan Department of Environment, Great Lakes, and Energy Air Quality Division (AQD) staff member Scott Evans (SE) conducted an on-site inspection of the QG Printing II Corp. facility located 1321 Van Deirse Street in Greenville, Michigan, to assess compliance with air quality rules and regulations. QG Printing is a printing facility that operates multiple offset color printing presses that utilize heatset ink printing methods. Plates are coated with ink, which is transferred first to a blanket and then from the blanket to the paper sheets. This process is used to produce various types of mailers and newspaper inserts. Two Catalytic Oxidizers control emissions from the printing lines. This facility has one opt-out Permit to Install (PTI): PTI No. 598-96. This permit was issued on May 22, 1997 and contains synthetic minor limits for Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs).

Upon arrival at the facility, SE conducted a perimeter inspection to assess any visible emissions (VE) or odors at the facility exterior. There were no observed VEs or odors around the facility exterior. After these initial observations were completed, SE entered the facility and was greeted by facility staff Dan Nichols. After a brief discussion was held to discuss the purpose of the visit, an inspection of the facility interior was conducted. During this inspection all printing lines and control rooms were visited and the roof was accessed to assess compliance with permitted conditions and all other applicable air quality rules and regulations.

PTI No. 598-96

This permit contains twelve special conditions (SC) numbered SC13 – SC24. Within SC13, nine press lines, four incinerators, three cold cleaners, one solvent recovery unit, and pre-press solvent and adhesives are defined as “processes.” This definition will be used for brevity in this report.

SC13 states that Volatile Organic Compound (VOC) emissions from processes cannot exceed 90 tons per year (tpy). VOC emission records were requested during the inspection. An initial observation of the records on site confirmed proper retention and copies of records from January 1, 2022 to December 31, 2022 were obtained at a later date for a detailed review. During this review it was seen that greatest annual VOC emissions were 12.56 tpy from July 2021 to June 2022, which is compliant with the 90 tpy limit.

SC14 states that emissions of any individual Hazardous Air Pollutant (HAP) shall not exceed 9 tpy and that aggregate HAPs shall not exceed 22.5 tpy, based on a 12-month rolling average at the facility. HAP emission records were requested during the inspection. An initial observation of the records on site confirmed proper retention and copies of records from January 1, 2022 to December 31, 2022 were obtained at a later date for a detailed review. During this review it was seen that the highest aggregate HAP emissions were 0.48 tpy from February 2021 to January 2022,

which is compliant with the 22.5 tpy limit. As this is well below 9 tpy, all individual HAP emissions are verified to be below the limited 9 tpy.

SC15 states that VEs shall not exceed a six-minute average of 5% for printing processes. During the inspection there were no instances of VEs observed. It was discussed and expressed by facility staff that no instances of excessive VEs have occurred since the last inspection when the replacement catalytic oxidizer catalyst for one of the catalytic oxidizers was installed, which is discussed in more detail below.

SC16 states that the facility may need to test and confirm VOC emission rates by the facility processes if requested by the AQD. During the last inspection it was discussed that the facility had planned to replace catalysts for process associated Catalytic Oxidizers (CO). On September 2, 2020 it was confirmed by AQD staff that the CO catalysts had been replaced as needed. Based on that knowledge, the current functionality of the COs as observed during this inspection, and emission records provided, at this time it does not appear to be necessary for the facility to test VOC destruction or emission rates.

SC17 states that the facility shall maintain a current listing of chemical compositions of inks, fountain solutions, and clean-up solutions. During the inspection the facility was able to provide Material Safety Data Sheets for all applicable chemicals on site.

SC18 outlines recordkeeping requirements for the facility. During the inspection records were briefly reviewed on-site and confirmed to be present as required and copies were provided later for detailed review. All required records were found to be maintained and were provided as requested. Copies of these records are included with this report. These records were used to confirm compliance with other emission and material limits discussed throughout this report. Below is a list of the required records that were provided:

- Monthly records for all used materials:
 - Identification and category.
 - VOC content.
 - HAP content.
 - Amount of material used.
 - Number of hours each printing press is operated.
- Monthly waste solvent disposal records.
- Monthly HAP calculations:
 - Individual HAP emissions.
 - Aggregate HAP emissions.
 - 12-month-rolling annual HAP emissions.
- Monthly VOC calculations:
 - Monthly VOC emissions.
 - 12-month-rolling annual VOC emissions.

SC19 states that VOC content and other important material content values shall be determined by Federal Reference Test Method 24 or 24A unless permission has been obtained by the AQD to use manufacturer's formulation data. During the inspection it was discussed that the facility utilizes manufacturer data for calculations. This has previously been discussed and approved.

SC20 states that printing lines shall not operate unless COs are properly installed and operated. As discussed above, the facility has conducted appropriate maintenance to keep the installed COs properly operational. Proper operation includes maintaining an operational temperature of at least 650°F. During the inspection two COs were observed to be operating at 671°F and 656°F, which are compliant with the temperature requirements. One CO was not in use as the associated printing lines were not running during the inspection. This CO was holding at 200°F at the time, however, this is acceptable as the unit and associated printing lines were not in use. All COs were properly installed and operational during the inspection, demonstrating compliance with this condition.

SC21 states that above mentioned CO temperatures shall be monitored continuously at the catalyst bed inlet, and records shall be retained for five years. Records were observed on site and confirmed to be recorded and retained appropriately. Additionally, these records demonstrated maintenance of an operating temperature above 650°F during print line operation. Historic records on circular paper dial graphs were observed on site and more recent records being maintained on digital graphs of continuous monitoring. A sample of the more recent digital were also provided along with all other records for a closer review and to demonstrate proper compliance. A copy of these records is included with this report.

SC22 states that air pressure for the dryers shall be maintained lower than press room pressure to ensure air flow into the dryers at all times. This was discussed with the facility, and it was expressed that regular testing to confirm negative air pressure are conducted throughout the year. No incidents of improper air flow have been reported in the time since the last inspection was conducted.

SC23 states that the facility is required to maintain a preventative maintenance program to ensure proper CO operation at 95% or 85% destruction efficiency dependent on which press line the specific CO is connected to. During the inspection, as discussed above, the maintenance procedures, which include evaluation by on site staff and CO manufacturer maintenance crews, of each CO were discussed and appear to be both appropriate and followed by the facility staff. The facility is required to provide a copy of this plan if requested by the AQD, however, during discussions it was confirmed that the maintenance plan is the same as previous inspections, so no copies were requested at this time.

SC24 states that all presses must be exhausted through one of four stacks. Four stacks were observed during the roof portion of the inspection. Though the stacks were not directly measured during the inspection for safety purposes, all four appeared to be compliant with the permitted dimensions.

Other Items

This facility has one emergency generator on site, which was installed in 1994 and is exempt from air permitting requirements by Rule 282(2)(b)(i). As this engine was installed prior to the year 2006 it is not subject to New Source Performance Standard 40 CFR Part 60 Subpart JJJJ. As this engine is a Reciprocating Internal Combustion Engine for emergency use only that was installed prior to 2006 and is not contractually obligated to operate for more than 15 hours per year for emergency disaster response or to contribute to the local grid it is not subject to the National Emission Standard for Hazardous Air Pollutants 40 CFR Part 63 Subpart ZZZZ.

This facility has a finishing area where the printed products are trimmed as required. The trimmings and dust from these operations are captured by a dust collection system that vents to the facility exterior. During the inspection this dust collection system appeared to be operating properly. This unit is exempt from air permitting requirements by Rule 285(2)(l)(vi)(c).

Conclusion

At the conclusion of this inspection, the facility appeared to be compliant with all requirements within PTI 598-96 as well as all other applicable rules and regulations.

NAME Scott EvansDATE 2/1/2023SUPERVISOR HH