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

N282928968

FACILITY: DICKINSON PRESS INC.		**SRN / ID:** N2829
LOCATION: 5100 33RD STREET SE, GRAND RAPIDS		**DISTRICT:** Grand Rapids
CITY: GRAND RAPIDS		**COUNTY:** KENT
CONTACT: Kevin DeWeerd , Maintenance Manager		**ACTIVITY DATE:** 03/27/2015
STAFF: David Morgan	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

At 10:30 A.M. on March 27, 2015, Air Quality Division staff Dave Morgan conducted an unannounced scheduled inspection of Dickinson Press Inc. located at 5100 33rd Street in Grand Rapids. The purpose of the inspection was to determine the facility's compliance with state and federal air pollution regulations as well as Permit to Install (PTI) No. 114-13. Accompanying AQD staff on the inspection was Kevin DeWeerd, Maintenance Manager.

FACILITY DESCRIPTION

Dickinson Press prints a variety of books and magazines using sheet-fed and web-fed printing. The facility consists of five web-fed offset printing lines, two sheet-fed offset printing lines, two hot melt adhesive lines for binding, and two scrap paper collection system. All lines are either covered by the PTI No. 114-13 or are exempt from permitting. The company also has a regenerative thermal oxidizer (RTO).

The company is considered a minor source of VOC emissions and a synthetic minor source of hazardous air pollutants.

COMPLIANCE EVALUATION

The following table is a summary of permitted emission units at the facility.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Controlled by RTO
EU-R506	Man Roland non-heatset sheetfed lithographic printing press with UV and IR curing units for coatings. Automatic and/or manual blanket wash. Five color press.	01/2012	No
EU-5C	Mitsubishi 5C non-heatset sheetfed lithographic printing press. Automatic and/or manual blanket wash.	02/1996	No
EU-M1000	Harris M1000 heatset webfed offset lithographic printing press. Manual blanket wash. Two gas-fired dryers.	05/2004	Yes
EU-M110	Harris M110 heatset webfed offset lithographic printing press. Manual blanket wash. Two gas-fired dryers.	12/1986	Yes
EU-M120	Harris M120 heatset webfed offset lithographic printing press. Manual blanket wash.	12/1986	Yes
EU-47	Timson 47 heatset webfed offset lithographic printing press. Automatic and/or manual blanket wash.two colors are appliedwith associated gas-fired drying ovens	10/1998	Yes
EU-54	Timson 54 heatset webfed offset lithographic printing press. Automatic and/or manual blanket wash.	11/2003	Yes

In web-fed printing, a web of paper is continuously moved between two blanket cylinders. Printing occurs when the paper comes into contact with the printing plate containing ink receptive coatings. The web of paper continues to move through drying ovens where the ink solvent is driven off and the color pigment is left on the paper. Since the inks are considered 'heatset' inks, ovens are necessary for the ink to dry. The ovens operate between 220°F and 300°F. The ink application is vented to the in-plant environment, but the drying ovens are exhausted to the RTO.

All inks are used as received with no additional thinning. It is noted that ink usage for all the web-fed presses is measured using a flow meter at the roller.

The Mitsu 5/C and ManRoland R506 are sheet-fed lithographic printing presses with associated infrared ovens. Essentially in sheet-fed printing, sheets of paper are fed between two blanket cylinders. Printing occurs when the paper comes into contact with the printing plate containing ink receptive coatings. The sheets of paper are then moved through infrared ovens for curing where the ink solvent is driven off and the color pigment is left on the paper. These units do no use heatset inks.

RTO:

In 2002 a RTO was installed for the heatset presses. Emissions from the curing ovens for all heatset web-fed printing lines are vented through the RTO. The sheet-fed lines are not vented to the RTO because they do not generate enough heat to allow venting to the RTO. In addition manufacturer specifications indicate an expected destruction efficiency of 98%. In accordance

with PTI No. 114-13 the destruction efficiency of the RTO was tested in January 2014 with test results indicated destruction efficiency at 98%. It is noted that the company uses a conservative factor of 95% destruction efficiency in its emissions calculations.

At the time of the inspection the RTO was operating at a temperature of 1,588 °F which is above the minimum temperature requirement of 1,500°F in the permit. In addition, the company monitors and records the RTO temperature on a continuous basis using a circular chart recorder. Records for 2014 and 2015 indicate that the RTO has been operated with a temperature above 1,500°F.

Records:
On the day of the inspection, records were reviewed on site. The company was maintaining VOC calculations and material usage records (including VOC content) for each press in accordance with PTI No. 114-13.

The following table summarizes emissions from the period of March 2014 through February 2015:

Requirement	Emission Unit	Amount	Limit	Compliance	Comments
VOC Content of Fountain Solution	EU-R506,EU-5C	< 2.27%	5.0% by weight, as applied	YES	
VOC Content of Fountain Solution	EU-M100, EU-M110, EU-M120, EU-47, EU-54	<0.37%	5.0% by weight, as applied	YES	
12-month rolling VOC (in tons)	EU-M100, EU-M110, EU-M120, EU-47, EU-54, EU-R506,EU-5C	8.68 tons	27.3 tons	YES	
Total HAPS	Facility-wide	0.177 tons	22.5 tpy	YES	
Individual HAPS	Facility-wide	<0.177 tons	9.0 tpy	YES	

** In calculating emissions from the coating process, only the worst case VOC content ink is used.

It is noted that the VOC content of inks and washes used in the presses is based on manufacturer formulation data.

Binding Area:
The binding area contains several machines used to sort and package sheets of paper which ultimately form the book. The hot melt gluing machine applies adhesive to bind the pages. The books are split apart and trimmed on three sides. All hot melt adhesive is exempt under Rule 287(i).

Also in this area, are lamination machines used to apply a plastic film to front pages of books and pamphlets. Emissions from this process are nil. In addition, this equipment is exempt from permitting under Rule 286.

Scrap Paper System:
The company has two separate scrap paper systems that collect paper cuttings from the presses as well as other scraps generated from the binding process. All scraps go through a bagfilter collector which is vented internally. Collected material is sent to a baler where it is bundled for recycling. This process is exempt from permitting under Rule 285(l)(vi).

Miscellaneous:
Because the facility is considered a synthetic minor opt-out source for HAPS, they will be required to report to the Michigan Air Emissions Reporting System in 2016.

SUMMARY
Dickinson Press is in compliance with all applicable requirements. Records obtained during the inspection are attached

NAME [signature] DATE 4/8/15 SUPERVISOR PMB