

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

N709758875

FACILITY: NTVB MEDIA, INC.		SRN / ID: N7097
LOCATION: 209 PARK STREET, TROY		DISTRICT: Warren
CITY: TROY		COUNTY: OAKLAND
CONTACT: Jack Thomsen , Plant Engineer		ACTIVITY DATE: 07/13/2021
STAFF: Sebastian Kallumkal	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Schedule inspection to verify compliance PTI and air quality regulations		
RESOLVED COMPLAINTS:		

On May 20, 2021, I, Michigan Department of Environment, Great Lakes & Energy Staff-Air Quality Division (EGLE-AQD) staff Sebastian Kallumkal requested records and information pursuant to PTI No. 15-02A from NTVB Media (SRN N7097) located at 209 Park Street, Troy, Michigan. Due to the Covid 19 pandemic protocols, the records are requested and reviewed prior to conducting inspections to limit the time spent at the site. The records were received on May 28, 2021, via email.

On Tuesday, July 13, 2021, at about 10:30 AM, I conducted a scheduled inspection of NTVB Media, Inc, located at 209 Park Street, Troy Michigan. NTVB Media prints TV weekly, TV books, lower end magazines or newspaper advertisement inserts. The facility has a Permit to Install No. 15-02A to operate six lithographic printing processes. This permit has facility-wide opt out limits for VOC and HAP emissions. The facility has two old lithographic printing lines that are not controlled by any air pollution control equipment, as well as another four new lithographic printing lines that are controlled by a regenerative thermal oxidizer (RTO). The purpose of the inspection was to assess compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules; and Permit to Install (PTI) number 15-02A.

I arrived at the facility at about 10:30 AM. I met Mr. Jack Thomsen, Plant Engineer. The inspection was announced due to due to EGLE-AQD Covid Pandemic protocol. I introduced myself, stated the purpose of the inspection and provided my credentials. He accompanied me to a meeting room. During the pre-inspection meeting, we discussed facility's operations and any changes after the last AQD inspection. I provided him a copy of the PTI No. 15-02A.

He told me that the facility's production has decreased since last few years. They have about 45 employees, mainly operates 4 days per week, 1 shift (7 AM to 7 PM) with occasional second shift. No process changes occurred since last inspection. No changes in inks, or other chemicals in last 5-6 years.

New thermocouples (three) installed in the RTO about eight months ago. The plate valve was changed recently. The RTO has two chambers with ceramic bed.

One of the old Litho printers was dismantled. FG-OldLitho has only one printer now. The printing operations include applying various colors of inks from the ink reservoir to the image plate to blanket cylinder to the substrate. Fountain solution (water based) is added to the blanket cylinder to keep the ink (oil based) to the areas with no images. This process occurs in the printer tower. From there the paper

(substrate) goes to the dryer where ink is heated and cooled (water) by running through cold rollers. During this process, the solvents are evaporated, and the ink is set. The vacuum (low pressure) is created with the exhaust fan. The printing machines are shut down if sufficient vacuum is not maintained in the dryers. The printed materials are then glued, folded, cut and packaged. They use a vinyl-based adhesive to glue the papers together to make the magazines, TV books, etc.

Facility operates the printers as web presses (continuous feed), prints on both sides (perfecting), with more than 2 blankets. Part of the FG-OldLitho is coldset web (non-heatset) and part is heatset web (uses heat to set the ink). Printers in FG-NewLitho are all heatset web printers.

Facility's inks are used up and if any waste ink is generated, it is collected, sent out and recycled. Similarly, the fountain solution and cleaning solvents are also used up. No waste is generated. The machines are cleaned only once a week. The soiled cleaning rags are collected, sent out to clean, and reused. The inks, fountain solution or the cleaning solvents do not contain hazardous air pollutants (HAP). Occasionally, the maintenance crew uses small amount HAP solvents to clean the machine bearings.

The VOC content of the inks, fountain solutions and cleaning solvents are determined by the suppliers (mainly Sun Chemicals).

We discussed the training materials for the employees. The permit requires that the employees be trained proper cleaning methods. He told me they are trained, but he was not sure this information is included in the training materials. He offered to verify.

Facility Walk-Through

After the pre-inspection meeting, he accompanied for an inspection of the facility. Initially, we inspected the FG-OldLitho printer. It has only printing tower (4 colors; top to bottom: red, yellow, blue, black). It has an associated glue, fold, cut machine. The printer was operating at the time of the inspection.

Next, we visited the FG-NewLitho printers. There were four printer towers and 4 dryer towers. Four printers have 3 three glue/fold/cut machines. Only one of the four printers was operating at the time of the inspection.

Later, he sent me the SDS for the glue/adhesive (EXPMI-376). The VOC content of the glue is less than 0.2% by weight. He told me they use around 250 gallons (density=9.0 lb/gal) per week. Therefore, the VOC emissions are around 255 pounds per year. This is part of the printing process.

The facility has a baler to collect and compress the paper cuts from the printers. The cuts are automatically transferred to the baler. It is controlled by a cyclor and dust collector baghouse. The exhaust is vented to the in-plant environment.

This process appears to be exempt from Permit to Install (R336.1201) requirements pursuant to R336.1285(2)(l)(vi)(C).

R 336.1285 Permit to install exemptions; miscellaneous.

(1) This rule does not apply if prohibited by R 336.1278 and unless the requirements of R 336.1278a have been met.

(2) The requirement of R 336.1201(1) to obtain a permit to install does not apply to any of the following:

(i) The following equipment and any exhaust system or collector exclusively serving the equipment:

(vi) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals, graphite, plastics, concrete, rubber, paper board, wood, wood products, stone, glass, fiberglass, or fabric which meets any of the following:

(A) Equipment used on a nonproduction basis.

(B) Equipment that has emissions that are released only into the general in-plant environment.

(C) Equipment that has externally vented emissions controlled by an appropriately designed and operated fabric filter collector that, for all specified operations with metal, is preceded by a mechanical precleaner.

The facility also has a bulk tank part cleaning station (cold cleaner, pars washer) that contains about 20 gallons of parts cleaning solvent. It is serviced and maintained by an outside vendor (Safety Kleen). At the time of the inspection, the cold cleaner was not being used. The lid was open.

Cold cleaners are exempt from Permit to Install (R336.1201) requirement pursuant to R336.1281(2)(h) if it has an air/vapor interface less than 10 square feet. This cold cleaner appears to meet this requirement.

R 336.1281 Permit to install exemptions; cleaning, washing, and drying equipment.

(1) This rule does not apply if prohibited by R 336.1278 and unless the requirements of R 336.1278a have been met.

(2) The requirement of R 336.1201(1) to obtain a permit to install does not apply to any of the following:

(h) Cold cleaners that have an air/vapor interface of not more than 10 square feet

This cold cleaner is subject to Rule 707 (R336.1707) for New Cold Cleaners (placed into operation on or after July 1, 1979). I informed him of the Cold Cleaner Operating Procedures, pursuant to Rule 707(4) that needs to be posted nearby the tank. I also informed him that the lid needs to be kept closed when not in use. He agreed to comply with these requirements. On Thursday, July 15th I emailed him copies of the operating procedures and the relevant rules.

I observed the area where they transfer waste ink to storage totes to be sent out to be recycled. He told me they have no emergency generator onsite.

Next, we inspected the RTO control system and the RTO. I did not observe any visible emissions from the stack. The chamber temperature indicates the combustion chamber temperature, which was above the minimum temperature requirement of 1450°F. Dryers are operated at around 350°F.

RTO Operational data on July 13, 2021

Pressure differential = 2.8" WC; T chamber = 1545°F.

Inlet air T=213°F; Bed 1 T = 1381°F; Bed 2 T = 1428°F; Exhaust T= 236°F

Records Review

During May 28, July 13, 14 and 15, electronic records which includes ink and fountain solution usages and VOC emissions calculations, 2021 Compliance Data for Article 1.4 (referring to PTI SC 1.4 and 2.4) and SDS for inks, glue and fountain solutions were submitted.

2021 Compliance Data for Article 1.4 details how the facility complies with SC 1.4 and 2.4 of the PTI. During inspection, we discussed employee training for cleaning procedures. This document explains that "as part of the new employee welcome/training package, each new member of the crew is given verbal instructions and a walk-through tour on the proper uses/handling methods of all chemical uses in the printing process." Jack informed me that if these instructions do not include cleaning process as required by SC 1.4f and SC 2.4f, it will be included.

Per Special Conditions 1.8 and 2.11, the facility is required to keep monthly records of the type of material used, the VOC content of each material, the usage rate of each material as applied, the amount of each material reclaimed, and rolling 12-month VOC emissions calculations for both FG-NewLitho and FG-OldLitho. In addition, NTVB must keep records of each material used and reclaimed, VOC content of each material as received, and VOC mass emissions calculations on a monthly and yearly basis for FG-Facility (S.C. 3.5). NTVB Media must also keep facility-wide records of the gallons or pounds of material used, gallons or pounds of material reclaimed, HAP content of each material used, and individual and aggregate HAP emissions calculations on a monthly and yearly basis (S.C. 3.6). All of the required records were provided and are attached.

NTVB is also required to maintain records of the chemical composition of each material used. I was provided Safety Data Sheets for all materials currently used by the facility to demonstrate compliance with S.C. 1.10, 2.13, and 3.7.

Per S.C. 1.7, 2.10, and 3.4, all records should be made available for the previous month by the 15th day of the calendar month. Due to the pandemic, I requested the emission records until April 2021 on May 20th. I received the records on May 28th, with April 2021 emissions calculations. Facility appears to be in compliance with these special conditions.

Emissions Limits

The emissions limits include a VOC content limit of less than 5% for fountain solution applied in FG-OldLitho and FG-NewLitho (S.C. 1.1a and 2.1a). The attached records of VOC content for materials used in FG-Old Litho and FG-NewLitho indicate that VOC content of the material applied in both lines is 1.4%. NTVB Media is therefore in compliance with S.C. 1.1a and 2.1a.

In addition, conditions 1.9 and 2.12 require the VOC content to be calculated using the method detailed in Appendix A. I performed spot check calculations using the usage data provided by the facility and VOC content listed in the SDS (PrintEasy 4050 Foun). My calculations gave a lower number than 1.4% which the facility calculated. I informed the facility to verify the VOC content and the density data they are using in the calculations.

NTVB Media is permitted to emit 12.5 tons per year (tpy) from the stack and 4.5 tpy fugitive emissions from FG-OldLitho and a total of 39.4 tpy from FG-NewLitho (S.C. 1.1b, 1.1c, and 2.1b). All emission limits are measured over a 12-month rolling time period. The attached records show the calculated 12-month rolling average VOC emissions for December 2020 and April 2021. The VOC emissions from FG-OldLitho were 2.2 tpy from the stack and 0.4 tpy fugitive emissions as of April 2021. NTVB reported 4.7 tpy VOC emissions from FG-NewLitho as of April 2021. NTVB is in compliance with the emissions limits for FG-OldLitho and FG-NewLitho (S.C. 1.1b, 1.1c, and 2.1b).

NTVB Media has a facility-wide VOC emission limit of 90.0 tpy, based on a 12-month rolling average (S.C. 31.a). Attached are records showing calculated 12-month rolling average VOC emissions of 7.2 tpy as of April 2021, which is well below the permit. There are also facility-wide emission limits for individual HAP (<9.0 tpy) and aggregate HAPs (<22.5 tpy) per S.C. 3.1b and 3.1c. The facility does not use any HAP-containing inks or materials and therefore did not report any HAP emissions. NTVB is in compliance with all facility-wide emission limits.

I noticed that the VOC emission, if any, from the cleaning solvents are not included in its VOC calculations. I requested them to obtain the SDS or technical data sheet this cleaning solution and update the VOC calculations. They agreed to comply with my request.

Thermal Oxidizer Temperature Records

The facility provided continuous temperature records for the RTO control on FG-NewLitho, as required by S.C. 2.9. Facility provided electronic data for 2020 and 2021 Jan-May. The records show that the combustion temperature was above 1450°F on the days it was operating.

During our pre-inspection meeting, I inquired about the disposal of waste solvents and solvent-saturated materials. Jack told me that the solvents are used up and no waste is created except the rags/towels used in weekly cleaning of the machines. The solvent-saturated rags are collected in closed containers and sent off-site for cleaning and reuse. The submitted "2021 Compliance Data for Article 1.4" stated that "All containers of new and used VOC-containing press related cleaning materials

(blanket and roller washes, and solvent-containing cleaning towels) shall be kept always closed". It also stated that "The disposal of solvent laden towels is closely monitored by management to ensure that they are properly disposed of in the red top fire department approved closed containers". This satisfies the requirements of special conditions 1.2, 1.4(b-d, g), 2.2, and 2.4(b-d, g). I did not observe or inspect the waste solvent or rag storage containers.

I also inquired about the type of solvents used and whether any solvents on site contained hazardous air pollutants, such as toluene or xylene. Per S.C. 1.4(a) and 2.4(a), cleaners containing HAPS should be eliminated or used only on hard to clean spots. "2021 Compliance Data for Article 1.4" indicated that NTVB uses only solvents standard to the printing industry and are generally supplied by the vendor for printing inks as a printing system.

I further inquired about the requirement to maintain negative air pressure within each dryer for both FG-NewLitho and FG-OldLitho. Jack explained that the negative pressures in the dryers are maintained by the exhaust fan flow, and that the equipment will shut down if proper pressure is not maintained. He also explained that the pressure difference can be observed when opening the door to the outside or to the office area of the building.

Conclusion

NTVB Media Company appears to be in compliance with the requirements of PTI No. 15-02A and applicable air quality requirements.

NAME Sebastianykallemkal DATE 09/02/2021

SUPERVISOR Joyce