

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

A421647730

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|---|-------------------------------|---------------------------|
| FACILITY: Rogers Printing Inc | | SRN / ID: A4216 |
| LOCATION: 3350 Main St, RAVENNA | | DISTRICT: Grand Rapids |
| CITY: RAVENNA | | COUNTY: MUSKEGON |
| CONTACT: Jeff Raap , Manufacturing Manager | | ACTIVITY DATE: 02/05/2019 |
| STAFF: Chris Robinson | COMPLIANCE STATUS: Compliance | SOURCE CLASS: SM OPT OUT |
| SUBJECT: FY'19 on-site inspection to determine the facility's compliance status with respect to PTI No. 114-01D and any other applicable air quality rules and regulations. | | |
| RESOLVED COMPLAINTS: | | |

AQD staff, Chris Robinson (CR), conducted an on-site scheduled unannounced inspection of Rogers Printing Incorporated (RPI) located at 3350 Main Street in Ravenna, Michigan on February 5, 2019 from approximately 9:20am to 10:20am. CR met with Mr. Andy Engle, Maintenance personnel for a site tour and a follow-up phone conversation with Mr. Jeff Rapp, V.P. of manufacturing, on February 7, 2019. Mr. Raap is the main contact for this facility, but he was not available during the inspection. AQD identification was provided to Mr. Engle and CR announced intent to conduct an inspection of the facility in order to determine the facility's current compliance status with respect to Permit to Install (PTI) No. 114-01D and any other applicable air quality rules and regulations. CR spoke to Mr. Rapp via phone during the inspection also announcing intent of the visit. Mr. Engle provided pertinent information and a tour of the facility and Mr. Raap provided all necessary documentation via email.

Weather conditions were cloudy approximately 26°F with northerly winds at approximately 12mph with no precipitation (www.weatherunderground.com). CR surveyed the perimeter of the facility upon arrival for odors and visible emissions; none were observed.

FACILITY DESCRIPTION / REGULATORY REQUIREMENTS

RPI is a printing facility that primarily prints newspaper pull-out ads, magazines, and other mail distribution items, normally operating five (5) days per week, but may increase to six (6) or seven (7) days during busy times.

RPI is a Title V opt-out (Area) source for HAPs and VOC's, operating under one (1) PTI (No. 114-01C). RPI appears to be subject to the National Emission Standard for Hazardous Air Pollutants (NESHAPs) for "the printing and publishing industry" promulgated in 40 CFR Part 63 Subpart KK, which applies to both Major and Area Sources. However, at this time the AQD does not have Area Source delegation for this federal standard. Consent Order AQD-29-2013 was terminated on May 29, 2016.

RPI does not have any boilers or parts cleaners. RPI does have one (1) dust collector that is used for paper shredding and subsequent baling operations which is vented to the in-plant environment, and therefore exempt from Rule 201 permitting requirements per Rule 285(2)(i)(vi)(B).

COMPLIANCE EVALUATION

All VOC containing blankets, roller washes and used shop towels are stored in closed metal containers and eventually sent to a laundry facility for cleaning. All containers were closed during this inspection, including any other containers that may have contained HAP and VOC containing materials. A Safety Data sheet was provided and included in **Attachment A** for the printing press cleaning solvent (PROCHEM PREMIUM WASH 55G DRUM), which confirmed composite vapor pressure of the solvent does not exceed 10 mmHg @ 20 deg C (68 deg F) as required per EUHEIDELBURG03 SCIII.3 and FGOFFSET2 SC III.3 of the PTI.

Stack diameters and heights were not explicitly measured during the inspection. However, observations seemed to confirm compliance with measurements specified in EUHEIDELBERG03 SC VIII.1 and FGOFFSET2 SCVIII.1. Mr. Raap indicated that records are maintained for at least five (5) years and provided the following by email, which are included in **Attachment B**:

- 1) A current listing of the chemical composition of each VOC containing material, including the weight percent of each component, and the composite partial vapor pressures of all press-related cleaning solvents used (EUHEIDELBERG03 SC VI.2, FGOFFSET1 SC VI.2 & FGOFFSET2 SC VI.2)
- 2) HAP content and amount of each HAP containing material used (FGFACILITY SC V.1 & VI.2)
- 3) VOC content and amount of each VOC containing material used and reclaimed (EUHEIDELBERG03 SC VI.3, FGOFFSET1 SC VI.3 & FGOFFSET2 SC VI.3)

- 4) Monthly and 12-month rolling individual and aggregate HAP and VOC emission calculations (FGFACILITY SC VI.2, EUHEIDELBERG03 SC VI.3, FGOFFSET1 SC VI.3, FGOFFSET2 SC VI.3)
- 5) For FGOFFSET1 - amount of blanket wash reclaimed (FGOFFSET1 SC VI.3)
- 6) For FGOFFSET2 - identification of the category (ink, coating, blanket wash, roller wash, press wash, etc.) of each VOC containing material used and reclaimed (FGOFFSET2 SC VI.3)

A list of equipment operated by RPI, under PTI No. 114-01D, along with emission limits specified throughout the PTI and facility calculated emissions is provided below. Based on the records provided (**Attachment B**) RPI appears to be in compliance with all emission limits specified in the PTI.

| Equipment | Pollutant | Limit | Time Period / Operating Scenario | * Facility Calculated Emissions (Jan 1, 2018 – Dec. 31, 2018) | Within Limit (yes/no) |
|----------------|-----------------|----------------------------------|----------------------------------|---|-----------------------|
| EUHEIDELBERG03 | VOC | 11.5 tpy | 12-month rolling | 3.47 tpy | Yes |
| | | 20 ppmv as hexane on a dry basis | Test Protocol | ** 12.7 ppmv as hexane on a dry basis | Yes |
| FGOFFSET1 | VOC | 10.0 tpy | 12-month rolling | 1.97 tpy | Yes |
| FGOFFSET2 | VOC | 4.3 pph | Test Protocol | *** 0.11 lb/hr | Yes |
| | | 17.8 tpy | 12-month rolling | 1.13 tpy | Yes |
| FGFACILITY | Individual HAPs | Less than 9.0 tpy | 12-month rolling | **** | Yes |
| | Aggregate HAPs | Less than 22.5 tpy | | 0.67 tpy | Yes |

* Records provided in **Attachment B**

** Based on Test Report received 9/2/2016.

*** Based on TPU's review . Test Report received 12/6/2013 listed an outlet concentration of 0.075lb/hr. Test Protocol received 8/19/2013 and testing conducted on 10/29/2013.

**** Individual HAP emissions are only tracked monthly. However, aggregate HAP emissions are well below the individual limit of 10 tpy.

Emission Unit EUHEIDELBERG03

Emission Unit "EUHEIDELBERG03" consists of a single Heidelberg M-600 heatset webfed offset lithographic printing press with an integrated recuperative thermal oxidizer as part of the dryer and an automatic wash system.

As discussed with Mr. Engle, this press is equipped with an interlock system and alarms that will either shut down or prevent the press from operating if the RTO either shuts down or operates at a lower temperature than what is specified by the manufacturer, which is not adjustable. Although the press was not operating during this inspection the associated dryer and RTO were in operation. The RTO lower burner temperature was ~1,410 °F and the upper burner temperature was 1,416°F. PTI 14-01D EUHEIDELBERG03 SC IV.1 requires a minimum combustion temperature of either 1,418°F or the minimum temperature established during the most recent acceptable stack test. Testing was successfully completed on July 19, 2016. Recorded temperatures were between 1,404°F – 1,417°F with an average of approximately 1,412°F. Operating temperature is not adjustable; therefore a minimum operating temperature could not be established during testing. However, testing did establish that a destruction efficiency of 99% was achieved as long as the press was operating as the manufacturer intended. Data was reviewed onsite with Mr. Rapp and Mr. Engle on 3/1/2019 and the average operating temperature was 1,418°F with slight dips in temperature of approximately 7°F (1,411°F), which based on testing data is still within the operating range of the unit. All combustion temperature data is continuously monitored and recorded by a Yokagawa data logger. Data was reviewed onsite on 3/1/2019 and an example is included in **Attachment C**.

Per requirements of EUHEIDELBERG03 SC V.1, the permittee is required to verify the VOC content of any ink, fountain solution, cleaning solvent, flash oil, etc. material, as received and as applied, using federal Test Method 24 or 24A unless approval has been given by the AQD District Supervisor to use manufacturer formulation data. The AQD received this request by the facility on February 10, 2016 and an approval letter from the AQD was issued on March 4, 2016. Mr. Raap confirmed use of manufacturers formulation data for VOC content verification.

Testing was successfully conducted as required by EUHEIDELBERG03 SC V.2, on July 19, 2016, 71 days following issuance of PTI 114-01D, requiring testing within 180 days. The VOC outlet concentration was 12.7 ppm (hexane), verifying that, when operated and maintained properly, the RTO outlet concentration is within the limit specified in EUHEIDELBERG03 SC I.2 of 20.2 ppm. Per Mr. Raap, maintenance is conducted as required per the MAP.

Flexible Group FGOFFSET1 & FGOFFSET2

Flexible Group "FGOFFSET1" consists of emission units EUHEIDELBERG01 and EUMISCELLANEOUS which includes one non-heatset sheetfed lithographic printing press, bindery, pre-press and adhesive operations. Emissions are fugitive and not controlled by a regenerative thermal oxidizer (RTO). Flexible Group "FGOFFSET2" includes both Emission Units EUHEIDELBERG02 and EUHARRIS which consists of two heat set web fed lithographic printing presses. Emissions from FGOFFSET2 are controlled by a regenerative thermal oxidizer (RTO). Both printing presses, FGOFFSET1 and FGOFFSET2, are manually washed with a blanket wash system.

Per requirements of FGOFFSET1 SC V.1 and FGOFFSET2 SC V.1, the permittee is required to verify the VOC content of all materials applied, using federal Test Method 24 or 24A unless approval has been given by the AQD District Supervisor to use manufacturer formulation data. The AQD received this request by the facility on September 26, 2013 and an approval letter from the AQD was issued on September 30, 2013. Mr. Raap confirmed use of manufacturers formulation data for VOC content verification.

Per Mr. Engle, the RTP for FGOFFSET2 is equipped with an interlock system and alarms that will either shut down or prevent the press from operating if the combustion temperature drops below a specified temperature. Although neither press was operating during this inspection the RTO was operating with a combustion temperature of 1,508°F. PTI 14-01D OFFSET2 SC IV.1 requires a minimum combustion temperature of either 1,500°F or the minimum temperature established during the most recent stack test which was successfully completed on October 29, 2013 establishing a minimum operating temperature approximately 1,501°F.

RPI maintains a Malfunction Abatement plan for FGOFFSET2 which was received by the AQD in September of 2013. A copy of the MAP for EUHEIDLEBERG03 was provided during the follow-up visit on March 1, 2019. Per Mr. Raap both MAP's are current and routine maintenance is conducted as required.

RPI is subject to facility wide emission limits for individual and aggregate HAPs. Emission data has been provided (**Attachment C**) and summarized in the table above. Based on this data RPI appears to be operating in compliance with these limits (< 9.0tpy Individual & <22.5 tpy Aggregate).

MAERS

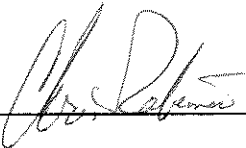
Emissions data for 2018 had been submitted by the facility but not reviewed/finalized by the AQD prior to this inspection. The facility's 2017 emissions data was submitted to MAERS on time and complete indicating that VOC emissions were 26,254.80 lbs (13.13 tons). Data provided during this inspection indicated that 2018 VOC emissions were approximately 6.57 tons. Approximately half of what was reported in 2017. CR and Mr. Raap took a cursory look at the 2018 MAERS submittal while onsite on March 1, 2019, and VOC emissions were reported to be 25,423.20lbs (12.71 tons), which is consistent with what was reported in 2017 but not with facility records. Upon review, it appears as though the facility is using MAERS emission factors which may over estimate emissions, instead of the emission factors established during testing. CR and Mr. Raap will discuss further and make necessary changes once MAERS submittals are available to the AQD for review and editing. The facility's 2017 MAERS reports is included in **Attachment D**.

COMPLIANCE DETERMINATION

Based on observations, discussions and a records review, Rogers Printing Inc. appears to be in compliance PTI No. 114-01D and other applicable air quality rules and regulations.

Attachments

- A - Safety Data Sheets
- B - Emission Calculations
- C - Example of Temperature Data
- D - 2017 MAERS Report

NAME 

DATE 4/8/2019

SUPERVISOR 