

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

N524059878

FACILITY: KNAPE INDUSTRIES INC		SRN / ID: N5240
LOCATION: 10701 NORTHLAND DR, ROCKFORD		DISTRICT: Grand Rapids
CITY: ROCKFORD		COUNTY: KENT
CONTACT: William Knappe , President		ACTIVITY DATE: 08/19/2021
STAFF: Michael Cox	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled unannounced inspection		
RESOLVED COMPLAINTS:		

On Thursday August 19, 2021 AQD Staff Michael Cox (MTC) conducted an unannounced scheduled inspection of Knappe Industries, Inc. located at 10701 Northland Drive, Rockford, MI 49341. The purpose of this inspection was to verify compliance with Permit to Install No. 26-97 and all other applicable air quality rules and regulations. MTC arrived on site at approximately 9:00 am and contacted Mr. William Knappe to conduct the inspection. No visible emissions or odors were noted upon arrival.

Facility Description

Knappe Industries is a finishing company for automotive parts with additional operations including vacuum metallizing, pad printing, hot stamping and silk screening. The facility is in operation with one Opt-Out Permit to Install (PTI) No. 26-97. During the initial discussion, Mr. Knappe state that no significant changes have occurred to the facility since the previous inspection on August 23, 2017.

Compliance Evaluation

FG-VACUUM

Knappe Industries currently operates three vacuum metallizers that were installed prior to 1967 and are grandfathered from New Source Review (NSR) permitting. A fourth vacuum metallizer was observed that was never put into operation. No stacks are listed in association with the three vacuum metallizers. Mr. Knappe stated that FG-VACUUM has oil filled pumps and runs on electricity. Additionally, the consumables are tungsten and aluminum. Nothing is externally vented from FG-VACUUM. This was verified by Knappe Industries to have not changed with no volatile organic compounds (VOCs) or hazardous air pollutants (HAPs) emitted from this flexible group.

FG-PAINTINGA

Eight paint booths, five paint machines and three ovens are listed in association with this flexible group. All paint booths, ovens and paint machines in FG-PAINTINGA were installed prior to 1967 and, therefore, are exempt from NSR. Acetone and MEK are primarily used to clean the spray nozzles. Dry filters are used for all paint booths and replaced on an as needed basis. All paint booths were observed and noted to have dry filters installed. All five paint machines were not in use at the time of the inspection and have not been run for varying lengths of time. Paint machine M-5 was no longer in operation and the associated stack was removed. Waste coating and

solvent containers associated with this unit were properly closed. Ovens O-1 and O-2 are indirect and direct fired respectively. Oven O-1 typically operates from 150°F - 180°F. Oven O-2 typically operates from 140°F – 235°F. Oven O-3 has not been in operation for over fifteen years. Approximately fifteen stacks are listed as associated with the remaining paint booths, ovens and paint machines. Six of these stacks are included within Opt Out PTI No.26-97 and were observed during the inspection. Stacks appeared to be consistent with Opt Out PTI No.26-97.

FG-PAINTINGB

Seven paint booths and three paint machines are listed in association with this flexible group. Equipment for this flexible group was installed or modified after 1967 and permitted. Acetone and MEK are primarily used to clean the spray nozzles. Dry filters are used for all paint booths and replaced on an as needed basis. All paint booths were observed and noted to have dry filters installed. Paint booths B-12 and B-13 and associated stacks had been removed from operation. All three paint machines were not in use at the time of the inspection and have not been run for varying lengths of time. Waste coating and solvent containers associated with this unit were properly closed. Approximately six stacks are listed in association with the remaining pieces of equipment and are included in the Opt Out PTI No. 26-97. Stacks appeared to be consistent with Opt Out PTI No.26-97.

FG-MASKWASHERS

Four solvent based mask washers and two solventless mask washers are listed in association with this flexible group. The washers are exempt from NSR pursuant to Rule 281(2)(h). At the time of the inspection washers W-4 and W-6 were removed from operation. Knape Industries primarily uses Acetone and MEK for these washers. All containers associated with these washers were properly closed. One stack, specifically for washer W-5, is listed in the Opt Out PTI No. 26-97. The stack appeared to be consistent with Opt Out PTI No.26-97.

EU-BOILER

Knape industries is in operation with one (15 horse power) steam generating boiler that was installed in 1968 and is exempt from NSR pursuant to Rule 282(2)(b)(i). It was verified during the inspection that the boiler uses natural gas and, therefore, is not subject to 40 CFR Part 63, Subpart JJJJJJ. Based on the date of installation the boiler is also exempt from 40 CFR Part 60 Subpart Dc.

Stationary Source

VOCs at this site are limited to 90 tons per year (tpy) per a 12-month rolling time period. Additionally, the site is limited to 9 tpy and 22.5 tpy of individual HAPs and Aggregate HAPs respectively per a 12-month rolling time period. Records were provided by Mr. Knape following the facility inspection and reviewed from January 1, 2020 through July 2021. The highest 12-consecutive month VOC emission was noted to be 1.02 tons of VOC during the 12-month period ending in February 2021. The highest 12-month rolling total individual HAP emission occurred during the 12-month period ending in February 2021, when 1.01 tons of Methyl ethyl ketone (MEK) was emitted. MEK was removed as a HAP in 2005, but is still tracked as a HAP in Knape Industries records. Since MEK is being tracked as the only HAP from the facility, aggregate HAP emissions per 12-consecutive months are also the highest during the

12-month period ending in February 2021, when 1.01 tons of MEK was emitted. Based on the records provided Knape Industries is well within the 12-month rolling total VOC, individual and aggregate HAP limits.

FG-PAINTINGB is specifically limited to 240 lbs of VOC emissions per calendar day and 23 tons of VOC emissions per a 12-month rolling time period. Records denoting the emissions from this source were requested and reviewed for the time period of January 1, 2020 through July 2021. The highest monthly VOC emission from this source occurred during the month of October 2020 when the monthly total VOCs emitted for the month was 88.485 lbs. Based on the records reviewed, the monthly total VOCs emitted never exceeded 240 lbs which is the permitted daily limit. The total facility 12-consecutive month VOC emissions was noted to be 1.02 tons of VOC, which occurred during the 12-month period ending in February 2021 and is well within the limit of 23 tons of VOC per 12-consecutive month limit for FG-PAINTINGB.

All waste coatings/solvents observed during the inspection appeared to be properly stored in closed containers. Per Special Condition (SC) 8, the VOC contents of all coating materials used shall be identified using Test Method 24, or upon request and the approval of the District Supervisor, manufacturers formulation data sheets may be used. During the inspection, it was concluded that Knape Industries uses a combination of Material Safety Data Sheets (MSDS) and manufacturers formulation data sheets. For the MSDS, Knape Industries stated that they use the worst-case scenario when determining the VOC content. Mr. Knape stated the facility has had difficulty in the past obtaining manufacturers formulation data sheets from suppliers. From the previous inspection on August 23, 2017 it was concluded by AQD staff Adam Shaffer and the District Supervisor Heidi Hollenbach that if manufacturers formulation data sheets are available then to use them in verifying the VOC content. If manufacturers formulation data sheets are not accessible, Knape Industries will be allowed to use MSDS. If VOC emissions increase significantly, then this conclusion will be reassessed.

Per SC.9.a-j, Knape Industries must keep various records including the identity of each coating or solvent used, VOC content minus water and with water, daily usage rates, daily average VOC emissions, the individual and aggregate HAP contents for each coating or solvent used, monthly/12-month rolling individual and aggregate HAP emission totals, and individual and/or monthly/12-month rolling VOC emission totals. Applicable records were requested and reviewed for the time period of January 1, 2020 through July 2021. Based on the review of the records provided, Knape Industries appears to be keeping track of all usage rates, VOC contents, HAP contents, VOC emissions and individual/aggregate HAP emissions. However, it was also identified that most of the coatings listed in the records are mixed on site. Since the mixture of the coatings are one gallon or less, Mr. Knape stated that the facility claims the whole gallon as used when it is opened to mix the coatings for ease in recordkeeping. After further review, Knape Industries is adequately keeping track of the records as required.

Additional Observations

- Pad printing operations were observed on site and appear to be exempt from air permitting per Rule 285(2)(l)(ix).

- Knape Industries does conduct silk screening operations on site, however, the equipment was not set up at the time of the inspection. Silk screening operations on site appear to be exempt from air permitting per Rule 287(2)(e).
- Stamping operations were observed during the inspection and appear to be exempt from air permitting per Rule 285(2)(l)(i).
- Several chemical storage areas were observed and containers located in the areas were properly sealed.
- Prior to the inspection, Knape Industries was reviewed to determine if any additional federal regulations/requirements were applicable to the facility. The company is subject to the 40 CFR Part 63, Subpart W National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements for plating and polishing. The conversion coating line subject to this maximum achievable control technology (MACT) was observed during the facility walkthrough; however, AQD does not have delegation for this MACT from the EPA. The conversion coating line was determined to be installed in 1965. Based on the date of installation, this unit is considered grandfathered and exempt from permitting.
- Four natural gas heaters of approximately 80,000 BTU each are used on site for heating purposes and appear to be exempt from air permitting per Rule 282(2)(b)(i).

Conclusion

Based on the review of the records provided and on-site observations, Knape Industries, Inc. is in compliance with Opt-Out PTI No. 26-97 and all applicable air quality rules and regulations.

NAME Michael T. CoxDATE 9/16/2021SUPERVISOR HH