

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

N515554440

FACILITY: A & K Finishing, Inc.		SRN / ID: N5155
LOCATION: 4436 DONKER COURT SE, KENTWOOD		DISTRICT: Grand Rapids
CITY: KENTWOOD		COUNTY: KENT
CONTACT: Scott Hankamp , Operations Manager		ACTIVITY DATE: 07/15/2020
STAFF: April Lazzaro	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Announced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro arrived at the facility to conduct an announced, scheduled inspection of A & K Finishing, Inc. located at 4436 Donker Court SE in Kentwood. The purpose of the inspection was to verify compliance with Permit to Install No. 21-07C and 21-07D as well as state and federal air pollution regulations. Accompanying AQD staff was Scott Hankamp, Operations Manager. Proper PPE was utilized, and social distancing was maintained to the extent possible during the inspection.

FACILITY DESCRIPTION

A & K Finishing, Inc. paints plastic, interior automotive parts and some household products. The facility consists of seven coating lines which are permitted under Opt-out Permit to Install No. 21-07D. The company is considered a synthetic minor source for hazardous air pollutants (HAPs) and volatile organic compounds (VOCs). The company is also subject to Rule 632, coating VOC content restrictions.

COMPLIANCE EVALUATION

This compliance evaluation spans from January 2019 through June 2020. During this time, two permits were in effect. PTI No. 21-07C was in effect through July 2, 2019. PTI No. 21-07D became effective on July 3, 2019. I drove around the facility prior to the on-site inspection and did not observe any odors.

The company has seven coating lines. EU-LINE1 has three robotic paint booths and one infrared drying oven. EU-LINE2 has two robotic spray booths and one infrared oven. EU-LINE3A has one robotic spray booth and an infrared oven that is shared with EU-LINE3B. EU-LINE3B has one robotic spray booth and an infrared oven that is shared with EU-LINE3A. EU-LINE4 consists of two robotic spray booths and one infrared oven. EU-LINE5 consists of three spray booths, two of which are equipped with robotic spray and one that is not in use. EU-LINE6 has one manual spray booth and one infrared oven.

Paint is applied to plastic parts in all spray booths using Sata LP90, HVLP guns in accordance with the permit. In addition, the filters on all booths were maintained adequately.

The company uses a bar code scanning system to accurately determine the amount of coating that is being distributed out of the mix room.

There have been no changes to stacks since the previous inspection where all stacks were determined to be in compliance with applicable design requirements.

FG-LINE3

This flexible group includes EU-LINE3A and EU-LINE3B; two plastic parts spray coating lines with dry filters and includes purge and cleanup operations.

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Reported Emissions	Compliance Y/N
VOC	10.0 tpy	12-month rolling time period as determined at the end of each calendar month	EU-LINE3A and EU-LINE3B, each separately	EULINE3A- 1.04 tons EULINE3B- 2.01 tons	Y
VOC	2,000 lb/month	12-month rolling time period as determined at	EU-LINE3A and EU-LINE3B, each	EULINE3A 495.7 lb	Y

		the end of each month	separately	EULINE3B 530.6	
Tert-Butyl Acetate (CAS No. 540-88-5)	10.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG-LINE3	1.57 tons	Y

The permit is written incorrectly for the monthly limit identified above. The 2,000 lb/month limit is a per month time period, not a 12-month rolling time period. I discussed this with the AQD permit section who clarified that the limit is not a 12-month rolling total. I requested via email that the permit section correct the error by conducting an administrative change. I was informed by permit section staff that the company must submit a PTI application to have this corrected due to the length of time that has elapsed since permit issuance. AQD staff will notify the company about this, so they may submit a permit modification if they want clarification on the permit condition beyond the scope of this report.

FG-COAT

This flexible group includes EU-LINE1, EU-LINE2, EU-LINE4, EU-LINE5 and EU-LINE6 which are five automotive plastic parts spray coating lines with dry filters and includes purge and clean up operations. There are some furniture parts that get coated on the lines as well, and the company keeps track of the paint use for them separately. While the company is not keeping FGCOAT 12-month rolling VOC emissions without EU-LINE3, it was easy for me to subtract emissions from EU-LINE3 to get the value to demonstrate compliance. The company should modify records to keep 12-month rolling totals for both as required. The table below depicts limits established in PTI No. 21-07D:

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Reported Emissions	Compliance Y/N
VOC	87.7 tpy	12-month rolling time period as determined at the end of each calendar month	FGCOAT	39.24 tons	Y
VOC & Acetone (CAS No. 67-64-1) Combined	42.8 tpy	12-month rolling time period as determined at the end of each calendar month	EU-LINE4	7.63	Y
VOC	10.0 tpy	12-month rolling time period as determined at the end of each calendar month	EU-LINE6	2.0	Y
VOC	2,000 lb/month	Calendar month	EU-LINE6	663.7 lbs	Y
VOC	5.0 lb/gal (minus water) ^a as applied	Daily volume-weighted average	EU-LINE4	Various days that exceed 5.0 lb/gal	N
VOC	R 336.1632 – Table 66, lb/gal (minus water) ^a as applied	Daily volume-weighted average	Individually for EU-LINE1, EU-LINE2, and EU-LINE5	EU-LINE1 EU-LINE2 various EU-LINE5 various	Y N Y
cumene (CAS No. 98-82-8)	12.9 lb/yr	12-month rolling time period as determined at the end of each calendar month	EU-LINE4	20.08 lbs	N
hydrocarbons, terpene processing by-	12.9 lb/yr	12-month rolling time period as determined at the end of each calendar	EU-LINE4	0 lbs	Y

products (CAS No. 68956-56-9)		month			
dibasic ester (CAS No. 95481-62-2)	128.6 lb/yr	12-month rolling time period as determined at the end of each calendar month	EU-LINE4	0 lbs	Y

As part of the recordkeeping review email discussions, I asked about the coatings and how the catalyst is accounted for in the records. In response, the consultant representing A & K Finishing stated that the records are maintained on an "as received" basis, not an "as applied" basis. The permit requires that the daily volume weighted average records be maintained on an "as applied" basis, as indicated in the table above. As such, this is a violation of the recordkeeping requirements.

During the time frame evaluated, EU-LINE4 was subject to different limits. For the time frame of January 1, 2019 - July 2, 2019, EU-LINE4 was permitted as Part 6 exempt and was limited to 2,000 lbs of VOC per month pursuant to PTI No. 21-07C. January 2019 VOC emissions from the line were 2,093.6 lbs. April 2019 VOC emissions from the line were 2,193.78 lbs.

Rule 632 states that once a coating line exceeds the 2,000 lb/month limit, it is permanently subject to the coating content limits established in Table 66. This means that the limit of 5.0 lbs/gallon VOC content on a daily volume weighted average became applicable on February 1, 2019.

In the following months EU-LINE4 exceeded the 5.0 lb/gal limit:

- February- 11 days (every day of operation)
- March- 13 days (every day of operation)
- April- 16 days (every day of operation)
- May- 11 days (every day of operation)
- June- 9 days (every day of operation)

A violation notice will be issued for exceeding the coating content limits of Rule 632.

Following issuance of PTI No. 21-07D on July 3, 2019, the following months exceeded the 5.0 lb/gal limit established in FGCOAT SC I.5:

- July- 5 days (all but one day of operation)
- August- 5 days (every day of operation)
- December- 1 day

In September 2019, A & K Finishing, Inc. begun to use a new coating by United on the line with a low VOC coating content of 2.50 lb VOC/gal. According to the company this coating is not new, but is old and rarely used, however it is new to this line as permitted. In June of 2020 a coating by SWI was used with a low VOC content of 2.19 lb VOC/gal. A & K Finishing, Inc. relies on these low VOC coatings to bring down the volume weighted average into the compliance range. I requested additional information about this coating and the parts it is used on and where the parts are going to. I also requested a Meaningful Change demonstration because this coating was not part of the 21-07D PTI application and review. According to the company, the 2.50 lb VOC/gal coating is used on an automotive related part and is used to coat racks after cleaning. The 2.19 lb VOC/gal is a seldomly used coating for a furniture related part and is used a few times a year. I received the formulation information along with what the company indicated was a Meaningful Change demonstration and found several issues.

I created a table to show the information obtained from my request for coating formulation data:

COATING	SDS/FORMULA-TION/EDS	DATE	VOC-MATCH?	ACCEPTABLE? Y/N
Redspot LE9425B- EDS	Formulation	02/16/18	Y	Y
PPG IMTB 301258	SDS	03/28/16	Y	N
US Paint	SDS	03/17/16	Y	N

USGDX-10275				
SWA G55BT65	SDS	11/24/15	Y	N
SWA P1C21	EDS	04/21/13	Y	N
SWA GB30BM30127	EDS	07/01/18	Y	Y
SWA GB30BM30129	SAME AS ABOVE?	U	U	N
Red Spot 318LE765	SDS	05/30/13	N	N
Red Spot 318LE1026	SDS is for B version not updated in spreadsheet	04/24/19	N	N
United AWHP-9307	SDS	08/26/08	N	N
SWI V66XXV13838	SDS	12/01/04	Y	N
PPG CAT 110	Not provided	U	U	N

The company provided SDS for the SWI V66XXV13838 coating. This is not the same as formulation data. Also, the SDS used was over 16 years old which is not acceptable. Finally, the old SDS included CAS # 28182-81-2, which does not have a screening level nor does A & K Finishing's consultant provide a rationale for why it wasn't evaluated. A Meaningful Change demonstration cannot be conducted if there is not a screening level identified for a coating constituent. A screening level has to be created and found to be acceptable or a permit application submitted.

The company provided a SDS for the AWHP-9307 coating. This is not the same as formulation data. Also, the SDS is over 13 years old which is not acceptable. Finally, the SDS includes carbon black as an ingredient which is not evaluated for in the Meaningful Change demonstration.

Finally, based on the PTI review information, there are several other air toxics that should have been included in the original hazard potential spreadsheet. Since the effort to determine compliance is not acceptable, a Rule 201 violation will be cited. A violation notice will be issued.

An Environmental Data Sheet (EDS), if labeled as such, is based on formulation data and is typically considered acceptable to determine VOC and HAP content of a coating.

EU-LINE4 is subject to a cumene limit of 12.9 lb/year based on a 12-month rolling average as determined at the end of each calendar month. A & K Finishing, Inc. exceeded the 12-month rolling average into the third month of the averaging period. The final 12-month average from July 2019-June 2020 is 20.08 lbs cumene. This is a violation of FGCOAT SC I.7. A violation notice will be issued.

A & K Finishing, Inc. has reported zero pounds of emissions from hydrocarbons, terpene processing by-products and dibasic ester which both have emission limits established. A review of the records indicates that the coatings evaluated for to establish these limits have not been used on EU-LINE4.

EU-LINE1, EU-LINE3A, EU-LINE3B and EU-LINE5 met the daily volume weighted average VOC content limit during the January 2019-June 2020 period evaluated.

EU-LINE2 exceeded the daily volume weighted average VOC content on February 2, 2020 during the January 2019-June 2020 period evaluated. This is a violation of FGCOAT SC I.6. A violation notice will be issued.

EU-LINE6 met the 2,000 lb/month limit during the January 2019-June 2020 period evaluated.

The temperature limit for each IR oven during the use of air dried coatings is 194°F. The IR ovens never exceed 190°F. A&K monitors part temperature as well to ensure quality. One type of part is heated to

less than 190°F and another type is less than 160°F. A&K stated that there have been no temperature exceedances for the time period evaluated.

FG-FACILITY

I requested assistance determining where in the spreadsheets did it list the VOC content with water as applied in pounds per gallon and the total gallons with water of VOC containing material in the spreadsheet, FG-FACILITY Material Limit. Information provided by the company in response to my request indicated that this information was not being maintained at the time of the inspection, however it was produced quickly by the consultant.

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Reported Emissions	Compliance Y/N
Each Individual HAP	Less than 9.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	2.60 tons Highest reported HAP MIBK	Y
Aggregate HAPs	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	3.11 tons	Y
VOC	Less than 90.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	41.25 tons	Y
VOC	30.0 tpy	12-month rolling time period as determined at the end of each calendar month	All plastic parts coating lines exempted per R 336.1632(15)(i) in FGFACILITY	EU-LINE3A, EU-LINE3B, EU-LINE6 Combined= 5.05 tons	Y

FGFACILITY also contains material limits-

Material	Maximum VOC Content, With Water As Applied, in pounds per gallon	Annual Usage Limit	Time Period / Operating Scenario	Equipment	Compliance Y/N
Any VOC Containing Material	6.5	27,661 gallons (with water) per year	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	N

I sorted the column in the spreadsheet specified by the company consultant in an email that contained the maximum VOC content with water as applied values and found that there are 8 coatings that are above the 6.5 lb/gallon VOC content limit.

The recordkeeping maintained seems thorough, although I sent an email with questions, and to request formulation data for the following coatings to ensure accuracy of the VOC content:

Redspot LE9425B- EDS
PPG IMTB 301258

US Paint USGDX-10275
SWA G55BT65
SWA P1C21
SWA GB30BM30127
SWA GB30BM30129
Red Spot 318LE765
Red Spot 318LE1026
United AWHP-9307
SWI V66XXV13838
PPG CAT 110

Following a review of the data, I found several issues as previously indicated. In 2018, A & K Finishing, Inc. received approval to utilize formulation data to determine the VOC content of coatings. The majority of information received consisted of SDS's, not formulation data. Additionally, the dates on them were old which is also not acceptable. HAP content of materials were also not able to be determined using SDS's. A violation notice will be issued for not utilizing formulation data to determine VOC and HAP content of coatings. Reference Test Method 24 will be required for determining VOC content of a certain amount of the coatings on an annual basis and Reference Test Method 311 will be required for determining HAP content for a certain amount of the coatings on an annual basis. A plan for sampling and testing will be requested.

The housekeeping practices and VOC minimization techniques in each booth at the facility were observed and found to be excellent. The facility was clean and well kept.

SUMMARY

A & K Finishing, Inc. was in non-compliance at the time of the inspection. A violation notice will be issued. Records obtained during the inspection will be recorded to CD and placed in the file.

NAME April Lazzaro

DATE 08/20/20

SUPERVISOR 