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

B645566523

FACILITY: CURTIS METAL FINISHING CO		**SRN / ID:** B6455
LOCATION: 6645 SIMS DRIVE, STERLING HTS		**DISTRICT:** Warren
CITY: STERLING HTS		**COUNTY:** MACOMB
CONTACT: Matt Ulewicz , General Manager		**ACTIVITY DATE:** 01/24/2023
STAFF: Adam Bognar	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On Tuesday, January 24, 2023, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) employee Adam Bognar conducted a scheduled inspection of Curtis Metal Finishing (the "Facility" or "CMF") located at 6645 Sims Drive, Sterling Heights, MI 48313. The purpose of this inspection was to determine the facility's compliance status with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes, and Energy -Air Quality Division (EGLE-AQD) rules; and Permit to Install No. 383-00J.

I arrived at the facility at around 1 pm. I met with Matt Ulewicz, General Manager, and Stephanie Jarrett, Consultant. I identified myself, provided credentials, and stated the purpose of the inspection. Prior to inspecting the manufacturing facility, the three of us sat down in a conference room and held a pre-inspection meeting. During this meeting we discussed facility operations and reviewed circular charts of the thermal oxidizer temperature. After the pre-inspection meeting, Matt and Stephanie accompanied me for an inspection of the manufacturing facility.

Curtis Metal Finishing performs coating operations on metal fasteners (nuts, bolts, screws) and other small metal parts. These parts are primarily for tier 1 automotive suppliers, making CMF a tier 2 automotive supplier. CMF also supplies industries such as military, aerospace, agricultural, and energy. There are approximately 159 total employees that operate the plant 24 hours a day, 5 days per week. CMF also operates on weekends depending on demand.

CMF operates 12 dip-spin coating lines, 1 e-coat (electrodeposition) coating line, and three phosphate coating lines. CMF is a synthetic minor source for HAP and VOC. HAP emissions are limited to 9 tons per year for individual HAPs and 22.4 tons per year for aggregate HAPs.

Generally, when parts arrive, they are first sent through one of the three phosphate lines (lines 11, 12, and 14). Each of these lines is made up of a series of tanks including rinse tanks, sulfuric acid pickling tanks, zinc phosphate tanks, an oil tank, a sealer tank, and a dry off oven. Parts are dipped into the zinc-phosphate solution and then rinsed in consecutive distilled water and city water tanks. Based on my observations during this inspection and record review, these three phosphate lines are exempt from Rule 201 requirements pursuant to Rule 290. I verified that CMF maintains records that demonstrate the Rule 290 exempt status.

After the phosphate lines, the parts are generally sent to either the e-coat line or one of the dip-spin lines.

The facility operates 12 dip-spin coating lines. All lines operate in a similar manner. In dip-spin coating, parts are coated by automatically loading them into a wire mesh basket and dipping the basket into a vat filled with coating. While still in the vat, the basket is lifted out of the liquid and spun on its vertical axis (sometimes horizontal). This spinning action causes excess coating on parts to flow off the part and back into the coating vat. After the excess coating is removed the parts are dropped to a conveyor and sent to a flash-off zone and then to a curing oven.

Emissions from the dip spin lines are controlled by two regenerative thermal oxidizers. RTO No. 1 controls line 21, 22, 23, 24, 25, 26, and 28. RTO No. 2 controls Line 27, Line 29, and Line 20. Line 18 and Line 19 are currently uncontrolled. Previously, Line 18 and Line 19 were controlled by a third thermal oxidizer. The oxidizer that controlled these two dip-spin lines experienced a catastrophic explosion in 2021. I observed that the oxidizer was still in place, but there is a large hole in the side. Matt wasn't exactly sure why the explosion occurred. Matt stated that they plan to install a new oxidizer eventually, but in the meantime the facility only runs water based coatings on Line 18 and Line 19. Dip spin line 20 is not controlled by an RTO and runs only EGLE AQD Rule 621 compliant coatings.

The facility operates one E-coat line, Line 42. E-coat coatings are applied by immersing the parts in a tank containing a coating solution. The e-coat line is anodic. A rectifier current is applied to the e -coat tank causing negatively charged coating to adhere to the positively charged metallic workpiece. After electrodeposition, the parts are rinsed in five-stage, countercurrent, permeate rinse tanks.

The rinse water from the electrodeposition process is treated in the on-site wastewater treatment facility. The wastewater treatment facility operates a clarifier to separate and removed the solids. A polymer is added to help precipitate the solids. The sludge is processed through a filter press.

Treated water is discharged to the Detroit Water and Sewerage System. Based on my observations during this inspection, the water treatment system is exempt from Rule 201 requirements pursuant to Rule 285 (2)(m).

Excess coating on the dip spin baskets is cleaned by blasting them on a table blaster using a metallic grit. The baskets go through an electric batch oven before blasting. According to Matt, the oven only serves to loosen coating, not to burn off excess coatings. The oven is operated at 450 **°F.** During my on-site inspection, I noticed that there was a stack coming out of the top of the oven which exhausts to the ambient air.

After working through the Rule 290 calculations with the facility, Curtis Metal Finishing decided to route the exhaust for this oven to RTO1. This was a decision made by the facility after my on-site inspection. AQD did not direct Curtis Metal Finishing to route this oven to RTO1. I have not verified that this oven is connected to RTO1.

During my inspection I informed Matt that I thought the oven could be considered a "burn-off oven" by AQD. The facility does not believe that this oven meets the definition of a burn off oven because of the low relative temperature it is operated at. The AQD general permit for burn off ovens states that "A natural gas-fired burnoff oven is a highly specialized oven that operates at 600

to **800 °F**." The facility also stated that they would not need the sandblaster if the oven was burning off excess coatings.

The facility submitted a Rule 290 demonstration for this oven. Curtis Metal Finishing performed a mass balance study where they put 14 total baskets through this oven, weighing each basket before and after baking. Two different types of baskets were used. They determined an average weight reduction from baking of 1.5 lbs/basket and a maximum weight reduction of 4.8 lbs/basket. Curtis Metal Finishing stated that the coatings used in this study were selected based on high relative use.

Using the maximum weight reduction of 4.8 lbs VOC/basket, the Rule 290 (2)(a)(i) limit of 500 lbs/month of controlled non-carcinogenic VOC's, and the destruction efficiency of RTO 1 (98.8%), the facility determined that the maximum number of baskets that can be run though the oven is 8,681/month when based on VOC emission alone; however, the facility is further limited by the amount of toxic air contaminants emitted.

The facility provided me with a list of all coatings used at the facility and the toxic air contaminants they contain. Based on my review of this list, the coating with the highest amount of material subject to the 10 lb/month limit in Rule 290 (2)(a)(ii)(B) is DORRL B70 at 4.1%. The density of DORRL B70 is 9 lb/gallon and the VOC content is 4.5 lb/gallon. If this worst-case coating was applied to a basket, only the 50% volatile portion can be assumed to evaporate in the oven. This means that the total amount of material under the screening level in Rule 290 (2)(a)(ii)(B) is 8.2% in the worst-case coating.

The calculations show that the carcinogenic toxic air contaminants will be below the Rule 290 (2)(a)(ii)(B) limit of 10 lb/month if less than 2,117 baskets are run through the oven per month. This number can be found by dividing the 10lb/month limit by the total amount of Rule 290(2)(a)(ii)(B) subject compounds emitted per basket:

(10lb/month) / [(4.8lb/basket)*(0.082)*(0.012 control efficiency)] = 2,117 baskets.

The article titled "*Temperature Limits for E-Coated Parts | Products Finishing (pfonline.com)"* states that "Typical electrocoats can support continuous high temperature exposures in the range of 430–450°F without any significant film degradation...." "As the temperature increases to 475–525°F, the organic resins and components start smoking heavily and the remaining film loses chemical resistance. As temperature increases above 550°F, the film starts burning slowly, loses thickness rapidly, and loses all physical and corrosion properties."

Although this article refers to e-coat rather than dipspin coatings, it further demonstrates that this oven should not cause any burning of coatings. For this reason, I did not evaluate particulate matter (PM) emissions from this oven.

Based on the results of this study, my inspection, and my review of the data, this bake oven is exempt from Rule 201 requirements pursuant to Rule 290. If AQD receives odor, opacity, or fallout complaints regarding this bake oven or from Curtis Metal Finishing in general, then AQD may require this oven to be permitted.

During this inspection I reviewed records from January 1, 2022 through December 31, 2022. This time period was selected because the last AQD inspection was in January 2022. The digital records I reviewed can be found in the AQD shared drive at the address below:

S:\Air Quality Division\STAFF\Bognar, Adam\Inspection Documents\Curtis Metal Finishing FY2023

PTI No. 383-00J

EUDIPSPIN
EUDIPSPIN consists of seven miscellaneous metal parts dip-spin coating lines (Lines 21-26, and 28) and seven associated cure ovens controlled by a common regenerative thermal oxidizer (RTO1).

Section I – SC 1: VOC Emissions are limited to 51.5 tons per year based on 13-four week rolling time periods. CMF is in compliance with this emission limit based on the records I reviewed. VOC emissions were reported highest during the eleventh 13-four week rolling time period in 2022 at 12.72 tons.

An overall control efficiency of 93.2% was used for these calculations (94.4% capture and 98.8% destruction. The stack test conducted in March 2002 determined that the overall control efficiency was 94.9% (95.7% capture and 98.8% destruction). I reached out to Curtis Metal Finishing to determine why they are using 93.2% as their overall control efficiency instead of what was determined during the stack test; however, AQD will accept this approach for this inspection since it conservatively overestimates emissions. The temperature of the RTO was not noted in the March 2002 stack test report.

Section I – SC 2: Limits the emission of Dibasic ester (CAS No. 627-93-0) to 3.7 tons per year based on 13 four-week rolling time periods. CMF is in compliance with this emission limit based on the records I reviewed. Dibasic ester emissions were reported highest during the first 13-four week rolling time period in 2022 at 0.24 tons.

Section III – SC 1: States that the facility shall dispose of waste coating, reducers, additives, and solvents in a manner that minimizes the introduction of air contaminants to the outer air. I observed that coatings were stored in sealed containers. Matt stated that this waste is disposed of in closed 55-gallon drums and taken away by Republic Services (formerly US Ecology). CMF does not take into account any reclaimed or disposed material in their emission calculations.

Section III – SC 2: Requires CMF to implement and maintain a malfunction abatement plan (MAP) for EUDIPSPIN. CMF maintains a MAP for these emission units. This MAP was submitted to the AQD on February 13, 2013 and found to be acceptable. I reviewed the MAP as part of this inspection and did not notice anything that needs to be changed.

Section IV – SC 1: States that CMF shall not operate EUDIPSPIN unless the regenerative thermal oxidizer (RTO) is installed and operating properly. Proper operation includes maintaining a minimum temperature of 1400°F and a minimum VOC control efficiency of 83.6%. The RTO was operating during my inspection. According to the digital readout and the continuous monitor, RTO temperature was 1529°F.

RTO combustion chamber temperature records are maintained on circular charts and on hand-written logs. I reviewed the circular charts from July 2022 through December 2022. The RTO

records indicate that RTO1 is operated above 1400°F. The temperature is maintained around 1550° F based on the circle charts I reviewed.

On August 5, 2022, there was a brief dip below 1400°F. I asked Matt why the RTO temperature dipped on that day. Matt was able to show me that CMF maintained production records for that day showing that there was a power outage during the time the RTO was down. According to Matt and another production staff, the RTO has an interlock system that will shut down the dip spin conveyor belts if the RTO temperature falls below 1400°F. The curing ovens will still operate in this scenario.

Section V – SC 1: Requires the permittee to determine VOC content and density of any coating as applied and as received using federal Reference Test Method 24. With prior approval, this condition allows CMF to use manufacturers VOC data in lieu of doing a Method 24 analysis on every coating. AQD granted CMF this approval under the condition that the facility perform one Method 24 analysis on a currently used coating each year, utilizing a different coating each year. An approval letter to use manufacturers VOC data was sent to CMF on February 25, 2020.

CMF provided me with a Method 24 analysis performed the day after this inspection on 1/25/2023. The analysis was performed on coating B18 and B06JA which showed VOC contents of 5.14 lb/gallon and 3.6 lb/gallon, respectively. I verified that the manufacturer's stated VOC content is higher than the Method 24 value in both cases.

CMF did not perform a Method 24 analysis once per year as stated in the February 25, 2020 approval letter. The CMF staff that I informed of this requirement in 2020 resigned from his position soon after our discussions. I spoke with the AQD district supervisor Joyce Zhu about this issue. At our discretion, AQD will not issue a violation notice for this non-compliance. If CMF fails to perform this single Method 24 analysis each year going forward, a violation notice will be issued.

Section VI – SC 1,2,3,4: Specifies monitoring and recordkeeping requirements for EUDIPSPIN. CMF must keep records of the RTO combustion chamber temperature, the chemical composition of all coatings/solvents used, the hours of operation of each coating line, and the volume of each coating used. This information shall be used to calculate the VOC and Dibasic ester emissions on a four-week and a 13-four-week rolling time period.

These records are maintained. CMF maintains multiple electronic databases that store and keep track of this information. Stephanie sent me digital versions of these spreadsheets.

Section VIII – SC 1: Specifies stack parameters. The stacks at CMF appeared to be discharged unobstructed vertically upwards. I did not verify stack parameters during this inspection.

EUECOAT

EUECOAT is an electrodeposition coating line (Line No. 42) used to coat miscellaneous metal parts. This line consists of an electrodeposition tank, a five-stage water rinsing process, and a cure oven.

Section I – SC 1,2: VOC emissions from EUECOAT are limited to 800lb/four-weeks and 4.7 tons per year. CMF is in compliance with this emission limit based on the records I reviewed. VOC emissions

were reported highest at 0.57 tons during the thirteenth 13-four week rolling time period in 2022. The highest reported 4-week period VOC emissions was 180 lbs during the 7th 4-week period in 2022.

Section VI – SC 1,2,3: Specifies monitoring and recordkeeping requirements for EUECOAT. CMF must maintain records of the chemical composition of each coating/solvent used and the amount of each coating/solvent used. These records must be used to calculate VOC emissions on both a four-week and 13-four-week rolling time period.

These records are maintained. CMF maintains multiple electronic databases that store and keep track of this information.

Section VIII – SC 1: Specifies stack parameters. The stacks at CMF appeared to be discharged unobstructed vertically upwards. I did not verify stack parameters during this inspection.

FGDIPSPINS

FGDIPSPINS consists of two miscellaneous metal parts dip-spin coating lines (Line 27 & Line 29) controlled by a shared regenerative thermal oxidizer (RTO2).

Section I – SC 1: VOC emissions from FGDIPSPINS are limited to 18 tons per year. CMF is in compliance with this emission limit based on the records I reviewed. VOC emissions were reported highest during the first 13-four week rolling period in 2022 at 13.7 tons.

VOC caputure and destruction efficiency of RTO2 was tested in May 2014. This test showed a Destruction efficiency of 98.1% and a capture efficiency of 99.5%. One of the three test runs was omitted from the capture efficiency average per USEPA document GD-35 because it showed 118% capture efficiency. Anything above 105% capture efficiency is omitted from the results per this EPA guidance document.

In the facility's calculations, Curtis Metal Finishing used a destruction efficiency of 98.1% and a capture efficiency of 84.2%. This results in a overall control efficiency of 82.6%. I am not sure where they got the 84.2% capture efficiency. This number may be used because the capture efficiency determined during the May 2014 stack test was not valid (above 100%). Curtis Metal Finishing's VOC calculation approach conservativly overestimates emissions and will be accepted for purposes of evaluating compliance during this inspection. I reached out to Curtis Metal Finishing and asked why 84.2% is used as capture efficiency.

Section III – SC 1: States that the facility shall dispose waste coating, reducers, additives, and solvents in a manner that minimizes the introduction of air contaminants to the outer air. I observed that coatings were stored in sealed containers. Matt stated that this waste is disposed of in closed 55-gallon drums and taken away by Republic Services. CMF does not consider any reclaimed or disposed material in their emission calculations.

Section III – SC 2: Requires CMF to handle all VOC/HAP containing materials in a manner to reduce fugitive emissions. I observed that VOC/HAP containing materials were stored in an organized manner in containers equipped with tight fitting lids.

Section IV – SC 1: States that CMF shall not operate FGDIPSPINS unless the regenerative thermal oxidizer (RTO) is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum temperature of 1400°F and a minimum VOC control efficiency of 81%. The RTO was operating during my inspection. According to the digital readout and the continuous monitor, RTO temperature was 1615°F during this inspection. The minimum control efficiency is met, but is only 1.6% above the minimum allowable control efficiency (82.6% overall control).

VOC control efficiency of this RTO was tested in May 2014. The destruction efficiency was 98% and the capture efficiency was greater than 100%. It was not possible to calculate a valid capture efficiency value from the test data (data showed over 100%, which is impossible). The stack test report states that the RTO operates at a temperature of 1500°F. Based on the results of this test, the VOC control efficiency is greater than 81%.

I reviewed the RTO2 temperature circular charts from July 2022 through December 2022. Based on the circular charts I reviewed, RTO2 is consistently operated at around 1600°F . On August 5, 2022, there was a brief dip below 1400°F. I asked Matt why the RTO temperature dipped on that day. Matt was able to show me that CMF maintained production records for that day showing that there was a power outage during the time the RTO was down. According to Matt and another production staff, the RTO has an interlock system that will shut down the dip spin conveyor belts if the RTO temperature falls below 1400°F. The curing ovens will still operate in this scenario.

Section IV – SC 2: Requires CMF to install, calibrate, maintain, and operate a temperature monitoring device in the combustion chamber of the RTO and record the temperature on a continuous basis. This RTO is equipped with a combustion chamber thermocouple that reports to a central database. This thermocouple is calibrated by the manufacturer. Matt stated that CMF does not do any calibration on their own. Instead, the thermocouples are replaced every year during the annual PM inspection.

Section V – SC 1: Requires the permittee to determine VOC content and density of any coating as applied and as received using federal Reference Test Method 24. With prior approval, this condition allows CMF to use manufacturers VOC data in lieu of doing a Method 24 analysis on every coating. AQD granted CMF this approval under the condition that the facility perform one Method 24 analysis on a currently used coating each year, utilizing a different coating each year. An approval letter to use manufacturers VOC data was sent to CMF after this inspection on February 25, 2020.

CMF provided me with a Method 24 analysis performed the day after this inspection on 1/25/2023. The analysis was performed on coating B18 and B06JA which showed VOC contents of 5.14 lb/gallon and 3.6 lb/gallon, respectively. I verified that the manufacturer’s stated VOC content is higher than the Method 24 value in both cases.

CMF did not perform a Method 24 analysis once per year as stated in the February 25, 2020 approval letter. The CMF staff that I informed of this requirement in 2020 resigned from his position soon after our discussions. I spoke with the AQD district supervisor Joyce Zhu about this

issue. At our discretion, AQD will not issue a violation notice for this non-compliance. If CMF fails to perform this single Method 24 analysis each year going forward, a violation notice will be issued.

Section VI – SC 1,2,3,4,5: Specifies monitoring and recordkeeping requirements for FGDIPSPINS. CMF must maintain records of the chemical composition of each coating/solvent used, the amount of each coating/solvent used, and records of the RTO combustion chamber temperature on a continuous basis. These records must be used to calculate VOC emissions on both a monthly and 12-month rolling time period.

These records are maintained. CMF maintains multiple electronic databases that store and keep track of this information. RTO combustion chamber temperature records are kept on a continuous basis on a chart recorder. Additionally, an operator manually records the RTO temperature on the digital readout once per shift.

Section VIII – SC 1: Specifies stack parameters. The stacks at CMF appeared to be discharged unobstructed vertically upwards. I did not verify stack parameters during this inspection.

FGDIPSPINS2

FGDIPSPINS2 consists of three dip-spin lines (Line 18, Line 19, and Line 20) for coating miscellaneous metal parts.

Section I – SC 1,2: Establishes emission limits for FGDIPSPINS2. VOC emissions are limited to 10 tons/year/line and 2000 lbs/month/line. CMF is in compliance with these emission limits based on the records I reviewed. Emission limits in this flexible group is based on 12-month rolling periods rather than 13-four week rolling periods.

For EUDIPSPIN18, VOC emissions were reported highest during the 12-month period ending in August 2022 at 0.72 tons.

For EUDIPSPIN19, VOC emissions were reported highest during the 12-month period ending in September 2022 at 4.79 tons. The highest monthly emissions occurred in February 2022 at 1,320 lbs.

For EUDIPSPIN20, VOC emissions were reported highest during the 12-month period ending in December 2022 at 8.5 tons. The highest monthly emissions occurred in April 2022 at 1,759 lbs.

Section III – SC 1: States that the facility shall dispose waste coating, reducers, additives, and solvents in a manner that minimizes the introduction of air contaminants to the outer air. I observed that coatings were stored in sealed containers. Matt stated that this waste is disposed of in closed 55-gallon drums and taken away by Republic Services. CMF does not take into account any reclaimed or disposed material in their emission calculations.

Section III – SC 2: Requires CMF to dispose of spent filters in a manner which minimizes the introduction of air contaminants to the outer air. There are no dry filters associated with dip spin operations. This permit condition likely should not have been included in this flexible group.

Section III – SC 3: Requires CMF to handle all VOC/HAP containing materials in a manner to reduce fugitive emissions. I observed that VOC/HAP containing materials were stored in an organized manner in containers equipped with tight fitting lids.

Section V – SC 1: Requires the permittee to determine VOC content and density of any coating as applied and as received using federal Reference Test Method 24. With prior approval, this condition allows CMF to use manufacturers VOC data in lieu of doing a Method 24 analysis on every coating. AQD granted CMF this approval under the condition that the facility perform one Method 24 analysis on a currently used coating each year, utilizing a different coating each year. An approval letter to use manufacturers VOC data was sent to CMF on February 25, 2020.

CMF provided me with a Method 24 analysis performed the day after this inspection on 1/25/2023. The analysis was performed on coating B18 and B06JA which showed VOC contents of 5.14 lb/gallon and 3.6 lb/gallon, respectively. I verified that the manufacturer's stated VOC content is higher than the Method 24 value in both cases.

CMF did not perform a Method 24 analysis once per year as stated in the February 25, 2020 approval letter. The CMF staff that I informed of this requirement in 2020 resigned from his position soon after our discussions. I spoke with the AQD district supervisor Joyce Zhu about this issue. At our discretion, AQD will not issue a violation notice for this non-compliance. If CMF fails to perform this single Method 24 analysis each year going forward, a violation notice will be issued.

Section VI – SC 1,2,3: Specifies monitoring and recordkeeping requirements for FGDIPSPINS2. CMF must maintain records of the chemical composition of each coating/solvent used and the amount of each coating/solvent used. These records must be used to calculate VOC emissions on both a monthly and 12-month rolling time period.

These records are maintained. CMF maintains multiple electronic databases that store and keep track of this information.

Section VII – Requires CMF to notify the AQD within 30 days after completing any installation, construction, reconstruction, relocation, or modification authorized by this permit to install. CMF submitted this notice to the AQD stating that the start of trial operation was April 16, 2018.

Section VIII – SC 1: Specifies stack parameters. The stacks at CMF appeared to be discharged unobstructed vertically upwards. I did not verify stack parameters during this inspection.

FGRULE621

FGRULE621 consists of all metal parts coating lines source-wide, including metal parts coating lines covered by other permits, which are exempted by Rule 336.1621(10)(b). EUDIPSPIN 18, EUDIPSPIN19, and EUDIPSPIN20 are included in this permit. Emission limits in this flexible group is based on 12-month rolling periods rather than 13-four week rolling periods.

Section I – SC 1: Establishes a 30 tons per year VOC emission rate for FGRULE621. All coating lines that operate as exempt from Rule 621 must have combined emissions less than 30 tons per year to remain exempt. CMF is in compliance with these emission limits based on the records I reviewed.

The highest annual emission was for the 12-month rolling period ending in October 2022 at 13.43 tons.

Section III – SC 1: States that the facility shall dispose waste coating, reducers, additives, and solvents in a manner that minimizes the introduction of air contaminants to the outer air. I observed that coatings were stored in sealed containers. This waste is disposed of in closed 55-gallon drums and taken away by Republic Services. CMF does not consider any reclaimed or disposed material in their emission calculations.

Section III – SC 2: Requires CMF to handle all VOC/HAP containing materials in a manner to reduce fugitive emissions. I observed that VOC/HAP containing materials were stored in an organized manner in containers equipped with tight fitting lids.

Section V – SC 1: Requires the permittee to determine VOC content and density of any coating as applied and as received using federal Reference Test Method 24. With prior approval, this condition allows CMF to use manufacturers VOC data in lieu of doing a Method 24 analysis on every coating. AQD granted CMF this approval under the condition that the facility perform one Method 24 analysis on a currently used coating each year, utilizing a different coating each year. An approval letter to use manufacturers VOC data was sent to CMF on February 25, 2020.

CMF provided me with a Method 24 analysis performed the day after this inspection on 1/25/2023. The analysis was performed on coating B18 and B06JA which showed VOC contents of 5.14 lb/gallon and 3.6 lb/gallon, respectively. I verified that the manufacturer's stated VOC content is higher than the Method 24 value in both cases.

CMF did not perform a Method 24 analysis once per year as stated in the February 25, 2020 approval letter. The CMF staff that I informed of this requirement in 2020 resigned from his position soon after our discussions. I spoke with the AQD district supervisor Joyce Zhu about this issue. At our discretion, AQD will not issue a violation notice for this non-compliance. If CMF fails to perform this single Method 24 analysis each year going forward, a violation notice will be issued.

Section VI – SC 1,2,3: Specifies monitoring and recordkeeping requirements for FGRULE621. CMF must maintain records of the chemical composition of each coating/solvent used and the amount of each coating/solvent used. These records must be used to calculate VOC emissions on both a monthly and 12-month rolling time period. These records are maintained. CMF maintains multiple electronic databases that store and keep track of this information.

Section VIII – SC 1: Specifies stack parameters. The stacks at CMF appeared to be discharged unobstructed vertically upwards. I did not verify stack parameters during this inspection.

FGFACILITY

Section I – SC 1,2,3: Establishes facility-wide synthetic minor source emission limits. VOC emissions are limited to 89.9 tons per year. HAP emissions are limited to 9 tons per year for each individual HAP and 22.4 tons per year for total HAPs. CMF is in compliance with these emission limits based on the records I reviewed.

VOC emissions were reported highest during the first 13-four week rolling period in 2022 at 35.79 tons.

Aggregate HAP emissions were reported highest during the first 13-four week rolling period in 2022 at 2.11 tons.

Section II – SC 1,2,3,4,5,6,7: Specifies material limits for FGFACILITY. Usage of a particular coating is limited based on the coating group that it belongs to. There are seven coating groups in this section that are grouped by VOC content. Groups 1-5 apply to lines 18, 19, & 20. Groups 6 & 7 apply to EU-Ecoat.

Group 1 coatings with 5 to 9 lb/gallon VOC are limited to 1,096 gallons/year. The highest reported usage was during the 12-month period ending in December 2022 at 0.7 gallons.

Group 2 coatings with 3 to 5 lb/gallon VOC are limited to 1,324 gallons per year. The highest reported usage was during the 12-month period ending in July 2022 at 97.7 gallons. Group 2 coatings also include the usage of Group 1 coatings.

Group 3 coatings with 1 to 3 lb/gallon VOC are limited to 17,150 gallons per year. The highest reported usage was during the 12-month period ending in December 2022 at 10,769 gallons. Group 3 coatings also include the usage of Group 1 & 2 coatings.

Group 4 coatings with 0.1 to 1 lb/gallon VOC are limited to 18,320 gallons per year. The highest reported usage was during the 12-month period ending in December 2022 at 11,979 gallons. Group 4 coatings also include the usage of Group 1, 2, & 3 coatings.

Group 5 coatings with less than 0.1 lb/gallon VOC are limited to 21,784 gallons per year. The highest reported usage was during the 12-month period ending in October 2022 at 13,883 gallons. Group 5 coatings also include the usage of Group 1, 2, 3, & 4 coatings.

Ecoat Group 1 coatings with less than 2 lb/gallon VOC are limited to 82,782 gallons per year. The highest reported usage was during the 12-month period ending in November 2022 at 13,548 gallons.

Ecoat Group 2 coatings with 2 to 8 lb/gallon VOC are limited to 14,911 gallons per year. The highest reported usage was during the 12-month period ending in December 2022 at 3,352 gallons.

Section V – SC 1: Requires CMF to determine the HAP content of any material as applied and as received using manufacturer's formulation data. CMF uses manufacturers formulation data when calculating the HAP emissions from coatings.

Section VI – SC 1,2,3: Specifies monitoring and recordkeeping requirements for FGFACILITY. CMF must maintain records of the amount of VOC and/or HAP containing material used or reclaimed at the facility. This information must be used to calculate the facility-wide VOC and HAP emissions on a monthly and 12-month rolling time period. CMF must also maintain data showing that they are in compliance with the material limits in Section II of this flexible group.

I verified that these records are maintained. CMF maintains multiple electronic databases that store and keep track of this information.

Compliance Determination

CMF failed to perform the required once per year Method 24 analysis on a coating of their choosing. At our discretion, AQD will not issue a violation notice for this non-compliance. If CMF fails to perform this single Method 24 analysis each year going forward, a violation notice will be issued.

Based on my findings during my inspection and record review, Curtis Metal Finishing is operating in compliance with all other requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) Administrative Rules; and Permit to Install No. 383-00J.

NAME Adam Bognar DATE 3/21/2023 SUPERVISOR K. Kelly