

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

B300062526

FACILITY: Beacon Park Finishing LLC		SRN / ID: B3000
LOCATION: 15765 STURGEON, ROSEVILLE		DISTRICT: Warren
CITY: ROSEVILLE		COUNTY: MACOMB
CONTACT: Popat Patel , Environmental Manager/Chemist		ACTIVITY DATE: 03/08/2022
STAFF: Adam Bogнар	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On Tuesday, March 8, 2022, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, I, Adam Bogнар, conducted an unannounced targeted inspection of Beacon Park Finishing LLC (the "Facility") located at 15765 Sturgeon, Roseville, MI. 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; 40 CFR Part 63, Subpart N, National emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks (Chrome NESHAP); and Permit to Install No. 186-91B.

I arrived at Beacon Park Finishing at 10:15 am. I knocked and pinged the doorbell at what appeared to be the door to the lobby/office area, nobody answered. I tried calling Mr. Garrett Kanehann, Owner, and several other contacts I found in our records. I could not reach anyone on the phone. Nobody answered the main phone line for the facility and the voice message box was full.

I walked around the facility and could see through an open door that processes were operating. I kept walking around the facility until I found a maintenance area that felt safe to enter. I entered the facility and identified myself to an employee inside as an Air Quality Division inspector from the State of Michigan. This employee called someone that could show me around the facility. I met with Mr. Popat Patel, Environmental Manager/Chemist, and with Ramone, Plant Manager.

Beacon Park Finishing performs finishing operations on metal parts. Nearly all parts are automotive related. Processes at this facility include decorative chrome plating, nickel plating, zinc plating, nitric acid stripping, and various grinding/polishing operations. Metal plating is achieved by dipping racks of metal parts into a series of chemical & electrochemical tanks which modify the surface of the metal parts. Part racks are conveyed in and out of each plating/wash tank via an overhead hoist system. According to Ramone, there are approximately 25 employees that operate these processes during four 10-hour shifts per week. Generally, the business will operate Monday through Thursday and use Friday for maintenance activities. In 2015, an AQD inspector noted that there were 100 employees operating this plant 24 hours a day for 5 days a week. It appears that business has slowed significantly in the last several years. Mr. Kanehann purchased this facility on 11/29/2017.

The zinc plating line and the chrome/nickel plating line are currently the only operational plating lines. The chrome/nickel line consists of a soak tank, alkaline cleaning tank, electrolytic cleaning tank, acid dip tank (30-40% hydrochloric acid), nickel strike tank, two nickel tanks (bright and semi-bright), two chrome tanks, and several aqueous wash tanks. Only one chrome tank was filled

during this inspection. The chrome tank (decorative) and the nickel strike tank are vented to a composite mesh pad (CMP) scrubber (Control D).

The zinc electroplating line consists of a soak tank, alkaline cleaning tank, acid tank (30-40% HCl), 2 zinc electroplating tanks, and several aqueous wash tanks. The HCl tank is permitted to be controlled by a wet scrubber (Control B). It appears that the two zinc electroplating tanks were also controlled by Control B (prior to its removal).

Decorative chrome "Line 1" and associated "Control A" wet scrubber are no longer in operation. According to Mr. Patel, this chrome line was last operated on June 13, 2013 and was drained on January 21, 2014. The first MAERS report submitted by the facility was for the year 2015. According to that report and all MAERS reports since then, this line has not been operated. I verified that each tank in this plating line was drained. I didn't see any evidence that this line was recently used. The area around this line is now used for storage.

The nitric acid strip tank and associated wet scrubber (Control C) were last operated in mid-2021. Mr. Patel stated that the tank was only used for a few hours in all of 2021. I observed that the nitric acid strip tank was drained, and the scrubber was turned off. I requested scrubber operating data for the few hours the tank was operated in 2021.

There have been several employee changes since the last AQD inspection in October 2020. Mr. Patel had retired shortly after that inspection. There appears to have been several other changes in staff who were responsible for aspects of environmental compliance. During that October 2020 inspection, AQD staff Joe Forth noted that Beacon Park Finishing was operating their nickel-chrome plating line while the CMP scrubber (Control D) was offline. A violation notice was issued for this non-compliance on January 7, 2021.

The facility stated that they would maintain pressure drop data in their response to the January 7, 2021 violation notice.

During the inspection on March 8, 2022, Mr. Patel stated that the chrome/nickel line is sometimes operated without the chrome scrubber functioning because scrubber water lines freeze on cold winter days.

Due to recent roof/scrubber damage during the summer of 2021, the Zinc Plating line was operating without a scrubber installed during this inspection. Google Earth Pro aerial photos indicate the scrubber was not on the roof in March 2021. Google Earth Pro aerial photos shows that the scrubber was there in March 2020. These compliance issues are described in more detail below in the conditions of PTI No. 186-91B.

Mr. Popat Patel has been responsible for environmental compliance and chemistry at this facility for around 20 years. He retired/resigned in January 2021 based on my conversations with facility staff (his last paycheck was on 2/5/2021). Mr. Patel was re-hired on 10/25/2021 because of his knowledge of operating this facility. Another employee, Ms. Pushpal Jadhav, was meant to replace the duties of Mr. Patel. According to Mr. Kanehann, Ms. Jadhav was not a good fit at the facility and was let go. Ms. Jadhav worked at the facility from 9/30/2019 until 6/12/2021.

The owner, Mr. Garrett Kanehann is likely the only consistent staff at this facility. I spoke with Mr. Kanehann on the phone after this inspection at about 1:30 pm on March 8, 2022. I informed him of my findings during the inspection. I informed him that he is operating the zinc plating line without a scrubber installed. Mr. Kanehann was not sure what a wet scrubber was. He asked if it was some kind of filter. I explained to Mr. Kanehann what a wet scrubber was and which processes in his plant utilize these pollution control devices.

It appears that Mr. Popat Patel is the only one who understands air quality regulatory requirements at this facility. His departure in early 2021 appears to have left Beacon Park Finishing with a significant lack of experience regarding air quality regulatory requirements. There is a nearly complete gap in recordkeeping during the period Mr. Patel was not working at this facility.

UPDATE: I visited this facility again on April 7, 2021 at around 12 pm. The purpose of this follow up inspection was to get photos showing how the HCl tanks are ventilated. These pictures can be found on the AQD shared drive at the following address:

S:\Air Quality Division\STAFF\Bognar, Adam\Inspection Documents\Beacon Park Finishing FY2022\4-7-2022 pictures

The pictures show that the zinc line 30-40% HCl tank is vented to the general in-plant environment. The ducting from the HCl tank to Control B is completely removed. The disconnected hood remains above the tank. The two zinc electroplating tanks appear to have been vented to Control B (or just out the roof). Now, the two zinc lines have hoods/ducting that travels up to the roof of the building but terminates about 1 foot before the roof. The zinc tanks are exhausted to the general in-plant environment.

The 30-40% HCl tank associated with the nickel-chrome line is ventilated to the general in-plant environment; however, this tank is located directly adjacent to the nickel strike tank, which is vented to Control D. It is likely that a significant amount of HCl is captured by the nickel strike tank hood. Control D is not designed to control HCl emissions. I noted that Control D was operating on April 7, 2021. The pressure gauges showed 4.2" of water across the scrubber.

During this inspection, I asked Popat to label all of the metal finishing tanks at the facility. Many of the labels are missing or unreadable. Popat stated that he would label the tanks but said that the labels tend to fall off/corrode quickly.

Permit to Install No. 186-91B

Special Condition 14: Specifies chromium emission limits from decorative chrome "Line 1". I verified that decorative chrome "Line 1" and associated "Control A" wet scrubber are no longer in operation. I verified that each tank was drained.

Special Condition 15: Limits the total chromium emission rate from the nickel-chrome plating line, exhausted to a composite mesh pad scrubber (Control D) to 0.05 micrograms per cubic meter,

corrected to 70 degrees F and 29.92 inches Hg. Compliance with this emission limit is demonstrated through proper operation of the wet scrubber, Control D.

Control D was a wet scrubber at the time of issuance of PTI No. 186-91B, but the scrubber was replaced by a composite mesh pad system (CMP) in 2000. AQD considered this replacement to be exempt from Rule 201 requirements pursuant to Rule 285(2)(d).

On January 7, 2021, a violation notice was issued to Beacon Park Finishing for failure to operate Control D while operating the nickel-chrome plating line.

This line was not operating during my inspection; however, it is still frequently operated based on discussions with staff and the records I reviewed. The most recent MAERS submittal shows that this line was operated each quarter in 2021. The scrubber was not operating and pressure gauges read 0 inches of water for each stage. Mr. Patel stated that the scrubber is currently operational; however, it has trouble operating during the winter months due to water lines freezing. I informed Mr. Patel that this scrubber needs to be operated at all times when this plating line is operating. I explained that Beacon Park Finishing needs to come up with a method to keep this scrubber operating during the winter months. This may include insulating pipes on the scrubber or enclosing the entire scrubber unit.

In Beacon Park Finishing's response to the January 7, 2021 violation notice, the facility stated that they would operate the scrubber when the chrome line is operating and monitor and record daily readings of pressure drop across the scrubber bed.

Beacon Park Finishing was not able to provide me with pressure drop records for the Control D CMP scrubber during this inspection. Neither Mr. Patel nor Ramone were sure who is responsible for recording/maintaining this data. After the inspection, Mr. Patel provided me with some of this data; however, daily pressure drop data is absent between 2/5/2021 and 10/25/2021. The data I reviewed after 10/25/2021 was initialed pp next to each reading, indicating that Popat Patel recorded those readings. The data that was provided shows that the scrubber is operated within the manufacturers recommended pressure drop range of 1.25" H₂O to 5.25" H₂O (generally operates around 4.5" H₂O).

The records provided do not include pressure drop readings for each day that Mr. Patel/Ramone/Garrett indicated are normal operating hours (Monday – Thursday/Friday). AQD is requesting that Beacon Park Finishing make a data entry on the pressure drop sheet for days that a coating line is not operated. Facility staff should write "Did not operate" or something similar on days that a particular coating line was not operated.

Without daily pressure drop data, the facility was not able to demonstrate that they have been operating the nickel-chrome CMP scrubber (Control D). The permit evaluation calculations for PTI No. 186-91B show that this chromium tank with a fume suppressant has an emission factor of 0.05 micrograms/m³ when considering a 99% control efficiency from Control D. Without Control D functioning properly, this emission factor is 5 micrograms/m³. The emissions from this chrome tank with a fume suppressant added but with no scrubber installed are expected to exceed the facility's permitted limit. AQD presumes the emission limit in SC 15 was exceeded during the

months the scrubber was not operated. A violation notice was sent to Beacon Park Finishing for violation of SC 15.

The Chrome NESHAP only requires that fume suppressants be used to control emissions from chromium operations; however, AQD engineering calculations indicated that the chrome lines could not meet Rule 230 (health-based screening levels) without a scrubber installed.

In order to comply with SC 15, Beacon Park Finishing must come up with a plan to keep the scrubber system operating during the winter months. Additionally, the facility must maintain daily pressure drop readings across the CMP system (Control D) in accordance with the operation and maintenance plan.

The mesh pad is washed down throughout the day based on manufacturer's recommendations. The wash down schedule is controlled by a programmable logic control system for the pre-control and stage one filter. The malfunction abatement plan states that the stage two filter is cleaned manually as needed (if pressure drop approaches 5" of water).

Comparing Beacon Park Finishing's throughput from the 2020 and 2021 Michigan Air Emissions Reporting System (MAERS) reports show that this chrome tank was operated for a similar amount of time in both years. Throughput was 1,696,500 amp-hours in 2021 versus 1,570,000 amp-hours in 2020. In both years, the company noted that the tank was operated in equal amounts during each quarter. In 2020, the company noted that the tanks were operated 10 hours per day, 5 days per week, and 161 days in the year. In 2021, the company noted that the tank was operated for 8 hours per day, 5 days per week, and 193 days in the year. Comparison of this data suggests that the chrome tank was operated throughout 2021 during the times where no pressure drop data for Control D was available.

In addition to the chrome tanks, the nickel strike tank is also vented to Control D. A 30-40% hydrochloric acid tank is directly adjacent to the nickel strike tank. It is likely that a significant amount of hydrochloric acid emissions are captured by the nickel strike tank hood. Mr. Patel stated that when originally installing this line the facility considered installing a hood on the HCl tank, but decided it was not needed because of the proximity of the HCl tank to the nickel strike tank hood. Composite mesh pad scrubbers are designed specifically to control chromium emissions (not HCl). The control efficiency for HCl through Control D is unknown.

Special Condition 16: Limits the hydrogen chloride (HCl) emissions from the zinc electroplating process to 0.8 milligrams per cubic meter. The zinc electroplating process is permitted to be controlled by a wet scrubber "Control B". Control B was designed to control emissions from two HCl tanks, but the older zinc line with the 2nd HCl tank is no longer operated.

Mr. Patel explained that Control B was not installed during this inspection. In order to fix the roof, Control B had to be removed. Google Earth Pro aerial photos of the facility roof indicate the scrubber was on the roof on March 14, 2020 and gone on March 19, 2021 (Attachments 3 & 4). Google Earth Pro does not have any pictures of the facility between those two dates. Based on this data, the scrubber was removed sometime between March 2020 and March 2021. The facility is

having trouble getting someone to re-install the scrubber unit. Currently, the single 30-40% HCl tank is exhausted to the general in-plant environment.

The operation and maintenance plan states that liquid flow rate from this scrubber will be recorded daily. Despite the scrubber being removed during this time, Mr. Patel provided me with daily liquid flow rate records from January 1, 2021 to present. All data is missing from 2/5/2021 through 10/25/2021 (Attachment 1). The data from 10/25/2021 through March 2022 shows that the flow rate is 30 gallons/minute when a reading is taken. There was a reading recorded on the day of this inspection, although the scrubber was not installed. Readings provided during times when the scrubber was not installed are irrelevant. The gauge (rotameter) where these readings are taken from appears to be old/dirty. I could not verify whether water was actually flowing through the rotameter or if the device was stuck reading at 30 gallons per minute.

AQD presumes that the HCl emission rate was exceeded during times that the scrubber was not operated/installed. AQD is still uncertain of the exact removal date of this scrubber. Also, since incomplete records of scrubber liquid flow rate were provided in 2021 for dates that Beacon Park Finishing is typically scheduled to operate, AQD cannot determine if the scrubber was operated properly prior to being removed. A violation notice was issued to Beacon Park Finishing for violating the emission limit in Special Condition 16.

Control B was located on the roof. It is reasonable to assume that this wet scrubber may have the same issues as the chrome CMP scrubber regarding winter operation. I will follow up with Beacon Park Finishing to ensure they will be able to operate this scrubber at all times, including during especially cold weather.

Comparing throughput from the 2020 and 2021 MAERS reports show that this HCl tank was operated for a similar amount of time in both years. Throughput was 8580 gallons in 2021 versus 11550 gallons in 2020. In both years, the company noted that the tanks were operated in equal amounts during each quarter. In 2020, the company noted that the tanks were operated 10 hours per day, 5 days per week, and 183 days in the year. In 2021, the company noted that the tank was operated for 10 hours per day, 5 days per week, and 214 days in the year. Comparison of this data suggests that the HCl tank (and new zinc line) was operated throughout 2021 during the times where no scrubber was installed.

UPDATE 4/7/2022 – Popat Patel informed me that the 8580 gallons of HCl is the total HCl purchased in 2021 for the entire facility. This includes all of the HCl used in the nickel-chrome line HCl tank. I informed Mr. Patel that this is not an appropriate way to report HCl emissions. Beacon Park Finishing will have to revise their MAERS report to reflect actual HCl usage on the Zinc line. Popat stated that he would send me purchase records showing how much HCl was purchased in 2021. I have not received these records at this time.

In the 2021 MAERS report, Beacon Park Finishing reported HCl emissions of 890 lbs considering a 97% control efficiency. HCl emissions are calculated using an equation (not mass balance) that incorporates tank surface area, HCl concentration, gas mass transfer coefficients, temperature, operating time, and vapor pressure. Since no control was installed from at least March 19, 2021, the control efficiency should be 0%. Records submitted with the MAERS report state the

uncontrolled HCl emissions from this HCl tank are 29,655 lbs, or 14.83 tons (Attachment 5). HCl is considered a Hazardous Air Pollutant (HAP) by the EPA. Having 14.82 tons of HCl emissions in 2021 classifies Beacon Park Finishing a major source of HAPs since their emissions of a single HAP is greater than 10 tons per year.

In addition, when Beacon Park Finishing removed the wet scrubber used to control HCl emissions from the zinc plating line, the facility's potential to emit (PTE) for a single hazardous air pollutant (HAP) (HCl) exceeded 10 tons/year, making the facility a major source of HAP emissions.

R 336.1211(a)(i)(A) of the Michigan Administrative Code (MAC) requires sources that directly emit, or have the potential to emit, 10 tons per year or more of an individual hazardous air pollutant (HAP) obtain a Renewable Operating Permit (ROP). R 336.1210 (Rule 210) prohibits the operation of a source required to have an ROP except in compliance with all applicable terms and conditions of an ROP, unless a timely and administratively complete ROP application has been received. Per R 336.1210(4), for a stationary source that is or becomes a major source, as defined by R 336.1211(1)(a)(i) to (iii), an administratively complete application shall be considered timely if it is received by the department not more than 12 months after the stationary source commences operation as a major source or otherwise becomes subject to the requirements to obtain a renewable operating permit as a major source.

The facility currently does not have an ROP and has not submitted an ROP application to date. This is a violation of AQD Rule 210. A violation notice was sent to this facility for violating AQD Rule 210.

Special Condition 17: Limits the nitric acid emissions from the nitric acid strip tank exhausted through a wet scrubber "Control C" to 32.4 mg/m³, corrected to 70°F and 29.92" Hg. This tank was not operating during this inspection. I observed that the tank was completely empty. Ramone stated that he believes this tank was operated for a few hours of work in mid-2021. I requested operating data for the scrubber for the dates the scrubber was operated.

During the inspection, Beacon Park Finishing could not provide me with any records of scrubber liquid flow rate data. The operation and maintenance plan for this scrubber unit states that liquid flow readings will be recorded daily each time the nitric acid strip tank is operated.

After the inspection on March 11, 2022, Mr. Patel provided me with liquid flow rate records for the nitric acid strip tank. Records show the tank was operated on January 11, 12, 13, 14, & 15 in 2022. Mr. Patel noted that this tank was not operated between 1/16/2021 and 2/5/2021 (Attachment 1). Mr. Patel resigned from the facility after 2/5/2021 and records end at that point. These records indicate that the nitric acid strip tank has been out of service since 10/25/2021 (the date Mr. Patel was re-hired).

Based on my conversations with facility staff, this nitric acid tank was operated between 2/5/2021 and 10/25/2021. Since no liquid flow rate data was available between 2/5/2021 and 10/25/2021 AQD, presumes that the 32.4 mg/m³ nitric acid emission rate was exceeded. AQD cannot verify if the Control C scrubber was operated properly when it was operated between 2/5/2021 and 10/25/2021.

A violation notice was sent to Beacon Park Finishing for violating special condition 17. Beacon Park Finishing must maintain daily records of liquid flow rate at all times this tank is operating.

Special Condition 18: Limits visible emissions from all vented process tanks to 0% opacity. I drove around outside the facility prior to this inspection. I did not notice any opacity coming from the stacks.

Special Condition 19: Limits visible emissions from the nitric acid strip tank to a 6-minute average of 20% opacity, except as specified in Rule 301(1)(a). The nitric acid strip tank was off and empty during this inspection. There was no opacity coming from this tank.

Special Condition 20: States that Beacon Park Finishing shall not operate Chromium Line 1 unless Control A is installed and operating properly. Chromium Line 1 was not operating during this inspection. This line has not been used in several years based on my observations during this inspection and information from past AQD inspections.

Special Condition 21: States that Beacon Park Finishing shall not operate the nickel-chrome plating line IV unless Control D is installed and operating properly. This line was not operating during this inspection; however, it is frequently utilized based on my discussions with Mr. Patel. Beacon Park Finishing did not maintain daily records of pressure drop through this scrubber between February 5, 2021 and October 25, 2021. Therefore, the facility did not demonstrate that they have been properly operating Control D during this period. A violation notice was sent to Beacon Park Finishing for violating Special Condition 21

Special Condition 22: States that the applicant shall not operate the new zinc line or the existing zinc line unless Control B is installed and operating properly. The "existing" zinc line, where tanks are arranged in a straight line, is no longer operational. All tanks have been emptied and appear to be in disrepair.

The "new" zinc line has the tanks arranged in a U shape. The new zinc line was operating during my inspection with no scrubber (Control B) installed. A violation notice was sent to Beacon Park Finishing to address this non-compliance.

Special Condition 23: States that the applicant shall not operate the nitric acid strip tank unless Control C is installed and operating properly. This line was not operating during this inspection. Beacon Park Finishing could not provide records of liquid flow rate for the times the nitric acid strip tank was operated in 2021. Therefore, the facility did not demonstrate that the scrubber was operated properly when the nitric acid strip tank was used. A violation notice was sent to Beacon Park Finishing to address this non-compliance.

Special Condition 24: Requires Beacon Park Finishing to equip and maintain Control A, Control B, Control C, and Control D with liquid flow indication devices to maintain constant water flow to the controls.

Control C is equipped with a liquid flow indication device. The Control C wet scrubber was not operating. The nitric acid strip tank was emptied during this inspection.

I did not ask to see the flow gauge on Control A since this line has been shuttered for several years. The Control D wet scrubber was replaced in 2000 with a composite mesh pad (CMP) scrubber. There is no constant liquid flow associated with CMP scrubbers. The Control D scrubber should be automatically washed down periodically based on the pressure drop.

Mr. Patel showed me the liquid flow gauge (rotameter) for Control B (zinc line). I was told Control B was not currently installed; however, the rotameter read 30 gallons/minute. 30 gallons/minute is the flow rate recommended in the operation and maintenance plan for this scrubber. Based on the statement from Mr. Patel saying that the scrubber is not installed, it appears that this rotameter was just stuck on that value and not actually reading flowrate. The meter itself was dirty and in an inconvenient location so that I could not tell whether or not fluid was moving through it.

Special Condition 25: Requires the permittee to submit an operation and maintenance plan within 45 days of the issuance of this permit to install. This plan was submitted to the AQD within 45 days of this permit issuance. Most recently, Beacon Park Finishing submitted the plan as a response to the October 2020 violation notice.

Beacon Park Finishing's operation and maintenance plan requires the facility to record daily liquid flow readings for Controls A, B, and C, as well as daily pressure drop readings for Control D. These values must be recorded on any day that particular metal finishing line operates. Additionally, there are instructions for washing down the composite mesh pad on Control D. The plan also includes instructions for proper startup, shutdown, and operation of each control device.

Based on my observations during this inspection and record review, this plan is not being followed. Neither Mr. Patel or Ramone knew who was responsible for taking daily pressure drop and liquid flow rate readings from any of the scrubbers. Daily records of pressure drop and liquid flow rate were not available to me during my inspection. I did not see any place to record this information near the scrubbers.

The operation and maintenance plan does not identify supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air cleaning devices. Mr. Patel appears to have been responsible for these tasks prior to leaving Beacon Park Finishing. This plan should have been updated when Mr. Patel left the company in February 2021.

From what I can tell, there was nobody responsible for inspecting, maintaining, and repairing these air cleaning devices for the period of time that Mr. Patel was retired. This plan must be updated to identify supervisory personnel responsible for inspecting, maintaining, and repairing the scrubbers. A violation notice was sent to Beacon Park Finishing for violating Special Condition 25.

Special Condition 26: States that Beacon Park Finishing shall maintain the surface tension of all chrome plating tanks at less than 45 dynes/cm². Due to changes in the chrome NESHAP, this limit is now 40 dynes/cm² when measured with a stalagmometer. There is currently 1 chrome tank

operating at this facility (tank 4A). Beacon Park Finishing takes surface tension readings of the chrome bath daily before operation using a stalagmometer.

During the on-site inspection, Mr. Patel provided me with daily surface tension records from January 2022, February 2022, and March 2022 to date (Attachment 2). I reviewed these records and did not notice any exceedances of the 40 dynes/cm² limit.

Mr. Patel could not provide these records prior to January 2022. Mr. Patel is not sure where records from before January 2022 would be located since he was not working at the facility for most of 2021. The last surface tension records from this facility on AQD file were from October 29, 2020. Beacon Park Finishing does not have surface tension data for this chrome tank from 10/29/2020 through 1/1/2022.

The records from January 1, 2022 through March 8, 2022 show that the facility has maintained the surface tension below 40 dynes/cm². Each time a reading was taken the operator noted that the tank was operated for 8 hours on that day.

The Chrome NESHAP requires that these readings be taken once every 4 hours of tank operation for the first 40 hours of tank operation after the applicable compliance date. If there are no exceedances during the first 40 hours of tank operation, then surface tension measurements may be conducted once every eight (8) hours of tank operation for the next 40 hours of tank operation. If there are no exceedances during the 40 hours of tank operation when surface tension measurements are being conducted every eight (8) hours, then surface tension measurements may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every four hours must be resumed and the subsequent decrease in frequency shall follow the schedule as laid out above. The minimum frequency of monitoring allowed is once every 40 hours of tank operation.

Beacon Park Finishing did not take Stalagmometer readings between 10/29/2020 and 1/1/2022. The facility did not demonstrate compliance with the surface tension and/or emission limit during this time. This means that Beacon Park Finishing must revert to taking surface tension readings every 4 hours of tank operation. Currently, readings are only taken every 8 hours of tank operation.

A violation notice was sent to Beacon Park Finishing for violating this condition (Special Condition 26) and for violating the surface tension monitoring schedule in the Chrome NESHAP.

There are dates listed in the surface tension records that do not have surface tension readings nor hours of operation recorded. The dates that don't have readings may be days the tank was not operated. It is also possible a blank space could be due to neglectful recordkeeping. AQD advised Beacon Park Finishing to make a note on days the tank is not operated.

Special Condition 27: States that Beacon Park Finishing shall not operate any chrome tanks unless all provisions of the Chrome NESHAP are met. Only one chrome tank is currently in operation. The chrome tank is supposed to be controlled through maintaining surface tension below 40 dynes/cm²

(when measured with a stalagmometer) and through proper operation of the CMP scrubber (Control D). For purposes of Chrome NESHAP compliance, Mr. Patel stated that they maintain surface tension below 40 dynes/cm². The scrubber (Control D) is an additional control.

Surface tension records were not maintained throughout all of 2021. Additionally, Beacon Park Finishing did not take these readings frequently enough according to the monitoring schedule in the Chrome NESHAP. See discussion under Special Condition 26 for more details.

Surface tension is reduced through periodic additions of a wetting agent. Beacon Park Finishing switched to a non-PFOS based wetting agent shortly before the Chrome NESHAP rules changed to not allow PFOS based wetting agents. Mr. Patel explained that, despite having moved away from the PFOS based wetting agent, significant amounts of PFOS remained in the plating tanks. This PFOS could not be treated with their standard wastewater treatment process. I observed that there is a series of large carbon filters on-site which treat wastewater from process tanks which previously utilized PFOS based wetting agents.

The current wetting agent used is Ankor LF-19. The main active ingredient in Ankor LF-19 is polyfluorosulfonic acid (PFSA). Although this compound is not a "PFOS-based fume suppressant", PFSA belongs to the family of perfluorinated and polyfluorinated alkyl compounds (PFAS).

Mr. Patel provided me with Ongoing Compliance Status Reports required by 40 CFR 63.347(h) (Attachment 2). There are two reports for 2021: one from 1/1/2021 through 6/30/2021 and another from 7/1/2021 through 12/31/2021. These reports did not contain all of the information required by 40 CFR 63.347(g)(3). This report did not contain a certification by a responsible official indicating whether or not the operation and maintenance plan was followed. This section was left blank. The operation and maintenance plan was not followed in 2021 because there are incomplete records of surface tension of the chrome bath and pressure drop across the CMP scrubber (Control D).

Additionally, there is no explanation of the reasons for not following the provisions of the operation and maintenance plan, an assessment of whether any excess emission and/or parameter monitoring exceedances are believed to have occurred, and a copy of the report(s) required by 40 CFR 63.342(f)(3)(iv) documenting that the operation and maintenance plan was not followed. 40 CFR 63.342(f)(3)(iv) requires that these incidents be recorded and reported to the AQD district supervisor via phone call within 2 working days after commencing actions inconsistent with the operation and maintenance plan. This report shall be followed by a letter to the AQD district supervisor within 7 working days after the end of the event.

The Ongoing Compliance Status Report does not contain a description of any changes in monitoring, processes, or controls since the last reporting period. Mr. Popat Patel, who was responsible for maintaining daily pressure drop records for days that the nickel-chrome line was operated, left the facility in late 2020/early 2021. The Ongoing Compliance Status Report should detail when key personnel change. These changes in key personnel should also be noted in the operation and maintenance plan.

The Ongoing Compliance Status Report does not contain the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with [40 CFR 63.342\(a\)\(1\)](#), including actions taken to correct a malfunction. Mr. Patel stated that this scrubber is not operated during very cold temperatures because of water lines freezing. This type of malfunction must be reported in the Ongoing Compliance Status Report.

A violation notice was sent to Beacon Park Finishing for failing to maintain/record information in the Ongoing Compliance Status Report which is required by 40 CFR Part 63.347(g)(3).

Based on the Ongoing Compliance Status Reports from the facility, chrome tank 4A was operated for a total of 1.7 million amp-hours in 2021. This classifies Beacon Park Finishing in the small electroplating facility category according to the Chrome NESHAP since it is less than 60 million amp-hours per year.

Special Condition 28: Requires that the applicant maintain records of quarterly inspections of control equipment required to comply with the Chrome NESHAP. Mr. Patel provided me with these inspection forms. According to the forms submitted, these inspections were performed on 7/14/2021, 10/14/2021, 1/22/2022, and on 3/15/2022. These inspections include checks of inlet/outlet zones, spray nozzles, packed-bed section, overhead weir, drain lines, fan motor, and fan vibration. I requested these records from January 1, 2021 to present. Beacon Park Finishing did not provide records of these inspections for the first two quarters of 2021. A violation notice was sent to Beacon Park Finishing for violating this condition.

Additionally, there appears to be initials next to the item "Pressure drop monitors calibrated" which are erased/whited out. I am requesting that Beacon Park Finishing elaborate on this inspection item in their response to the violation notice that was sent. Specifically, I am curious if the pressure drop monitors should be calibrated, and if so, how often. I am also curious why was this item initialed and then erased.

Special Condition 29: Requires verification of total chromium emission rates from the chrome tanks by testing at the owner's expense if requested by the AQD. AQD is not requesting chromium emission testing at this time.

Special Condition 30: Requires verification of total HCl and nitric acid emission rates from the nitric acid strip tank exhausted through Control C & the new zinc line exhausted through Control B by testing at the owner's expense if requested by the AQD. Due to presumed air emission exceedances at this facility, AQD may request that Beacon Park Finishing perform a stack test on one or both of these units.

Special Condition 31: Specifies stack dimension requirements. I did not verify stack dimensions during this inspection. I did not feel comfortable going onto the roof of this facility on this date. Due to Control B (zinc line) being disconnected and recent roof maintenance, it is possible that this stack is not conforming to the minimum exit point requirements.

Grinding/buffing stations

There is a grinding/buffing area that contains 8 buffing units. Several of these units appear to have been ducted outdoors through a cyclone collector with no fabric filter. The ducting from these units was disconnected for maintenance during this inspection. Approximately 3-4 buffing units are exhausted into the general in-plant environment.

The buffing stations exhausted into the general in-plant environment are controlled by both a cyclone and fabric filter bags. The buffing stations which are exhausted indoors appear to be exempt from permitting requirements pursuant to Rule 285(2)(l)(vi)(B).

The cyclone exhausted outdoors with no fabric filter appears to be a relatively new installation. I informed Mr. Patel, Ramone, and Mr. Kanehann that exhausting these buffing stations outdoors without being ducted through a fabric filter is a violation of Rule 201 – the requirement to obtain a permit to install. A violation notice was sent to Beacon Park Finishing to address this issue.

These grinding stations meet the requirements of the Chrome NESHAP since these operations are located in a separate room from the chrome plating operations.

Subpart WWWWWW

The zinc plating tanks, nickel plating tanks, and the nitric acid strip tank appear to be subject to 40 CFR Part 63 - National Emissions Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations (NESHAP WWWWWW). The AQD has not taken delegation of 40 CFR Part 63 Subpart WWWWWW (6W) standards therefore compliance was not evaluated.

Bake Oven

There is one 250,000 BTU/hr natural gas fired bake oven used to relieve stress within metal parts before and after plating activities. Ramone stated that this oven was recently purchased for a specific job, but they lost the job before the oven was needed. This oven appears to be exempt from permitting pursuant to Rule 282(2)(a)(i).

I did not notice any cold cleaners, boilers, or emergency generators on-site. Process tanks are heated electronically where necessary.

Compliance Determination

Beacon Park Finishing is not operating in compliance with the 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; 40 CFR Part 63, Subpart N – Chrome NESHAP; and PTI No. 186-91B.

A detailed list of each violation observed during this inspection is included in the notice of violation. The notice of violation can be viewed electronically at the address below:

https://www.egle.state.mi.us/aps/downloads/SRN/B3000/B3000_VN_20220405.pdf



Image 1(March 14, 2020) : Shows Control B installed on March 14, 2020



Image 2(March 19, 2021) : Shows Control B gone on March 19, 2021

NAME Adam Bogner

DATE 4/11/2022

SUPERVISOR K. Kelly