

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

N547168289

FACILITY: Dynamic Finishing II LLC.		SRN / ID: N5471
LOCATION: 823B W WESTERN, MUSKEGON		DISTRICT: Grand Rapids
CITY: MUSKEGON		COUNTY: MUSKEGON
CONTACT: John McManus , VP of Engineering		ACTIVITY DATE: 06/20/2023
STAFF: Scott Evans	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: On site inspection to assess compliance with air quality rules and regulations.		
RESOLVED COMPLAINTS:		

Intro

On June 20, 2023, State of Michigan Department of Environment, Great Lakes, and Energy Air Quality Division (AQD) staff member Scott Evans (SE) conducted an on-site inspection of the Dynamic Finishing II facility located at 823B W Western St. in Muskegon, Michigan, to assess compliance with the requirements of Permit to Install (PTI) No. 556-94 and all other applicable air quality rules and regulations. This facility conducts small scale chrome plating operations of equipment used to manufacture transmission components and other products. This process is conducted through the use of six tanks: an alkaline cleaner tank, a flowing rinse tank, a chrome plating tank, and three final rinse tanks. The chrome plating tank is controlled through use of a mesh filter scrubber that vents through a HEPA filter system. The remaining tanks are uncontrolled and vent to the facility interior.

Upon arrival at the facility, SE observed no visible emission or odors outside of the facility. After entering the facility, SE was greeted by Matt Hayes. After a brief conversation about the purpose of the visit, an inspection of the facility was conducted.

PTI No. 556-94

This PTI contains 13 special conditions (SC) identified as SC 15 - 27.

SC15 states that the hexavalent chromium emission rate from the Hard Chrome Plating Line with composite mesh pad mist eliminator shall not exceed 2.81×10^{-5} pound per hour nor 6.74×10^{-5} pounds per hour. During the inspection pressure drop records were reviewed. Stack test results from the test conducted in 1999 confirmed that the control equipment is compliant with the emission limits so long as control equipment is functioning as demonstrated with these pressure drop records. At this time there does not appear to be a need to conduct further testing as the control equipment appears to be well maintained and functional.

SC16 states that the total chromium emissions shall not exceed 0.015 milligram per dry standard cubic meter, corrected to 70°F and 29.92 inHg. During the above-mentioned record review coupled with review of the 1999 stack test results, it was confirmed that the facility appears to be compliant with this requirement.

SC17 states that there shall be no visible emissions (VEs) from the chroming process. During the inspection there were no observed VEs and it was expressed by facility staff that no instances of VEs had occurred since the last inspection.

SC18 states that the process may only operate if appropriate emission controls are installed and operational. During the inspection it was observed that the necessary scrubber with mesh mist eliminator and HEPA filter were installed and operational.

SC19 states that appropriate pressure drop monitors must be installed and operational at each step of the process. During the inspection, all four monitors were observed to be reading between 0 and 1 inH₂O, which was within 1 inH₂O of the baseline readings. This is acceptable as the NESHAP allows variation of up to 2 inH₂O.

SC20 states that any exhaust from the process shall be released vertically from a stack with a maximum diameter of 6 inches at an exit point not less than 22 feet above ground level. During the inspection the stack was observed and appeared to meet required parameters.

SC21 states that an operation and maintenance plan should be submitted to the AQD by October 25, 1996. An updated plan was submitted during the inspection conducted in 2010 and is in use at the facility as required. This plan appears to still be appropriate and compliant with requirements at this time.

SC22 requires verification of chromium emission rates. As discussed above, testing was conducted in 1999 to confirm control equipment efficacy and resulting emissions factors. During the inspection, all control equipment was in good condition and well maintained with daily inspection checklists being demonstrated on site. Due to this proper maintenance it is not felt that further testing is necessary at this time.

SC23 states that the facility must conduct the following daily:

- Visual inspection of the back portion of the mesh pad to ensure no breakthrough of chromic acid mist.
- Turn off fans to wash down mesh pads for at least 10 minutes.
- Determine gas velocity prior to control device.
- Determine pressure drop across controls.

During the inspection, records tracking daily procedures of the above were observed on site. Scans of these records for the calendar year of 2022 were provided for detailed review and current 2023 records were reviewed during the on-site visit. All records appeared to demonstrate compliance with the daily requirements.

SC24 states that, at least once a month, visual inspection of the controls should be done to ensure proper drainage, no chromic acid build-up on the mesh pads, and that structural integrity is sound. During the inspection, it could be seen that all components were in good condition and that proper maintenance and observations are being done and recorded.

SC25 states that only fresh water shall be used for make-up water. This was discussed and the facility appears to be compliant with this condition.

SC26 states that daily and monthly records of the above requirements shall be maintained as is appropriate for each condition. As discussed, the facility is keeping appropriate records.

SC27 states that the facility must adhere to the requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subparts A and N. These requirements are summed up as follows due to the facility's use of a four stage CMP and HEPA filter control system:

- Visual inspection to ensure proper drainage, no chromic acid buildup on pads, and no chromic attack on the structural integrity of the unit.
- Visually inspect the back portion of the mesh pad to ensure breakthrough of chromic acid mist.
- Visual inspection of ductwork to ensure no leaks.
- Conducting washdown of mesh pads as recommended by manufacturers.

Adherence to all other SCs as discussed in this report also demonstrates compliance with these NESHAP requirements and so the facility appears to be compliant as of the time of the inspection. Additionally, the facility has submitted necessary compliance reports consistently and on time since the last inspection, demonstrating compliance with all NESHAP requirements.

Conclusion

At the conclusion of this inspection the facility appeared to be compliant with the requirements of PTI No. 556-94 and all other air quality rules and regulations.

NAME Scott Evans

DATE 7/24/2023

SUPERVISOR 