

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

N547143070

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: 01/18/2018
STAFF: Chris Robinson	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: The purpose of this inspection was to determine the facility's compliance status with PTI No. 556-94 and other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

AQD staff Chris Robinson was on-site to conduct a scheduled unannounced inspection on Thursday January 18, 2018. AQD staff arrived at Dynamic Finishing II (Dynamic), formerly known as Dynamic Finishing, located at 823B W. Western Street, Muskegon, MI, at approximately 12:30 pm and met with Mr. Mat Hayes, operations manager. No odors or visible emissions were detected. AQD staff presented Mr. Hayes with a business card and informed him that AQD was there to perform an inspection of the facility to determine compliance status with respect to the chrome NESHAP, PTI No. 556-94 and other applicable air rules and regulations. Mr. Hayes informed AQD that there have not been any significant changes since the last inspection on February 17, 2017.

The only operations at the facility are hard chrome plating and quality control. The anodizing line was removed by the previous owner. The facility maintains a permit for the hard chrome plating line and is also subject to the National Emission Standards for Chromium Emissions from Hard Chromium and Decorative Chromium Electroplating Tanks (Chrome NESHAP). Dynamic currently operates five (5) days per week, two weeks per month and employs two (2) staff.

### Compliance Evaluation

#### **PTI No. 556-94**

All the tanks except for the Chrome tank are vented to the in-plant environment. The chrome tank consists of chromic acid, sulfuric acid and water. A Safety Data Sheet is included in **Attachment A**. This tank is covered and vented directly to the control system (scrubber). Fume suppression is not utilized at this facility due to this method of operation. The chrome plating line consists of the following tanks:

Tank #1 (Alkaline Cleaner, 150°F) >> Tank #2 (Flowing Rinse) >> Tank #3 (Chrome Plating, 130-134°F) >> Tank #4 (Rinse#1) >> Tank #5 (Rinse #2) >> Tank #6 (Rinse #3)

Based on discussions with Mr. Hayes and observations made during this inspection, the scrubber is always operated during plating operations. The scrubber is a composite mesh pad (CMP) system ducted directly to the lid of the chrome tank consisting of four separate stages with individual filters. Each stage is equipped with a pressure drop gauge. A separate hepa filter, with a pressure drop gauge, is also maintained and operated between the scrubber and the stack. The stack is vented vertically through the roof. Stack dimensions were not explicitly measured but visual observations were consistent with PTI No. 556-94. Pressure drop readings taken during this inspection were as follows:

Magnehelic Gauge No.	Avg. 1999 Stack Test Pressure Reading ("H2O)	Maximum Allowable NESHAP Pressure Range ("H2O)	Observed Pressure ("H2O)	Compliance Status
1	1.0	3.0	0.1	Yes
2	0.6	2.6	0.3	Yes
3	1.0	3.0	1.7	Yes
4	0.2	2.2	0.2	Yes
Hepa	--	--	0.3	Yes

Compliance with the chrome NESHAP (0.015 milligram per dry standard cubic meter, corrected to 70°F and 29.92 inches Hg) and PTI (2.81 x 10<sup>-5</sup> lbs./hr nor 6.74 x 10<sup>-5</sup>) emission rates are determined based on compliance with pressure drop readings. The 1999 stack test was used to determine the base operating range for the scrubber, which are the averages of the pressure drops observed during the stack test. According to the NESHAP, the range can vary from the determined value by 2 inches. AQD reviewed pressure drop records on-site. All pressure drops were within the specified range.

The facility has and maintains an Operation and Maintenance plan as required. Dynamic provided an updated version during the previous inspection. Daily and monthly records were reviewed on-site. Records are maintained as required. Based on these records and discussions with Mr. Hayes, the facility is currently performing the following daily as required by PTI No. 556-94:

- Visually inspect the back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.
- Turn off the fan and the plating tank and wash down the mesh pads for at least 10 minutes.
- Determine the gas velocity prior to the control device. Based on a review of the final rule, this has been changed and the facility is no longer required to calculate daily gas velocities as long as pressure drops are monitored & recorded daily, which they are. However, this is still a permit requirement and the facility maintains the necessary components to calculate it if necessary. CR did not require them to do so at this time.
- Determine the pressure drop across the controls.
- Visually inspect the controls to ensure proper drainage, no chromic acid build-up on the mesh pads, and that structural integrity is sound. This is a monthly requirement. However, the facility has chosen to conduct this inspection daily.

According to Mr. Hayes, only fresh water is used during wash-downs.

**Chrome NESHAP**

The facility maintains necessary records, which were reviewed on-site, and submits annual "Ongoing Status Reports" to the AQD documenting compliance with the NESHAP for the previous year. The next report is due in March 2018. December 2017 scrubber logs were provided as an example and are included in **Attachment B**. As noted above, the facility utilizes a four (4) stage CMP with hepa filter control system. The NESHAP requirements for this control system are as follows:

Description	Frequency	Compliance Status
1. Visually inspect device to ensure there is proper drainage, no chromic acid buildup on the pads, and no evidence of chemical attack on the structural integrity of the device.	1/quarter	Yes
2. Visually inspect back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.	1/quarter	Yes
3. Visually inspect ductwork from tank to the control device to ensure there are no leaks.	1/quarter	Yes
4. Perform wash-down of the composite mesh-pads in accordance with manufacturer's recommendations.	Per manufacturer	Yes

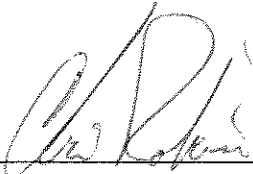
The facility keeps thorough records of any and all activities for the chrome tank and the scrubber. As required by the permit and by the final rule, the facility does all of the above as required and with greater frequency than is required.

**Compliance Determination**

Based on the observations made at the time of this inspection, the facility appears to be in compliance with the requirements of the Chrome NESHAP, PTI No. 556-94 and all other applicable Air Quality Rules and Regulations.

**List of Attachments**

- Attachment A - Chrome SDS
- Attachment B - December 2017 Scrubber Logs

NAME 

DATE 1/19/2018

SUPERVISOR 