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

N325462027

FACILITY: MAC VALVES INC		**SRN / ID:** N3254
LOCATION: 30569 BECK ROAD, WIXOM		**DISTRICT:** Warren
CITY: WIXOM		**COUNTY:** OAKLAND
CONTACT: Dave Meinke , Facility Engineer		**ACTIVITY DATE:** 03/02/2022
STAFF: Kaitlyn Leffert	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: FY2022 Scheduled Inspection		
RESOLVED COMPLAINTS:		

On March 2, 2022, Michigan Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) staff Kaitlyn Leffert conducted a scheduled inspection of Mac Valves located at 30569 Beck Road, Wixom, MI. The source is identified by the Source Registration Number N3254. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules; and Permit to Install (PTI) Number 130-94A.

Mac Valves manufactures pneumatic valves, which have a variety of end uses, including the automotive industry and in the medical field, where the valves are used in personal oxygen units and in hospital beds. Mac Valves is permitted to operate a metallic surface coating line, which consists of two automated and one manual spray paint booths and two bake ovens, as well as a chemical dip chlorination process, which is used to harden rubber surfaces. Mac Valves has opt-out emission limits for hazardous air pollutants (HAPs) and volatile organic compounds (VOCs).

Mac Valves is located in the same building as Great Lakes Rubber (B8919) and is considered part of the same stationary source. Both facilities were permitted separately and have individual HAP and VOC emission limits. However, HAP and VOC emissions must be combined for both sources to determine whether the facility as whole is classified as a major source.

Mac Valves comprises approximately 80-90% of Great Lake's Rubbers' business. Great Lakes Rubber has the capability to manufacture other rubber products and has manufactured them in the past, but now they primarily focus on the manufacture of rubber-coated metal parts for Mac Valves. An inspection of both facilities was done while on-site. The inspection of Great Lakes Rubber is documented in a separate activity report, filed the SRN of B8919.

On February 22, 2022, I contacted Dave Meinke, Mac Valves, about the possibility of inspecting Great Lakes Rubber and Mac Valves the following day, on February 23rd. Mr. Meinke let me know that they would not be available for an inspection that day and instead an inspection was scheduled for March 2nd.

Facility Inspection

I arrived at the facility around 9:30 am and met Mark Dziadosz, who was accompanying me on the inspection. We were greeted by Dave Meinke, Mac Valves. We first went to a conference room, where we also met Paul Yahr, Great Lakes Rubber, and Jeff Neiter, Great Lakes Rubber. I explained the purpose of the inspection.

First, we went over the required recordkeeping for both facilities. Mr. Meinke walked us through the excel spreadsheet that contained all emission calculations for both Mac Valves and Great Lakes Rubber. Based on the preliminary review on-site, the facility appeared to be maintaining all

required records. I requested that a copy of the spreadsheet be emailed to me for further review following the inspection.

Following our initial meeting, Mr. Meinke led Mark and I on a walk-through of both facilities. We first went through the Great Lakes Rubber portion of the facility, which is documented in a separate activity report for Great Lakes Rubber (SRN: B8919).

After leaving Great Lakes Rubber portion of the building, we first entered the grinding section of Mac Valves, which has 9 robotic and 3 manual grinding processes. These grinding operations are vented into the general in-plant environment and are considered exempt from the requirement to obtain a permit to install according to Rule 285(2)(vi).

Mac Valves is permitted to operate a chlorination process, which is used to harden the surface of the rubber surface on the valves. The chlorination process consists of series of chemical dip tanks. The process was not operating at the time of my inspection.

We walked through the assembly area of the facility. Depending on the specific valve or end use, assembly can be automated or done manually. Much of the assembly takes place in separate soundproof enclosures. Mr. Meinke explained that the purpose of soundproofing each individual assembly area is so that when the valves are tested following assembly, they can hear whether they are functioning properly. In the assembly area is a parts washer with Crystal Clean mineral spirits. The parts washer is used to clean parts following assembly, if needed. The parts washer appeared to be exempt according to Rule 281(2)(h).

Mac Valves is permitted to operate two automated coating booths, one manual coating booth, a large bake oven, and a small bake oven. The coating processes were operating at the time of my inspection. One of the bake ovens is in-line with the automated coating lines, while the other oven is used as needed with the manual coating booth. The automated coating lines are operated regularly, while the manual coating booth and associated oven operated as needed, typically around two times per week. Next to the coating process is a large parts washer, where parts are washed before and/or after coating in a soap and water solution. The coating lines are equipped with exhaust filters, as required by PTI No. 130-94A, EU00001, S.C. IV.1. In addition, I did not observe any visible emissions from the coating operations while at the facility, as required by S.C. I.4.

Mac Valves also has a deburring department and a series of CNC machines. Both the deburring processes and the CNC machines vent to the in-plant environment and are considered exempt according to Rule 285(2)(l)(vi).

The facility also operates a water boiler. The water boiler at the facility was recently replaced. The hot water boiler has a heat input of 500,000 BTU/hr and is considered exempt according to Rule 282(2)(b).

Mac Valves has an emergency generator, which is subject to 40 CFR 60 Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. Subpart JJJJ allows for a maximum of 100 hours of non-emergency use of the generator. Last year, it was identified that Mac Valves had not been maintaining records of the hours of operation for the generator. During this inspection, I was provided copies of records which indicated the date the generator operated, the

number of hours the generator was operated, and the reason for operation (power outage, bi-weekly testing, etc). The emergency generator operated for a total of 4.75 hours from September through December 2021. Only 0.25 hours of that time was due to a power outage. The remaining hours were for bi-weekly testing of the engine. In 2022 so far, the generator has operated for a total of 2.5 hours, all for biweekly testing. Mac Valves appears to be operating the emergency generator in compliance with the requirements of 40 CFR Part 60 Subpart JJJJ.

Records Review

I received paper copies of some of the records during the inspection and received the remaining emissions records via email on March 2nd.

PTI No. 130-94A limits emissions of VOCs to 43.0 tpy, as determined on a 12-month rolling time period (FGFACILITY, S.C. I.1). Mac Valves is required to maintain monthly and 12-month rolling VOC emissions calculations. I was provided copies of monthly VOC emissions calculations for the past year. Rolling 12-month VOC emissions at the end of February 2022 were 5.83 tons per year.

In addition, the permit contains a VOC content limit of 3.5 pounds gallon for coatings used at the facility. Mac Valves uses two coatings, Mac Blue and Flat Black. Based on the provided records, the VOC content of Mac Blue is 2.89 lbs/gal and the VOC content of the Flat Black coating is 2.60 lbs/gal. Other coatings may be used if requested by the customer, but this is rare. The provided records show that only Mac Blue and Flat Black were used in the month of February.

Emissions of chorine from the chemical dip chlorination process are limited to 0.24 lb/hr and 0.52 tpy (EU00002, S.C. I.1 and I.2). Based on the FY2021 MAERS submittal, Mac Valves used a total of 430 pounds, or 0.25 tpy, of HCl in 2021. Based on the information provided during the inspection and the MAERS submittal, Mac Valves appears to be operating in compliance with the chlorine emission limits.

The permit also limits emissions of HAP to 4 tpy for each individual HAP and 10 tpy for all HAPs combined. Rolling 12-month HAP emissions for Mac Valves and Great Lakes Rubber combined were 0.47 tpy as of February 2022. The provided HAP emissions records indicate that Mac Valves is operating in compliance with the permitted HAP emission limits.

MAERS Report

Mac Valves reported their annual emissions for calendar year 2021 to the Michigan Air Emissions Reporting System (MAERS) on March 8, 2022. Since Mac Valves and Great Lakes Rubber combined are considered one stationary source, they also submit one combined MAERS report. I reviewed the submittal and noted that reported VOC emissions were lower than the VOC emissions calculations provided during the inspection. This appears to be due to the use of MAERS emission factors instead of the actual emission calculations. I reached out to the facility about this discrepancy and it is in the process of being resolved.

Conclusion

Based on the on-site inspection and review of the required recordkeeping, Mac Valves (SRN: N3254) appears to be operating in compliance with all conditions of PTI No. 130-94 and all other applicable air quality rules and regulations.

NAME Kaity Leffert DATE 07/13/2022 SUPERVISOR K. Kelly