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

P109158878

FACILITY: Exotic Rubber & Plastics		**SRN / ID:** P1091
LOCATION: 53500 Grand River Avenue, NEW HUDSON		**DISTRICT:** Warren
CITY: NEW HUDSON		**COUNTY:** OAKLAND
CONTACT: Scott Peffer , Plant Manager		**ACTIVITY DATE:** 06/11/2021
STAFF: Kaitlyn Leffert	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:**
SUBJECT: FY2021 Inspection		
RESOLVED COMPLAINTS:		

On June 11, 2021, I, Kaitlyn Leffert, conducted an inspection of Exotic Automation and Supply (also known as Exotic Rubber and Plastics), located at 53500 Grand River Ave, New Hudson, MI. The source is identified by Source Registration Number (SRN) P1091. The facility previously operated in Farmington Hills and was previously operating under the SRN N0007 and Permit to Install (PTI) No. 49-08A. The purpose of this 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 No. 175-19.

Exotic Automation Supply develops and manufactures custom molded rubber and plastic products for use in a variety of industries. At the entrance of the facility, there is a direct to consumer shop called Parker Store, where the public can buy hydraulic and pneumatic products manufactured by Exotic Automation. In addition to the public-facing shop, the New Hudson facility serves as the company's headquarters, which houses office space, production, and warehouse space. This is a newly built facility that they relocated to in early 2020.

The permitted equipment at Exotic Automation Supply are primarily split into two flexible groups: FG-RUBBER and FG-URETHANE. The rubber section of the facility consists of hydraulic presses used for compression and injection molding, an electric oven and milling operations. The urethane section of the facility includes both hydraulic and hand presses for polyurethane molding, degassers, a pouring machine, and electric ovens. In addition, the facility is permitted to operate a prep station where adhesives and primers are applied, a laser engraver, plasma cutter, and hose saws.

On June 3, 2021 I contacted Joe Brish to request the required records and schedule the inspection. I received a response from Scott Peffer, Plant Manager, Exotic Rubber and Plastics, to inform me that Mr. Brish is no longer the Plant Manager and that he has assumed that role. The inspection was scheduled for Friday, June 11th and records were to be provided at that time.

Facility Inspection

I arrived at the facility around 9:00 am on June 11th and was greeted by Scott Peffer. We first went back to a conference room to go over the requested records. Following records review, we did a walk-through of the facility. There is one large production floor in the facility, which houses the permitted equipment and associated processes, as well as a warehouse and storage space. The facility was operating on the day of my inspection. I observed the rubber and urethane processes and noted that there were nine hydraulic presses, a hand press, and two rubber injection processes, which is consistent with the permitted equipment. In addition, I observed the pouring machines and degassers associated with the urethane process, as well as the eleven electric ovens used by both processes. I noted that the area around both the urethane and rubber processes were well maintained and that all the equipment in these areas was clearly equipped with ventilation hoods that directed emissions to the ambient air.

Near the main production part of the facility is the preparation area, which consists of two workstations, each with an associated ventilation hood. The workstations were not in use during my inspection but are typically used to clean and prepare metals parts before they go to the

rubber or urethane presses. There were also sand blasters located adjacent to the preparation area, which are used to further prepare the surface of the metal parts before the parts go to the rubber and urethane presses.

I also observed the laser engraver and plasma cutter, neither of which were operating during my inspection. Mr. Peffer informed me that they had not yet the used plasma cutter, but they keep one on site in case if it is needed for custom products. The laser engraver is occasionally used, as needed by the customer. I also observed that the facility had three hose saws on site, which differs from the two that are permitted to operate at the facility. These hose saws were not operating during my inspection, but again are used as needed, depending on the part being manufactured. The hose saws are all equipped with a ventilation hood that vents to ambient air.

The facility also has a welding station and a cold cleaner. The welding station is not regularly operated and is used on an as needed basis. It was not operating on the day of my inspection. I observed the cold cleaner and noted that it is covered with a lid and has an associated ventilation hood. The cold cleaner also had the appropriate signage posted on the front of it. The solvent used in the cold cleaner is methyl ethyl ketone (MEK).

At the previous facility, there was an emergency generator. I asked about whether there were any emergency generators at this site and was told that they did not install an emergency generator at this location. I also did not observe any emergency generators during my initial drive around the facility.

Records Review

Following the in-person portion of my inspection, I returned to my home office to more closely review the records provided during the inspection. The primary volatile organic compounds emitted by the facility is toluene diisocyanate (TDI), which is generated during the urethane portion of the process. The permit limits TDI emissions to 0.26 lbs/month (FG-URETHANE, S.C. I.1). Compliance with this emission limit is primarily demonstrated through records of emission calculations (S.C. VI.4). I was provided copies of monthly TDI emission calculations for the period of January 2014 through May 2021 during my inspection. Emissions calculations for months prior to January 2020 correspond to emissions at the previous location. Based on the provided records, TDI emissions ranged from 0.003 to 0.010 lbs/month since January 2020. TDI emissions in May 2021 were 0.007 pounds. Across the entire time frame for which records were provided, the highest monthly TDI emissions were 0.033 pounds in April 2019.

In addition to the emission limits, the urethane process is also subject to material limits of 400,000 lbs/year of all prepolymer materials, as well as a limit of 80,000 lbs/year for any curatives containing di-(methylthio) toluenediamine (FG-URETHANE, S.C. II.1 and II.2). The provided records indicate that 12-month rolling total prepolymer usage at the end of May 2021 was 34,367.71 pounds. The highest 12-month rolling prepolymer usage over the previous year was at the end of June 2020, with 40,003.03 pounds. The provided usage records and SDS' indicate that there were not any curatives used which contain di-(methylthio) toluenediamine.

Exotic Rubber is permitted to use up to 30 tons per year, as determined on a 12-month rolling time frame, in the rubber portion of their process (FG-RUBBER, S.C. II.1). In order to demonstrate compliance with this limit, the facility maintains records of monthly and 12-month rolling pounds of rubber in FG-RUBBER (S.C. VI.3). I was provided copies of total raw rubber usage for the period of November 2016 through May 2021. Again, Exotic Rubber was operating out of their previous location until January-February 2020. According to the records provided by the facility, 12-month rolling pounds of rubber during the period of December 2019 through present ranged from 7,612.96 pounds, or 3.8 tons (in May 2021), to 10,179.89 pounds, or 5.1 tons (in December 2019). The provided records indicate that Exotic Rubber is operating in compliance with the permitted raw rubber usage limits.

Exotic Rubber is required to maintain records of the chemical composition of all prepolymer, rubber, and other coating materials used at the facility. Copies of Safety Data Sheets for all materials used in the facility are kept on file and easily accessible as needed. I was provided

copies of the SDS sheets for many of the commonly used materials, which are attached the physical copy of this report.

During my visit to the facility, Mr. Peffer indicated that the facility has phased out the use of TDI-containing materials and now uses materials called "low free" polymers. These materials still contain TDI, but at much lower concentrations than the previous materials. I requested copies of SDSs for some of these "low free" materials, which indicated that the TDI concentration is less than 0.01%. The provided records also show that "TDI Free" prepolymer materials are the primary material used at the facility and make up around 90 – 99% of the prepolymers used on a monthly basis. The "standard" or TDI-containing prepolymers make up the remaining 1 – 10% of prepolymer materials used at the facility. The provided SDS' of the TDI-containing prepolymer materials that are used at the facility show TDI contents ranging from 0.4 to 0.8% (Andur 80-5 AP).

The permit also requires the facility to maintain records of annual gallons of primers, coatings, adhesives or other materials used in FG-PREP (S.C. VI.2, VI.3). If more than 200 gallons of primer or more than 25 gallons of adhesives are used per year, than records must instead be maintained on a monthly basis. The records of monthly and annual primer and adhesive usage in FG-PREP indicate that usage of primers and adhesives combined ranged from 0 to 4.17 gallons per year over the previous seven years.

Exotic Rubber is also limited to operation of the laser engraver for 20 hours per month, the plasma cutter for 10 hours per month, and the hose saws for 100 hours per month (FG-MISC, S.C. III.1 to III.3). I was provided copies of monthly usage, which indicated that the plasma cutter had not yet operated at the new facility, the laser engraver operated between 1-3 hours per month, and the hose saws operated between 10 to 41 hours per month. The monthly usage of these pieces of equipment appears to satisfy compliance with the permit requirements.

Conclusion

Based on the on-site inspection and review of the provided records, Exotic Automation and Supply (SRN: P1091) appears to be operating in compliance with the conditions of PTI No. 175-19 and all applicable air quality rules and regulations.

NAME Kaitlyn Jeffett DATE 07/15/2021 SUPERVISOR K. Kelly