

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

U63230080166404

FACILITY: Filtration Systems, LLC		SRN / ID: U632300801
LOCATION: 1340 Wheaton Avenue, Troy		DISTRICT: Warren
CITY: Troy		COUNTY: OAKLAND
CONTACT: Dave Stewart , Consultant		ACTIVITY DATE: 02/13/2023
STAFF: Kerry Kelly	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: Complaint investigation and on-site inspection 2/13/23 and 2/14/23		
RESOLVED COMPLAINTS: C-23-00750		

On February 13 and 14, 2023, I (Kerry Kelly), Michigan Department of Environment, Great Lakes and Energy-Air Quality Division (EGLE-AQD), conducted a self-initiated inspection and odor complaint investigation in the vicinity of Filtration Systems, LLC located at 1340 Wheaton Ave, Troy, MI 48083. The inspection/investigation was in response to an anonymous odor complaint that was forwarded to the EGLE Warren district office. The odor complaint was received by Robert Joseph on February 2, 2023 via email. In the message forwarded to the AQD, the complainant stated that a strong chemical odor is originating from Filtration Systems, LLC. The complainant stated the odor caused them to leave the area because the fumes were making them nauseous. Wind speed and direction at the time of the complaint was recorded as 10 - 15 mph from the south-southwest (SSW).

The odor intensity scale, as mentioned in this report, is:

ODOR SCALE

0 - Non-Detect

1 - Just barely detectable

2 - Distinct and definite odor

3 - Distinct and definite objectionable odor

4 - Odor strong enough to cause a person to attempt to avoid it completely

5 - Odor so strong as to be overpowering and intolerable for any length of time

I arrived in the vicinity of Filtration Systems, LLC at approximately 11:50 AM on February 13, 2023. At the time I arrived, the temperature was 48 degrees Fahrenheit, the wind was from the west-northwest (WNW) at approximately 7 mph, and the sky was clear and sunny. I observed a flag in front of a business on Piedmont Street approximately 400 feet west of Filtration Systems, blowing toward the east-southeast (ESE), verifying the wind direction was from the WNW.

11:50 AM to 11:55 AM, I parked, with all windows of the car rolled down, on Piedmont Street on the south side of the building that houses Filtration Systems, which was parallel/upwind to/of Filtration Systems with respect to wind direction. I did not detect odors while at this location.

11:55 AM to 12:05 PM, I parked, with all car windows of the car rolled down, in the parking lot on the east side of the building that houses Filtration Systems, which was downwind of Filtration Systems. I did not detect odors while at this location.

12:08 PM to 12:13 PM, I parked, with all windows of the car rolled down, in a parking lot approximately 840 feet west of Filtration Systems, which was upwind of Filtration Systems. I did not detect odors while at this location.

Following the odor observations, I drove to Filtration Systems. I entered Filtration Systems and introduced myself to the people standing near the door. I showed my photo credentials, gave my business card, and explained the purpose of the visit to someone identifying themselves as the consultant for Filtration Systems. The consultant, Dave Stewart, Omega Home Consultants, LLC, gave me his card.

According to Dave, Filtration Systems moved to 1340 Wheaton in Troy at the end of 2022 and began operating in January 2023. The building that Filtration Systems is located is divided into approximately 10 suites separated by cinder block walls. According to Dave, the suites do not share a ventilation system.

During the facility walk-through, I observed one conveyorized parts washer. Emissions from the parts washer are ducted to a stack. Dave stated the blower and stacks were added to the parts washer the week prior to my inspection, in an effort to mitigate odors in the building. The parts washer, according to Dave, is used

to clean heating, ventilation, and air conditioning system (HVAC) filters for various businesses including powder coating facilities, oil cutting facilities, and cigar bars. I saw about 10-15 dirty HVAC filters near the parts washer. The parts washer was not being operated during the inspection on February 13, 2023. The cleaning solution for the parts washer is heated to 140 Fahrenheit using a 400,000 Btu/hour, natural gas-fired heater based on information in the washer manual that the washer operator, Sam, showed me. The manual indicates the parts washer is a JRI Industries MCCA-1000. According to the specifications sheet on JRI Industries website, the MCCA-1000 has a wash tank capacity of 200 gallons (Attachment 1). The machine sprays the cleaning solution onto the filters through several spray heads on the top and sides of the washer. Following the wash cycle, the wash solution is filtered and drains to the wash tank. Sam stated the facility cleans about 70-80 filters a day over approximately 3-4 hours.

Dave stated Filtration Systems agreed to only wash parts after 4:00 PM, when other tenants in the building would not be present. Dave showed me gallon bottles of a detergent, Ecolab Heavy Duty Degreaser, that he said was used to clean filters. During a follow-up inspection on Feb. 14, 2023, Filtration Systems employees identified a different product, BD-20, as the cleaner used in the parts washer. The employees said the Ecolab Heavy Duty Degreaser was used to clean floors.

The Safety Data Sheet (SDS) for the Ecolab Cleaner states it contains 5-10% Sodium Carbonate, 1-5% Tetrasodium EDTA, and 0.1-1% Sodium hydroxide undiluted. The SDS also states the cleaner has a pH of 11.5 when diluted. Volatile organic compound (VOC) data is not listed in the Physical & Chemical Properties section of the SDS. I did not see any components that would be considered a VOC listed on the back of the bottle. None of the Chemical Abstracts Service (CAS) numbers on the ingredients list on the back of the bottle are included in EPA's list of Hazardous Air Pollutants (HAP).

Dave sent the SDS for BD-20 via email (Attachment 2). The SDS states BD-20 contains 1-5% 2-butoxyethanol, 1-5% disodium oxosilanediolate, 1-5% proprietary surfactants, and 0.10-1.0% N,N-bis (Carboxymethyl)-glycine, trisodium salt. The SDS also states the cleaner has a pH of 12.5 -14 and it is completely soluble in water. The boiling point listed in the SDS is 171 degrees celcius (338 degrees Fahrenheit) and boiling range of 212 degrees Fahrenheit). VOC data is not listed in the Physical & Chemical Properties section of the SDS. 2-butoxyethanol (also known as ethylene glycol monobutyl ether (EGBE) and butyl cellosolve) is considered a VOC. None of the Chemical Abstracts Service (CAS) numbers on the ingredients list in SDS are included in EPA's list of Hazardous Air Pollutants (HAP). EPA removed 2-butoxyethanol from the list of HAPs in November 2004.

Aqueous based parts washers are exempt from the requirement to have a permit to install per Rule 281(2)(k). Aqueous based parts washer, as defined in Rule 101(q), means a tank containing liquid with a volatile organic compound content of less than 5 %, by weight, and at a temperature below its boiling point that is used to spray, brush, flush, or immerse metallic and/or plastic objects for the purpose of cleaning or degreasing.

During the inspection on Feb. 13, 2023, I also observed a 353,125 Btu/hour, natural gas-fired power washer and small booth. The size and fuel of the power washer was listed on the nameplate I inspected. The power washer and booth are used to clean HVAC filters as well. Fuel-burning equipment which is used for space heating, service water heating, electric power generation, oil and gas production or processing, or indirect heating and which burns sweet natural gas, synthetic natural gas, liquefied petroleum gas, or a combination thereof and the equipment has a rated heat input capacity of not more than 50,000,000 Btu per hour is exempt from the requirement to have a permit to install per Rule 282(2)(b)(i).

Dave and I arranged to meet at Filtration Systems on February 14, 2023 at 10:00 AM so I could see the conveyorized parts washer being operated.

On February 14, 2023, I arrived in the vicinity of Filtration Systems at approximately 9:45 AM. I conducted odor observations at the following locations and times prior to the inspection on Feb. 14, 2023. At the time I arrived, the temperature was 38 degrees Fahrenheit, the wind was from the south-southeast at approximately 2 mph, and the sky was clear according to Weather Underground. I observed a flag in front of a business on Piedmont Street approximately 400 feet west of Filtration Systems, blowing in toward the north, verifying the wind direction was from the south/south-southeast.

9:47 AM - 9:50 AM - I parked, with all windows of the car rolled down, in a parking lot approximately 840 feet west of Filtration Systems, which was parallel/upwind to/of Filtration Systems. I did not detect odors while at this location.

9:51 AM - Driving with all car windows rolled down, I observed a just barely detectable (0-1 intensity) vinger-like odor just northeast of the front door of Filtration Systems. I stopped for about a minute in the spot where I detected the vinegar-like odor. The odor lasted about 1 second.

9:53 AM - 9:55 AM - I parked, with all windows of the car rolled down, on Piedmont Street on the south side of the buiding that houses Filtration Systems, which was upwind of Filtration Systems. At this location, I just barely detected a distinct and definite cannabis-like odor (2 intensity) for about 20 seconds. Driving through the parking lot on the west side of the building that houses Filtration Systems, I again detected a distinct and definite, consistent, cannabis-like odor.

I entered Filtrations at approximately 10:00 AM on Feb. 14, 2023 and spoke with the equipment operator, Sam. The parts washer was being operated when I entered the facility. Sam said they began running the parts washer at about 8:30 AM and remained running until shorly after I arrived in the facility. While the parts washer was being operated, I observed a puddle of grey liquid on the ground under the parts washer and vapors escaping the entrance to the parts washer (Attachment 3). There is an approximately 6 inch diameter floor drain about 5 feet from the exit of the parts washer. I did not see cleaning solution entering the drain while I was at the site. I did not see vapors escaping near the exit of the parts washer. Sam put a cloth near the hood opening on both sides of the parts washwasher to show air was being drawn to the duct work. Sam also showed me the BD-20 used in the parts washer. The cleaning product was stored in closed containers.

Dave arrived between 10:00 AM and 10:30 AM on Feb. 14, 2023. While the machine was being operated, Dave and I went outside so I could view the stack and conduct odor observations. I did not see any visible emissions from the roof above Filtration Systems. I could not see the stack. Between 10:36 - 10:39 AM, I just barely detected (intensity 1) a metal cleaning-like odor for approximatly 1-2 seconds while standing approximately 100 feet north of the entrance to Filtration Systems.

I left the facility at approximately 10:55 AM and conducted odor observations at a location approximately 300 feet north-northwest of Filtration Systems between 11:01 AM and 11:06 AM. I did not see any visible emissions or detect odors at this location.

Regarding the odor complaint, the chemical/metal cleaning-type odors detected during this inspection were not of the intensity or duration expected to cause an unreasonable interference with the comfortable enjoyment of life and property. Additional complaints or information is necessary before futher action can be taken.

NAME K. Kelly

DATE 3/7/2023

SUPERVISOR Joyce