

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Self Initiated Inspection

U63170010338254

FACILITY: American Expedition Vehicles		SRN / ID: U631700103
LOCATION: 51960 W. 12 Mile Road, Wixom		DISTRICT: Southeast Michigan
CITY: Wixom		COUNTY: OAKLAND
CONTACT: Dave Yegge , Operations Manager		ACTIVITY DATE: 12/09/2016
STAFF: Tyler Salamasick	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: Site inspection and exemption demonstration.		
RESOLVED COMPLAINTS:		

### Background

American Expedition Vehicles (AEV) is an automotive assembly facility located at W, 51960 Twelve Mile Rd, Wixom, MI 48393. AEV is located in a primarily light industrial area with the nearest residential structure approximately 1000 feet west of the facility. There is also a high density housing development approximately 2000 feet to the east of the facility. AEV was inspected on Friday, December 9 2016 by Tyler Salamasick, Environmental Quality Analyst of the Michigan Department of Environmental Quality, Air Quality Division. The intent of the inspection was to determine the facility's compliance with the Federal Clean Air Act Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended, and Michigan's Air Pollution Control Rules. AEV does not currently hold air quality permits with the MDEQ for this address. The site contact is the Operations Manager, Dave Yegge. At this location, AEV has approximately 70 employees and operates Monday through Friday from 7 am until 5 pm. The facility will operate on Saturday as needed, but does not operate on Sunday.

### Inspection

Site arrival was at 2:10 pm Friday afternoon. I was greeted by Operations Manager, Dave Yeggie. Upon meeting I presented my State of Michigan identification card, informed the facility representative of the intent of my inspection and was permitted onto the site. AEV designs and assembles custom four wheel drive vehicles. The primary vehicle that they modify is the Jeep Wrangler. They also modify the Dodge 3500. Dave estimated that the facility modified approximately 100 Dodge Rams, 50 Jeeps to truck conversions, and 500 Jeeps. During my inspection Dave showed me the assembly floor. The facility had three primary areas. The three sections were storage, painting and assembly. The storage area consisted of primarily vehicle part storage. There were no processes in the storage area that appeared to generate air contaminants. The painting area had two single paint booths and one double paint booth. The facility used one paint booth for top vehicle parts and the other for painting underbody parts. The double booth was used for preparing the parts. Part preparation consisted primarily of sanding the parts prior to painting. The facilities booths were equipped with HVLP paint guns. Dave indicated that the facility uses water based paints and uses well under 200 gallons of paint minus water per booth per month. During my inspection the filters appeared to be in good condition. I did not observe any gaps in the filters that would allow for the air to bypass the control equipment. AEV appears to meet the permit exemption R 336.1287(c). I informed Dave to keep records of his paint usage per month. The assembly area was primarily used for adding custom parts. The custom parts included but were not limited to: front and rear bumpers, head lights, seats, suspension, tires and air intake systems. The facility did cut and weld the frame of the Jeep to truck conversion. This process appears to be permit exempt pursuant to R 336.1285(i). The facility also appears to meet ~~some~~ permit exemptions for drilling and cutting per the permit exemption R 336.1285(vi)(B).

Dave Yegge provided the MDEQ AQD an electronic copy of AEV's quarterly purchase records. Dave indicated that the average monthly usage is less than 28 gallons per month. I used the clear coat (autoclear HS+2 pack fast) to calculate the potential to emit for the facility including all three booths. Although AEV uses the third booth primarily for prep work the booth does have the potential to be used for painting. Clear coat normally contains the highest VOC and HAP content and using its VOC and HAP content is a more conservative estimate of the potential to emit that the facilities water based paints. The calculations are as follows.

$$4.17 \text{ lbs/gal VOC} * (200 \text{ gallon per month}) * (3 \text{ booths}) (12 \text{ months}) / 2000 \text{ lbs/ton} = 15.012 \text{ tpy VOC}$$

15.012 ton VOC \* (20% Toluene) = 3.0024 tpy single HAP

15.012 ton VOC \* (25% Aggregate HAPs) = 3.753 tpy aggregate HAPs

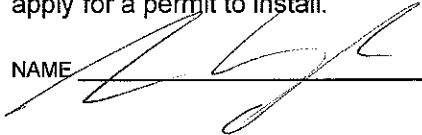
\*\*\*Aggregate HAPs consisted of 15-20% Toluene and 1-5% Xylene

Based on my calculations AEV is below the potential to emit threshold for VOCs (40 tpy), single HAP ( 10 tpy), and aggregate HAPs (25 tpy).

Conclusion

Based upon the inspection and document review AEV appears to be in compliance with Michigan's Air Pollution Control Rules. AEV has a potential to emit that does not exceed limits for Rule 201, but if AEV considers increasing the number of booths at the facility or the VOC/HAP content of its paints they may want to apply for a permit to install.

NAME



DATE

1/12/17

SUPERVISOR

SK