

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

M425959343

FACILITY: Midwest Bus Rebuilding Division, Midwest Bus Corp.		SRN / ID: M4259
LOCATION: 1940 STEWART, OWOSSO		DISTRICT: Lansing
CITY: OWOSSO		COUNTY: SHIAWASSEE
CONTACT: Michael Huff , Technical Services & Training		ACTIVITY DATE: 08/11/2021
STAFF: Julie Brunner	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection of Midwest Bus Corporation		
RESOLVED COMPLAINTS:		

I conducted a scheduled inspection of Midwest Bus Corporation located at 1940 Stewart Street in Owosso on August 11, 2021. The facility is a minor source of all criteria air pollutants and hazardous air pollutants (HAPs). The facility does not report emissions or pay any air fees. Midwest Bus Corporation was last inspected on July 23, 2015. Also, Midwest Bus has an additional paint booth, production, and storage facility (Transit Services of Owosso (N3346)) located at 1070 Aiken Road in Owosso.

Arrived: 11:05 am

Weather: 82°F, wind S @ 12 mph, UV Index 5

Departed: 12:15 pm

Facility Contacts:

Mr. Michael Huff, Technical Services and Training, 800-627-6627 ext. 875, mikeh@midwestbus.com

Mr. Ronald Roach, Production Supervisor, 989-723-5241, ronaldr@midwestbus.com

Facility Description:

Midwest Bus re-manufacturers transit buses. They commonly contract with bus owners for refurbishing buses with new motors, rebuilt axels, new or cleaned interiors, and new paint jobs. The cost of refurbishment is about 2/3 of the cost of a new bus or less. Midwest Bus contracts with municipal transit authorities across the United States.

The facility is situated on eight and one half acres of land in an industrial area and consists of a factory area of 32,080 square feet, with an attached office area of 2,400 square feet. In addition, there is a paint facility of 2,640 square feet detached from the main facility. The main building provides for controlled unit rebuilding, sandblasting, and window rebuilding in addition to the main work areas of the building. The Midwest Bus Aftermarket Parts Division (adjacent) is situated on two acres of land and consists of a warehouse and assembly area of 9,000 square feet, office area of 1,000 square feet, and a separate shipping and receiving storage area of 2,980 square feet.

Permit to Install (PTI) History:

PTI 402-85 for two paint spray booths – voided, using Rule 287(2)(c) which allows for up to 200 gallons per month of coating application.

PTI 403-85 for sandblasting operation – voided as no longer valid due to modification of sand blasting bay into a contained washing bay

Previous Inspections:

11/09/2011, Dan McGeen, No Violations

3/28/2014, Dan McGeen, No Violations

7/23/15, Nathan Hude, No Violations

Emission Unit / Equipment Identification

Emission Units / Equipment	Control equipment	Exemption Rule
Portable sanders	Portable vacuum filtration units	Rule 285(2)(l)(vi)(B)
Small sand blast cabinet		Rule 285(2)(l)(vi)(B)
Metal fabrication activities		Rule 285(2)(l)(vi)(B)
Auto body repair room		Rule 285(2)(l)(vi)(B)
Welding		Rule 285(2)(i)
Two large paint booths	Mat/panel filters	Rule 287(2)(c)
Spray cans, used in small paint booth	Mat/panel filters	Rule 287(2)(b)
3 used oil furnaces		Rule 282(2)(b)(iv)
Natural gas-fired space heaters		Rule 282(2)(a)
Small waste oil tanks		Rule 284(2)(d)

Inspection:

I arrived onsite and went into the front office. No odors or visible emissions were observed outside of the facility. I asked for Mr. Michael Huff while introducing myself and explaining the intent of my visit. Mike met me in the lobby. We discussed the process and toured the facility with various staff including Ron Roach.

The basic process of re-manufacturing a bus has 3-stages:

1. Strip the bus
2. Axels and engines work
3. Paint

Each bus has a work order/QA/QC specification sheet, and a kit containing all materials for the repairs including the paint and paint filters. Initially when buses arrive, they are inspected, washed, drivetrains are rebuilt, and engines are replaced followed by painting and interior cleaning/replacement. The plant has two sides. A tall side for tall buses, and a short side for shorter buses. The mechanics move from bus to bus to complete their part of the work order. Each side has three (3) overhead box/bag filters that exhaust to the plant air to filter any particulates created as the bus is worked on.

On the walk through the plant, I saw the portable sanders and dust vacuum systems, the wash rack that replaced the sandblasting area, welding area, and the small paint booth with mat panel filters where paint is applied from spray cans. We went through the drive train area where the axels are rebuilt and new brakes are installed.

Plant heat is provided by natural gas-fired space heaters and two (2) waste oil furnaces. In the warehouse building is another waste oil furnace. The waste oil to fire the furnaces is from the buses that are being re-manufactured. The oldest furnace is located in what is called the tank room and has not been operated in a while. Two (2) new waste oil furnaces were installed in 2019. Both are Clean Energy (CE) Heating Systems Waste Oil Furnaces. The one installed in the plant has a 1,400 CFM exhaust, and the one installed in the warehouse has a 1,700 CFM exhaust. The exhaust stacks appear vertical to the ambient air. According to the manufacture's information, the CE – 180 Waste Oil Furnace has an output of up to 175,000 BTU and can comply with all EPA regulations.

There are two (2) paint booths in a separate building next to the re-manufacturing plant. Both booths are large enough to contain the entire bus, and one is a tall booth for tall buses and one is a short booth for shorter buses. An exhaust system is installed and filters are put in place with each bus paint job. Each employee has their own spray guns. A spray gun cleaner/washer with collection is used for gun cleaning. Thinner is used to clean the guns.

Records of paint and thinner usage were provided as requested. Usage is estimated based on the invoices for these materials, and represents paint and thinner usage for the 2 booths at Midwest Bus and the 1 booth at Transit Services of Owosso. Below is usage estimated by the month based on invoice information provided to AQD.

Month - Year	Paint (gallons)	Hardener (gallons)	Thinner (gallons)
August - 2020	9.75	0.25	4.0
September - 2020	0	0.625	0
October - 2020	4.938	0	0
November - 2020	42.0	4.0	10.0
December - 2020	3.5	0.5	106.0
January - 2021	41.0	4.5	10.0
February - 2021	75.0	8.0	18.0
March - 2021	40.375	4.0	115.0
April - 2021	43.0	0	8.0
May - 2021	67.75	11.0	12.0
June - 2021	84.0	4.25	124.0
Total:	411	37	407

Less than 200 gallons per month of paint and hardener was used in a total of 3 paint booths demonstrating compliance with the exemption Rule 287(2)(c).

Based on a conservative estimate that the coatings and thinner would have a VOC content of 6.5 lb/gallon, a worse-case VOC emission rate for 11-months was estimated as follows:

$$(411 \text{ gal} + 37 \text{ gal} + 407 \text{ gal}) * 6.5 \text{ lbs VOC/gal} * (1 \text{ ton} / 2000 \text{ lbs}) = 2.8 \text{ tons VOCs}$$

Estimates for 12 months (year) result in approximately 3 tons/year of VOC demonstrating that the Midwest Bus facilities are true minor sources.

Summary:

Midwest Bus appeared to be in compliance with applicable air quality rules and regulations.



Image 1(IMG 0237) : Box filter above bus re-manufacturing



Image 2(IMG 0242) : Interior of paint booth



Image 3(IMG 0245) : Small blast cabinet



Image 4(IMG_0248) : Small paint booth



Image 5(IMG_0250) : Waste oil furnace

NAME Julie L. Brunner

DATE 9/10/2021

SUPERVISOR B.M.