DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

M425924709

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:** 03/28/2014
STAFF: Daniel McGeen	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Scheduled inspection of facility, and discussion of determining facility's Potential to Emit.		
RESOLVED COMPLAINTS:		

On 3/28/2014, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an inspection of Midwest Bus Corp.'s Midwest Bus Rebuilding Division, located at 1940 West Stewart Street, Owosso, along with an adjacent and contiguous property, 1930 West Stewart Street, where they have their Aftermarket Parts Division.

Environmental contacts:

Mr. Michael Huff; Technical Services & Training; 989-723-5241, ext. 853; mikeh@midwestbus.com

Mr. George Gunn; Director of Operations; 989-729-5866; georgeg@midwestbus.com

Facility description:

Midwest Bus, as indicated on their website, is the largest re-manufacturer of city transit buses in the United States. They also build bike racks, perform some bus repairs, and lease or occasionally sell buses to transit agencies.

Emission units:

Midwest Bus Rebuilding Division 1940 West Stewart Street emission units

Emission units	Control equipment	Relevant exemption	Operating status, at time of inspection
Portable sanders	Portable vacuum filtration units	Rule 285(l)(vi)(B)	Compliance
Metal fabrication activities		Rule 285(l)(vi)(B)	Not operating
Auto body repair room		Rule 285(l)(vi)(B)	Not operating
Welding		Rule 285(l)	Not operating
Two large paint booths	Mat/panel filters	Rule 287(c)	Compliance
Small paint booth for parts	Mat/panel filters	Rule 287(c)	Not operating
Spray cans, used in small paint booth	Mat/panel filters	Rule 287(b)	Not operating

Midwest Bus Aftermarket Parts Division 1930 West Stewart Street emission units

Emission units	Control equipment	Relevant exemption	Operating status, at time of inspection
3 or 4 used oil-fired furnaces		Rule 282(b)(iv)	Compliance

Regulatory overview:

The Midwest Bus Rebuilding Division operates two surface coating booths under Rule 287(c), which exempts them from the requirement of Rule 201 to obtain an air use permit. They also operate a number

of other processes which are exempt from Rule 201, as listed in the tables of emission units, above.

The Potential to Emit (PTE) for this facility is currently unknown. PTE is the maximum amount of regulated air contaminants a facility could emit if each emission unit operated at its maximum design capacity 24 hours per day, 365 days per year, using the highest emitting raw materials at the site, with air pollution control devices turned off. PTE is generally much higher than what a facility actually emits, over the course of a year.

The PTE is used to determine if a facility is classified as a major or minor source of air contaminants. For criteria pollutants (carbon monoxide, nitrogen oxides, sulfur dioxides, volatile organic compounds, lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns), a major source is one where the PTE for any single air contaminant is 100 tons per year (TPY) or more. For Hazardous Air Pollutants (HAPs), a major source is one where the PTE of a single HAP is greater than 10 TPY, or the PTE of all HAPs combined is 25 TPY or greater. The PTE for this facility needs to be determined for both criteria pollutants and HAPs, to determine whether it is major or minor, and if any additional regulations apply.

The Rebuilding Division is assigned a State Registration Number (SRN), M4259. The adjacent Aftermarket Parts Division could potentially be considered part of the same stationary source, as it appears to be contiguous and adjacent, and may satisfy other criteria of the definition of a stationary source. During the process of the PTE determination, this can be further explored.

Fee category:

This facilty is not currently considered to be a major source for criteria pollutants or Hazardous Air Pollutants (see discussion on PTE), and so is not considered a Category I source for fees. Also, it is not subject to any federal New Source Performance Standards, nor to any federal Maximum Achievable Control Technology standards, so it is not considered a Category II or III fee source, respectively. Finally, it is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting Systems (MAERS).

Recent history:

This facility was last inspected by AQD on 11/9/2011. Since then, the facility has undergone a recent expansion, adding the Aftermarket Parts Division, adjacent to the Rebuilding Division. They also purchased an industrial building and site, once owned by Vaungarde, on Aiken Street, with its own SRN, N3346. The inspection of that facility is discussed in a separate activity report.

Location:

The Midwest Bus Rebuilding Division and the Aftermarket Parts Division are side by side, on Stewart Street. To the immediate north is an industrial site, with another industrial site beyond that. To the immediate south, on the opposite side of Stewart Street, is a residential neighborhood. To the east are small businesses and residences, and to the southeast are residences. To the immediate west and southwest is an industrial park.

Arrival:

This was not an unannounced inspection. I had tried earlier this week, on 3/24, to conduct an inspection, but plant staff were not available, and we had agreed upon today's date. On 3/24, I provided Mr. George Gunn, Director of Operations, and Mr. Michael Huff, Technical Services & Training, with a copy of the DEQ brochure "Environmental Inspections: Rights and Responsibilities."

Before arriving at the plant today (3/28), I drove north and south along Chestnut Street, downwind of the plant. I could not detect any odors from Midwest Bus. Weather conditions were lightly raining, and 44 degrees F, with winds out of the west southwest at 5-10 miles per hour.

I discussed PTE with Mr. Huff, and provided a print out of the Clean Air Assistance PTE webpage. I explained PTE would need to be calculated for this facility, to determine their classification as a major or minor source. I also explained that it their potential made them a major source, they could obtain a synthetic minor permit which would contain enforceable restrictions to limit their PTE. Mr. Huff mentioned that they do have some current production bottlenecks, which greatly restrict the number of buses that they can paint in their two large paint booths.

Inspection:

We entered the shop area, where a number of buses from their Massachusetts Transportation Authority (MTA) contract were being sanded, with hand held portable sanders. They have about a dozen portable dust collectors with vacuum collection systems, which have been upgraded recently. They will be installing these to capture dust, at the point of generation, for the sanders. The filtered air will be exhausted into the general, in-plant environment. This should meet the criteria for the Rule 285(l)(vi)(B) exemption, for processes which exhaust into the general, in-plant environment, both before and after the controls are installed.

Additionally, they have a total of 12 particulate filtration units within the shop, for removing particulates and odors from the in-plant air. These devices are suspended from the ceiling, and use paper filters as well as bag (fabric) filters.

Metal fabrication; Rule 285(l)(vi(B):

Metal fabrication is done, as needed. Their machining processes were not running, at the time of the inspection. They exhaust into the general, in-plant atmosphere.

An axle rebuilding area is equipped with a power washer that uses water, and a surfactant. It is a closed system, and recycles 99% of the water it uses. Rule 285(l) exempts equipment, and any exhaust system or collector exclusively serving the equipment, for surface preparation of metals by use of aqueous solutions, except for acid solutions.

Auto body repair room; Rule 285(l)(vi)(B):

These processes were not in use at the time of the inspection. They do not do any fiberglass lay up work, such as with a chop gun. An Owosso based company, MRM Manufacturing Inc., makes fiberglass reinforced plastic parts for them.

Welding; Rule 285(i):

They do not perform a lot of welding. It is done on an as needed basis.

Two large paint booths; Rule 287(c):

The Rule 287(c) exemption allows up to 200 gallon per month of surface coating use, for a surface coating line. They use roughly 20 gallons of coatings per week, or 80 gallons per month.

They do not designate one paint booth specifically for primer, and the other for color coats. They tend to prime and paint each bus in the same location. They prefer to use the lower paint booth, as it is larger, as well as taller, and reserve the second paint booth for overflow work. A bus was curing in the large booth, and no painting was taking place in the smaller booth.

They allow the buses to cure in place, once they have received a coating of primer or paint. A coating has to completely dry, before they can mask over it with tape, to prepare for the next color. Since they apply five color top coats of paint to the MTA buses, they can only paint one bus about every 4 days. In order to move buses through the paint booths more quickly, they would have to let them cure outdoors, which would not be desirable.

The two booths use mat/panel style particulate filters, which are changed every time they are used, Mr. Huff explained. This would appear to be in keeping with the requirement of Rule 287(c)(ii) to have a properly installed and operating particulate control system for any exhaust system that serves only coatig spray equipment.

As previously stated, they generally use about 80 gallons of coatings per month at this site. Each bus is associated with a "paint kit," which provides information on exactly what coatings need to be applied. After the inspection, on 4/28, I e-mailed Mr. Huff, to request an example of a month's worth of paint records, for each paint booth at this site, to verify compliance with Rule 287(c)(iii), which requires that monthly coating use records be maintained on file, and made available upon request.

On 4/22, I e-mailed to Mr. Huff the URL for the DEQ Potential to Emit Workbook, and provided contact information for Ms. Anita Singh, Environmental Compliance Specialist with the DEQ's Office of Environmental Assistance. Ms. Singh will contact Mr. Huff, to provide any needed guidance as Midwest Bus determines their Potential to Emit for the Rebuilding Division, Aftermarket Parts Division, and their Aiken Street facility.

On 5/7/2014, Mr. Huff e-mailed me a Material Safety Data Sheet (MSDS), attached for reference, for PPG's "Conventional Epoxy Primer," in response to a request I made on 5/5 for information on their coating with the highest volatile content. I then conducted a very rough PTE calculation, as seen below. This primer weighs 12.27 lbs/gallon, has 66.6% solids, and has a volatile content of 33.4% w/w.

33.4/100 VOC x 12.27 lbs/gal = 4.10 lbs/gal VOC

Under Rule 287(c), each paint booth can use up to 200 gallons per month of coatings, or 2,400 gal/yr.

2 paint booths x 4.10 lbs VOC/gal x 2,400 gal/yr x ton/2,000 lbs = 9.84 tons VOC

At 9.84 tons per year, the PTE for VOCs is well below the 100 TPY major source threshold.

For HAPs, the primer contains toluene at 1-5%, and xylene at 1-5% (o-xylenes, m-xylenes, and p-xylenes are HAPs), and ethylbenzene at 0.1-1%. For either toluene or xylene, 5% of the volatile content =

5/100 x 9.84 tons VOC = 0.49 tons

For the HAP ethylbenzene, 1% of the volatile content =

1/100 x 9.84 tons VOC = 0.10 tons

Under this rough calculation, toluene and xylene would each have a maximum PTE of 0.49 TPY, well below the threshold of 10 TPY for a single HAP. Additonally, the aggregate HAPs would have PTE well below the 25 TPY threshold, as seen below:

0.49 TPY toluene + 0.49 TPY xylene + 0.10 TPY ethylbenzene = 1.08 tons HAPs

Small paint booth for parts; Rule 287(c), and Rule 287(b), for spray cans:

They have a small paint booth, with limited production. It is used maybe 6-12 times per week, for painting parts. Most of the work is done using hand held aerosol spray cans, which are exempted under Rule 287(b). The booth has mat/panel filters, which are changed on an as needed basis, since use of this paint booth varies.

For PTE for the small booth, most of the work is done with spraycans, which are unregulated. If all the painting was done with spray guns, though, the PTE for VOC would be 4.92 TPY VOC, the PTE for a single HAP would be 0.25 TPY, and the PTE for aggregate HAPs would be 0.05 TPY (see calculations below).

4.10 lbs VOC/gal x 2,400 gal/yr x ton/2,000 lbs = 4.92 tons VOC

For either toluene or xylene, 5/100 x 4.92 = 0.25 tons HAP

For ethylbenzene, 1/100 x 4.92 tons VOC = 0.05 tons HAP

After the buses are painted, they go through a final sub-assembly, where trim, lighting, handles on doors, etc. are installed. Then, they go to final assembly, and to their warehouse for a double check. Next is a road test, followed by a Quality Assurance/Quality Control check.

3-4 used oil burning heaters; Rule 282(b)(iv)

No manufacturing takes place in the adjacent warehouse, which is located at 1930 West Stewart Street. However, they have 3 or 4 used oil furnaces, which burn used oil generated on the geographical site. They are used in the spring and fall, to heat the building. The unit I observed appeared fairly small. I will inquire if the heaters each have a heat input capacity of 500,000 Btu/hr or less, which is the maximum capacity allowed by the Rule 282(b)(iv) exemption.

Conclusion:

I could not find any instances of noncompliance with air regulations during the inspection. Mr. Huff and other facility staff were very helpful, and cooperative. The potential to emit for the facility will need to be determined, however, to determine whether this facility is a major source of minor source of air emissions, and to see if there may be any additional air requirements which might apply. My rough PTE calculations earlier in this report are based on a MSDS for their coating with the highest VOC content, and suggest that the facility will not likely be a major source for criteria pollutants or for HAPs, based on the three paint booths at the site. A formal PTE calculation would need to include all processes at the site, however, not just the paint booths.

As noted earlier in this report, on 4/28, I e-mailed a request to Mr. Huff for one month's worth of coating use records, for each paint booth at the Stewart Street plant. These records will be reviewed, upon receipt.

NAME _____ DATE 5/7/2014 SUPERVISOR _____