

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

N252559338

FACILITY: BENTELER AUTOMOTIVE INCORPORATED		SRN / ID: N2525
LOCATION: 3721 HAGEN DR SE, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Lauren Madsen , Regional Safety Health Environmental Specialist		ACTIVITY DATE: 08/10/2021
STAFF: April Lazzaro	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro arrived at the facility to conduct an unannounced, scheduled inspection and met with Bill Norton, Technical Services Manager for the facility. I informed Mr. Norton of the purpose of the visit, and learned that Lauren Madsen, Regional Safety Health Environmental Specialist NAO would be arriving soon to assist us.

FACILITY DESCRIPTION

Benteler Automotive Corporation, Hagen Drive facility conducts robotic tig welding of stainless steel exhaust manifolds and converter systems for the automotive industry. Tube bending is also conducted as part of production. Additionally, there are three dynamometer test cells that conduct thermal durability testing on exhaust manifolds. The facility operates pursuant to Opt-out Permit to Install No. 467-97, which limits the potential to emit of carbon monoxide (CO), nitrogen oxides (NOx) and hazardous air pollutants (HAPs).

This facility also has a Stipulation for Entry of Final Order by Consent or Consent Order No. 3-2015. This Consent Order was issued for repeated failure to submit the Michigan Air Emissions System (MAERS) annual reports. The order requires Benteler Automotive Corporation to submit the MAERS reports timely, and the monetary penalty was \$15,540.00.

Benteler Automotive Corporation Hagen Drive facility employs ~550 people and operates three shifts, six days a week.

COMPLIANCE EVALUATION

During the pre-inspection, discussions I learned that there have been changes to the baghouses that control particulate emissions from the facility welding operations. There used to be eight baghouses, but now there are six. An addition to the facility to accommodate a larger shipping and receiving area had recently been conducted, and as a result there were baghouses removed and two new units installed.

Upon the arrival of Ms. Madsen, we discussed the active Consent Order and discussed that the company can request that it be terminated since they have been timely with their MAERS submittal since the Consent Order was entered in 2015.

We also observed the area where the three dynamometer test cells (dynos) are located. We met with the supervisor, Bob Tramontin and discussed the equipment and operating scenarios. I learned that the dynos only operated for the first six months of the year and may not run again for the remainder of 2021. Only dyno cells 1&3 are currently operational. The dyno went out in cell #2 and hasn't been

repaired. Benteler is currently evaluating whether or not to upgrade the dyno lab. We discussed the need for a modification to the Permit to Install if the changes as described were going to move forward. Benteler staff has already been in contact with a consultant to evaluate this project.

During our observations of the dyno lab, we discussed the electronic probe for temperature monitoring and the gas flow meter which are required by the permit. The electronic temperature is monitored by the lab computer and if the temperature is not above 1,000°F, the dyno test will be automatically halted. There have been no changes to any of the dyno stacks. Fuel usage is closely monitored as required by the permit, and also used to ensure the integrity of the underground fuel storage tanks.

Following our time in the dyno lab, we inspected each of the 6 baghouses.

The baghouses are numbered 1-8, which were not observed in numerical order. All baghouses are horizontal cartridge style filtration systems that collect particulate from the welding operations. All units appeared to be less than 50,000 CFM and have historically operated pursuant to the Rule 285(2)(i) exemption for welding operations.

Due to the baghouse removal/replacements the units have been re-numbered. Records documenting monthly inspections for 2021 were requested and received timely via email. (see attached) Baghouse #1 is a new Torit Delta P Plus cartridge style unit, that is located outside the dyno lab area. During the inspection the pressure drop was 4.5" H₂O, and as such it was currently in automatic cleaning mode. Baghouse #2 is one of the existing units (formerly #4). It was currently not operating and was locked out as they were waiting for new belts. These belts had been identified as requiring replacement over the past several months of PM's. Pressure drop monitoring is operational and designed to go into automatic cleaning mode at 4.0" H₂O. Baghouse #3 (formerly #5) is a Donaldson Torit cartridge style unit. The unit is designed to monitor fan amperage (vs. pressure drop) . It utilizes a color coded scale (see attached photo) that is associated with the fan amperage to identify proper operations. The unit color was "green" and the fan amperage was 18.9mA during the inspection. Baghouse #4 (formerly #6) is a Donaldson Torit cartridge style unit. The color code was green, and the fan amperage was 13.4mA during the inspection. This unit also monitors pressure drop which was 2.5" H₂O during the inspection. Baghouse #5 (replacement for former unit #7) was a Donaldson Torit cartridge style unit. The color code was green, and the fan amperage was 21.57mA during the inspection. Baghouse #6 (formerly #8) is an existing unit. The color code was green and the fan amperage was 61mA. This unit also monitors pressure drop which was 1.8" H₂O.

All units have been relabeled to designate the new numbering system. Visually, each baghouse was clean, and no obvious issues were identified during the inspection. Filter cartridges are replaced all at once on an as needed basis.

As we walked through the plant, we observed the welding and manufacturing lines. The internal plant environment was clean. A variety of the production lines utilize a rust inhibitor if the product requires cleaning. These units are electrically fired and internally vented and are serviced by Safety Clean. The product used is either SP-

840 or Prowash. These units are exempt from permitting pursuant to Rule 285(2)(r) (iv).

PTI No. 467-97

The permit was written with the intent to be a facility-wide Opt-out permit for CO, NOx and HAPs.

The permit limits total CO emissions at the facility to 88 tons per 12-month rolling time period. Records of emissions from 2020 to the present were requested and promptly provided. (see attached) Reported 12-month rolling CO emissions through June 2021 are 5.2 tons.

The permit limits total NOx emissions at the facility to 88 tons per 12-month rolling time period. Records of emissions from 2020 to the present were requested and promptly provided. Reported 12-month rolling NOx emissions through June 2021 are 0.7 tons.

The permit limits total HAP emissions at the facility to 22 tons and individual HAP to 8.9 tons per 12-month rolling time period. Records of emissions from 2020 to the present were requested and promptly provided. Reported 12-month rolling total HAP emissions through June 2021 are 6.1 tons. The highest reported individual 12-month HAP emissions through June 2021 is chromium associated with welding at 3.98 tons.

There are daily emission rates established in the permit, based on fuel usage that is required to be tracked monthly, and prorated to a daily rate. The daily limit is 600 gallons, and the highest monthly fuel usage for the past two years was in January of 2020 with 2233.2 gallons used. This equates to a prorated daily usage of 72 gallons of fuel. The annual fuel usage is limited to a total of 150,000 gallons calculated on a 12-month rolling total. The reported rolling total through June 2021 is 12,733 gallons.

CONCLUSION

Benteler Automotive, Inc. located at 3721 Hagen Drive SE, Grand Rapids, MI was in compliance at the time of the inspection.

NAME April Lazzaro DATE 08/16/2021 SUPERVISOR 

