

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

N654066400

<b>FACILITY:</b> GATES Technical Center		<b>SRN / ID:</b> N6540
<b>LOCATION:</b> 2975 Waterview Drive, ROCHESTER HLS		<b>DISTRICT:</b> Warren
<b>CITY:</b> ROCHESTER HLS		<b>COUNTY:</b> OAKLAND
<b>CONTACT:</b> Stephen Jabour , Health, Safety & Environmental Specialist		<b>ACTIVITY DATE:</b> 11/29/2022
<b>STAFF:</b> Mark Dziadosz	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> FY 2022 Inspection		
<b>RESOLVED COMPLAINTS:</b>		

On Tuesday, November 29, 2022, I, Michigan Department of Environment Great Lakes and Energy-Air Quality Division staff Mark Dziadosz, conducted an announced scheduled inspection of Gates Technical Center (N6540), located at 2975 Waterview Drive Rochester Hills, Michigan. The purpose of this 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 Department of Environment, Great Lakes and Energy (EGLE-AQD) Administrative Rules.

I arrived at Gates Technical Center at 10:00 AM and met with Steve Jabour, Health, Safety, & Environmental Specialist. Upon arrival, Steve and I discussed the operations at the facility as well as the reasons for voiding PTI 330-98. I was then taken on a tour of the facility.

Gates Technical Center is open from 8:00 AM until 5:00 PM Monday through Friday. The facility performs diagnostic testing on various rubber belts and tensioners for the industrial, automotive, forestry, agricultural, and bicycle industries among others. No production occurs at the facility. The belts and tensioners which are tested are produced at other Gates facilities throughout North America and around the world. The facility also tests some belts and tensioners fabricated by its competitors. Durability testing on the belts and tensioners takes place in two electric labs and short-term testing occurs in one of six firing engine labs. The engines in these labs are fired by gasoline. The short-term testing in the firing engine labs is conducted to evaluate the performance of the belts and tensioners at different levels of torque and horsepower. Each short-term diagnostic test in a firing engine lab consists of 50 run cycles for a duration of 75 minutes followed by a visual and mechanical inspection of the belt or tensioner lasting for approximately 30 minutes. This process repeats itself for up to 8 hours of total testing or until the belt or tensioner breaks. One cycle consists of running the engine for 50% of the time in idle mode and for 50% of the time at varying loads. Load for each cycle varied between 30% to 80% over the course of the test. Torque on the belts and tensioners is evaluated at low load and horsepower is evaluated at high load. The type of belt/tensioner being tested and the type of engine used to conduct the

testing is constantly in flux so the equipment used at the facility is not fixed. The facility has been tapering down engine testing activities. In 2021 only 15 gallons of gasoline fuel usage was reported to MAERS and according to Stephen Jabour, at the time of the inspection, no gasoline fuel usage had occurred in 2022. From 2016-2020, the facility reported approximately 1,000 gallons of gasoline usage per year to MAERS.

The facility was issued PTI #330-98 for the engine test cells. However, the facility voided the PTI on 6/23/2004 stating the activities were exempt via R283 (1)(a)(ii) since the equipment is used to physically analyze belts, pulleys, and dampers. In addition, the typical engine used in the firing engine labs is a 2-liter 4-cylinder engine with less than a 10 MMBTU per hour maximum heat input. The engines used at the facility are exempt from PTI requirements pursuant State Air Pollution Control Rule 285 (g). However, R278 (1)(b) states the exemptions specified in R280-R291 cannot be used if any activity results in actual emissions greater than the significance levels defined in R336.1119. Additionally, R278a indicates to be eligible for a specific exemption, any owner or operator of an exempt process or process equipment must be able to provide information demonstrating the applicability of the exemption. To this extent, Gates provided potential to emit (PTE) calculations in 2004 & 2009 showing the engine test cells were not above the significance levels in R336.1119. These calculations were based on CARB EMFAC2002 idle emission factors and USEPA mobile source emission factors. The calculations indicated that the six firing engine labs have the following PTE: CO-44 tons per year (tpy); PM -0.15 tpy; NOx-5.5 tpy; and VOCs-2.4 tpy. These calculations were based on running the firing engine labs 8760 hours a year on gasoline (gasoline combustion results in higher emissions than diesel combustion; facility no longer burns diesel fuel). The calculations also assumed that the engines would be run 100% of the time under summer conditions. Summer conditions generate more emissions than winter conditions. However, these calculations were based on an idling engine and therefore not appropriate since the engines idle during testing only approximately half the time.

The facility also has several chemical labs which are used to evaluate the various physical and chemical properties of the belts and tensioners after they have been tested. The following properties are evaluated in the chemical labs: thermal properties; vibrational properties; elastic properties; decompositional properties; and properties associated with failure. Each firing engine lab is equipped with its own stack which exhausts vertically unobstructed to the ambient air along the north outside wall of the building. The stacks are identical and are approximately 25 feet above ground level.

In addition to the electric durability testing labs, firing engine test labs, and the various chemical labs, the facility has a “Graymills” parts washer and a “Kohler” natural gas-fired electric generator. The “Graymills” parts washer appeared to be properly maintained and operated during the inspection and its lid was closed. ArmaKleen 4 in 1 Cleaner Concentrate is used in the parts washer. This is an aqueous, alkaline, concentrated cleaner that is diluted in water. The washer is serviced by Safety-Kleen. The parts washer is exempt from PTI requirements pursuant State Air Pollution Control Rule 281(h). The SDS for the parts cleaner solvent is attached to this report. The electric generator is a “Kohler Model #50RZGB” generator with a 63 kVa and 50 kW rated capacity. 50 kW is the equivalent of 68 horsepower. The generator’s serial number is 0743296 and it was manufactured in September 2002. The generator is used to provide emergency back-up power in the event of an electrical outage at the facility. The emergency generator is exempt from PTI requirements pursuant State Air Pollution Control Rule 285(g), but it is subject to RICE MACT Subpart ZZZZ for emergency spark compression engines with a horsepower of less than 500 constructed prior to June 12, 2006, at area sources of hazardous air pollutant (HAP) emissions. EGLE AQD has not accepted delegation for emergency generators at area sources of HAP emissions, however.

After the inspection on 11/29/2022, Gates was provided an option to provide updated emission factors and calculations that more accurately reflect actual operations or to make 5 of the engine test cells inoperable and therefore limit the PTE to be under the thresholds in R336.1119. Gates chose to make 5 of the cells inoperable. The exhaust ports in these 5 cells will be welded shut, the day tanks will be removed, and the fuel lines will be sealed shut. Note: the only test cell that is currently able to provide gasoline is Cell #4. The fuel is used for maintenance purposes (snowblowing). Gates will be given 3 months to complete the work and will provide photos once the work is complete.

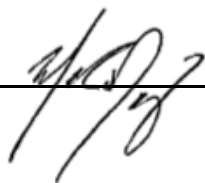
## Compliance

Any documents provided by Gates Technical Center can be found in: S:\Air Quality Division\Staff\Mark Dziadosz\N6540 Gates FY23 Inspection or the facility plant file.

## Conclusion

The facility appears to be operating in compliance with permits the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451.

NAME



DATE February 22, 2023

SUPERVISOR

