

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

N654023645

FACILITY: GATES Technical Center		SRN / ID: N6540
LOCATION: 2975 Waterview Drive, ROCHESTER HLS		DISTRICT: Southeast Michigan
CITY: ROCHESTER HLS		COUNTY: OAKLAND
CONTACT: Stephen Jabour , Health, Safety & Environmental Specialist		ACTIVITY DATE: 11/13/2013
STAFF: Erik Gurshaw	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: 2014 Targeted Inspection		
RESOLVED COMPLAINTS:		

SRN: N6540

COMPANY: Gates Technical Center

COMPANY ADDRESS: 2975 Waterview Dr.; Rochester Hills, MI 48309

PURPOSE OF INSPECTION: Targeted

CONTACT PERSON: Mr. Stephen Jabour, Health, Safety & Environmental Specialist (Ph: 248-260-1063; Fax: 248-260-1060; E-mail: sjabour@gates.com)

COMPANY PHONE NUMBER: 248-260-1063

On November 13, 2013, AQD staff, Erik Gurshaw, conducted a targeted, unannounced inspection at Gates Technical Center located at 2975 Waterview Dr. in Rochester Hills, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; and Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Rules.

Upon arriving at the facility, AQD staff introduced themselves and stated the purpose of the visit to Mr. Stephen Jabour, Health, Safety & Environmental Specialist. Mr. Jabour indicated that Gates Technical Center is open from 8:00 AM until 5:00 PM Monday through Friday and employs approximately 110 people. Gates Technical Center is a research and development laboratory which is exempt from Permit-To-Install (PTI) requirements pursuant State Air Pollution Control Rule 283. 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 can be fired by diesel or 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 typical engine used in the firing engine labs is a 2 liter 4 cylinder engine having less than a 10 MMBTU per hour maximum heat input. Therefore, the engines used at the facility are exempt from PTI requirements pursuant State Air Pollution Control Rule 285 (g). 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.

The company submitted Potential-To-Emit (PTE) calculations from its six firing engine labs to Iranna Konanahalli of the AQD on November 23, 2009. These calculations were based on CARB EMFAC2002 idle emission factors and USEPA mobile source emission factors. The calculations indicated that the firing engine labs have the following PTE with respect to CO, PM, NOx, and VOCs: 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). 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. In any event, the calculations were based on worst case scenarios and indicated that the PTE from the firing engines is under the significant levels in Rule 119(e) of Michigan's Air Pollution Control Rules. The November 23, 2009, PTE calculations are attached to this report. For some reason, these calculations were not in Gates Technical Center's file at the Southeast Michigan District Office. The company's 2012 MAERS Report indicated that the following amounts of CO, NOx, PM, and VOC were emitted by the facility in 2012: 12 tons of CO; 0.3 tons of NOx; 0.02 tons of PM; and 0.45 tons of VOC. 2012 emissions as reported to MAERS are also attached to this report.

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. TCI 105 H.D. non-aqueous parts washer solvent manufactured by Tetra-Chem International, Inc. in Bright, Ontario is used in the parts washer. This solvent is a completely biodegradable product containing no hazardous chemicals. The parts washer is exempt from PTI requirements pursuant State Air Pollution Control Rule 281(h). The MSDS 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. The State of Michigan AQD has not accepted delegation for emergency generators at area sources of HAP emissions, however.

As a result of this inspection, it was determined that Gates Technical Center meets the definition of a research and design facility and that the PTE from its 6 firing engine labs is below significant levels as defined in Rule 119(e) of Michigan's Air Pollution Control Rules. The parts washer at the facility is exempt from PTI requirements pursuant Rule 281(h) and the emergency generator is exempt from PTI requirements pursuant Rule 285(g). The emergency generator is subject to RICE MACT Subpart ZZZZ, however, but the State of Michigan has not accepted delegation for MACT Subpart ZZZZ at area sources of HAP emissions. The records cited in this report are attached in the order in which they were cited.

NAME Erik A. GurskawDATE 11/15/13SUPERVISOR CJE