

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

N756463445

FACILITY: MARTIN TECHNOLOGIES		SRN / ID: N7564
LOCATION: 55390 LYON INDUSTRIAL DR., NEW HUDSON		DISTRICT: Warren
CITY: NEW HUDSON		COUNTY: OAKLAND
CONTACT: Brian Jones , Vice President		ACTIVITY DATE: 06/17/2022
STAFF: Adam Bognar	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On June 17, 2022, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, I, Adam Bognar conducted a scheduled inspection of Martin Technologies (the "facility") located at 55390 Lyon Industrial Drive, New Hudson, MI. The purpose of this inspection was to determine the facility's compliance status with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division (EGLE-AQD) rules; and Permit to Install No. 352-05A.

I arrived at Martin Technologies at round 9 am. I initially met with Chris, Facility Manager. I identified myself and stated the purpose of the inspection. My contact at the facility, Brian Jones, was in a meeting. Chris explained that he had limited understanding about air regulations, but that he would show me around until Brian got out of his meeting. Chris showed me around the plant floor.

I asked if we could look at the storage tanks. Chris led me to the storage tank area behind the facility. I observed a 15,000 gallon tank that is split into two separate 7,500 gallon chambers. According to Chris, one container contains diesel fuel and the other contains 93 octane gasoline. Chris explained that they had to dispose of a large quantity of fuel recently because it had sat in the tank for too long. Chris stated that they hired a company to pump out the tank. Based on my observations, these tanks are exempt from Rule 201 requirements pursuant to Rule 284(2)(g)(iii). I did not check compliance with Rule 703 during this inspection. Under Rule 703, the tank is required to have a submerged fill pipe and a vapor balance system. Based on my brief research, the tank is subject to 40 CFR, Part 63, Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Gasoline Dispensing Facilities (MACT CCCCCC). I did not evaluate compliance with MACT CCCCCC. AQD has not taken enforcement delegation of MACT CCCCCC.

At around 9:30 am, I met with Brian Jones, Vice President. Brian showed me around the facility again and gave me more detail about current operations.

Martin Technologies builds, tests, and evaluates automotive engines. This includes gasoline, diesel, and more recently, electric, and hydrogen engines. The process includes designing, engineering, machining of parts, assembly, and testing the engines. According to Brian, there are around 4 shop workers and several office staff that operate this facility between 8 am and 5 pm Monday through Friday.

Previously, the facility was in the business of building portable engine testing equipment for other companies in the engine manufacturing business. According to Brian, this part of the business is not currently operated. I observed 8 portable engine test carts at the facility located in the permitted test bays. Brian stated that they are no longer in use, but that six of them could be used if needed. The two test bays closest to the dynamometer cells have been dismantled (pipes capped and equipment disassembled).

Brian explained that they have stopped dynamometer testing combustion engines almost entirely. He stated that they started to lose customers before the pandemic and lost a bunch more when the Covid-19 pandemic hit.

There are five permitted test cells. I observed that the dynamometers were removed from test cells 1, 2, 3, & 4. Brian stated that the dynamometers were sold to a plant in Mexico.

One of the test cells (cell 2) has a new dynamometer that is used to test electric drivetrains. The performance test cell still has a functional dynamometer which, according to Brian is run approximately once per month. Brian anticipates most of their business going forward will be in testing electric or other specialty drivetrains.

Adjacent to the permitted dynamometer cells, there is another dynamometer test cell. This test cell is used for hydrogen engine testing. The cell is equipped with a hydrogen generator that generates hydrogen through water electrolysis. Although the byproducts from hydrogen combustion are more environmentally friendly than the byproducts of other types of fuel combustion, nitrogen oxides are created from burning the hydrogen with ambient air. Martin Technologies did not obtain a permit to install prior to installing this hydrogen engine dynamometer test cell. Brian stated that the cell was installed approximately 1 year ago.

Brian stated that the hydrogen test cell is only used for internal R&D; however, I could not reach Brian for further clarification after this inspection. A violation notice was sent to Martin Technologies seeking compliance with Rule 201 for the hydrogen engine dynamometer test cell.

In one section of the building I observed an employee in the process of building a race car engine. There are various machining equipment in the facility used to machine engine parts. This includes a lathe, mill machine, drill press, sand blaster, and other machining equipment. I observed that all of this machining equipment is exhausted to the general in-plant environment. Based on my observations, the machining equipment is exempt from Rule 201 requirements pursuant to Rule 285(2)(l)(vi)(B).

Records

I requested records from Martin Technologies on June 9, 2022. I called Brian Jones and sent him an email requesting the records. I asked him to provide the records to me via email by the date of this inspection, June 17, 2022. He confirmed receipt of this email. Alternatively, I let him know that we could review the records on-site if that would be easier.

During the inspection, the records were not made available to me. Brian stated that the administrative staff that keeps the records was not available to show me the records due to an unexpected absence. I requested that Brian send me the records by June 24, 2022.

I did not receive any records or communication from Brian by June 24, 2022. I emailed Brian on June 27th, 2022 asking for the records and an explanation for not sending them to me by the agreed upon date. Brian responded stating that he would get me the records and call me on June 28, 2022. I did not receive the records or a phone call from Brian on June 28, 2022.

I called Brian on June 30, 2022 at around 1 pm to get an update on the records I requested. Brian did not answer. I left a voicemail requesting a call back.

I have not seen any records from this facility at this time (7/13/2022), nor have I received an explanation for why the records are not available. A violation notice was sent to the facility to address this issue.

MAERS

Martin Technologies did not submit a 2021 MAERS report. A letter dated July 1, 2022 was sent to Martin Technologies by AQD stating that AQD is unable to provide a billable emissions estimate because no MAERS report was submitted in 2021. The letter requests that Martin Technologies submit the MAERS report by September 1, 2022 so that an accurate fee for 2023 can be assessed. A violation notice will be sent to Martin Technologies for failing to submit MAERS for the 2021 calendar year.

Permit to Install No. 352-05A

FGENGTESTING

This flexible group permits internal combustion engine testing equipment consisting of four engine dynamometer test cells for development and testing, one engine dynamometer test cell for performance engine testing, and eight test bays for non-loaded engine testing. Engines tested in the dynamometer test cells burn unleaded gasoline, leaded gasoline, and diesel fuels, and are exhausted out SV1, SV2, SV3, and SV4. Engines tested in the test bays also burn unleaded gasoline, leaded gasoline, and diesel fuel and are exhausted out SV4.

Section I – Special Conditions (SC) 1,2,3: Establishes emission limits for FGENGTESTING. CO emissions are limited to 86.9 tons per year and 6.0 lb/gallon of gasoline. NOx emissions are limited to 35.7 tons per year. Martin Technologies did not provide records of these emissions. A violation notice was sent to the facility.

Section II – Special Condition 1: States that the permittee shall only burn unleaded gasoline, leaded gasoline, and diesel in engines/test bays. Based on my observations during this inspection and the statements made by facility staff, these are the only types of fuels used. According to facility staff, the only storage tank on-site contains diesel fuel and 93 octane gasoline (premium). Martin Technologies did not provide records of fuel usage. A violation notice was sent to the facility.

Section II – Special Condition 2: Limits total fuel usage in FGENGTESTING to 62 gallons per hour. Of the 62 gallons per hour, the leaded gasoline usage shall not exceed 10 gallons per hour. Brian stated that operators used to watch the fuel gauges on the computer screen to ensure compliance with this limit, but now fuel usage is so low that this would never happen. Martin Technologies did not provide records of fuel usage. A violation notice was sent to the facility.

Section II – Special Condition 3: States that total fuel usage for FGENGTESTING shall not exceed 117,000 gallons per 12-month rolling time period. Of the 117,000 gallons, the gasoline usage shall not exceed 27,000 gallons per 12-month rolling time period. Of the 27,000 gallons, the leaded gasoline usage shall not exceed 200 gallons per 12-month rolling time period. Martin Technologies did not provide records of fuel usage. A violation notice was sent to the facility.

Section V – Special Condition 1: States that upon request by the AQD District Supervisor, the permittee shall verify CO and/or NOx emission rates from FGENGTESTING by testing at the owners expense. AQD is not requesting this test at this time. This test has never been completed based on the records I reviewed and remarks from past inspection reports.

Section VI – Special Conditions 1,2,3,4: Specifies recordkeeping requirements for FGENGTESTING. Martin Technologies must keep records of any test reports, number of days operated per month, gallons of fuel used per hour, gallons of each fuel used per month, rolling 12-month usage records of fuel usage (separate totals for total fuel, leaded gasoline, regular gasoline), and CO/NOx emission calculations on a monthly and 12-month rolling basis. Martin Technologies did not provide these records. A violation notice was sent to Martin Technologies for failing to maintain these records.

FGFACILITY

Section I – Special Condition 1: Establishes a Title V opt-out limit for CO emissions of 89.8 tons per year. Martin Technologies did not provide records of CO emissions. A violation notice was sent to the facility for failing to maintain these records.

Section II – Special Condition 2: States that total fuel usage for the engines being tested in FGFACILITY shall not exceed 117,000 gallons per 12-month rolling time period. Of the 117,000 gallons, the gasoline usage shall not exceed 27,000 gallons per 12-month rolling time period. Martin Technologies did not provide records of fuel usage. A violation notice was sent to the facility for failing to maintain these records.

Section II – Special Condition 3: States that natural gas usage for FGFACILITY shall not exceed 70MM cubic feet per 12-month rolling time period. Martin Technologies did not provide records of natural gas usage. A violation notice was sent to the facility for failing to maintain these records.

Section IV – Special Condition 1: Requires the permittee to install, calibrate, maintain, and operate in a satisfactory manner, a device to monitor and record the natural gas usage in FGFACILITY on a continuous basis. Brian stated that natural gas has not been used in any engines at the facility for around 10 years. I observed that the natural gas line has been disconnected from the test cell which used to test natural gas engines (used for hydrogen testing now). Brian stated that he uses the natural gas meter attached to the building to demonstrate compliance with this condition. Martin Technologies did not provide records of natural gas usage. A violation notice was sent to the facility for failing to maintain these records. I did not request calibration records for the natural gas meter.

Section VI – Special Condition 1 & 2: Specifies recordkeeping requirements for FGFACILITY. Martin Technologies must keep records of the gallons of gasoline/diesel used per month, total gasoline (unleaded and leaded) usage on a 12-month rolling basis, total fuel used in engine testing (total gasoline and diesel) on a 12-month rolling basis, MMcf natural gas used per month and per 12-month rolling period, CO emission calculations on a monthly and 12-month rolling basis, and any other information that may be needed to quantify CO emissions. Martin Technologies did not provide these records. A violation notice was sent to the facility for failing to maintain these records.

Heated Wash Tank

There is a heated wash tank used to clean parts. There is a steam vent that is ventilated through the roof to the outside air. A detergent is used in the parts cleaner, called Aquatene GM571. I collected the safety data sheet for Aquatene GM571. The detergent contains sodium carbonate, sodium metasilicate, oxirane methyl polymer, and diethylene glycol mono-butyl ether (3%). Based on my research, diethylene glycol mono-butyl ether is not a hazardous air pollutant as defined by the EPA. Based on my observations, the heated wash tank is exempt from Rule 201 requirements pursuant to Rule 281 (2)(k).

Cold Cleaners

There are two mineral spirits based cold cleaners on-site. One cleaner had the lid open during my inspection. It did not appear to be in use at the time. I informed Brian that the lids must remain closed on the solvent cleaners when not in use. Brian closed the lid of the cold cleaner. Proper usage instructions were posted inside the cold cleaners on the bottom of the lid. The cold cleaners are approximately 2'x2'. Based on my research, mineral spirits have a Reid vapor pressure less than 0.6 psia (around 0.2 psia). I observed a device for draining solvent off parts. The cold cleaners comply with Rule 707 based on my observations/research. Based on my observations, these cold cleaners are exempt from Rule 201 requirements pursuant to Rule 281(2)(h).

Compliance Determination

Martin Technologies is not operating in 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; Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division (EGLE-AQD) rules; and Permit to Install No. 352-05A.

Martin Technologies did not provide any of the records I requested as part of this inspection. This includes records of fuel use, operating time, and CO/NOx emissions. This is a violation of PTI No. 352-05A – FGENGTSTING – Special Conditions I.1, I.2, I.3, II.2, II.3, VI.1, VI.3, and VI.4, and PTI No. 352-05A – FGFACILITY – Special Conditions I.1, II.2, II.3, VI.1, and VI.2.

Martin Technologies installed and commenced operation of a hydrogen dynamometer test cell at the facility without obtaining a permit to install. This is a violation of AQD Rule 201.

Martin Technologies did not submit a MAERS report for the 2021 calendar year. This is a violation of Rule 202 of the administrative rules promulgated under Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

NAME Adam Bogner

DATE 7/13/2022

SUPERVISOR K. Kelly