

M4836

MAWILA

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

M483645180

FACILITY: ILMOR ENGINEERING, INC.		SRN / ID: M4836
LOCATION: 43939 PLYMOUTH OAKS BLVD, PLYMOUTH TWP		DISTRICT: Detroit
CITY: PLYMOUTH TWP		COUNTY: WAYNE
CONTACT: Joseph Hoffman , Governmental Compliance Specialist		ACTIVITY DATE: 07/13/2018
STAFF: Stephen Weis	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Compliance inspection of the Ilmor Engineering, Inc. facility in Plymouth. The Ilmor facility is scheduled for inspection in FY 2018.		
RESOLVED COMPLAINTS:		

Location:

Ilmor Engineering, Inc.
(SRN M4836)
43939 Plymouth Oaks Blvd.
Plymouth 48170

Date of Activity:

Friday, July 13, 2018

Personnel Present:

Steve Weis, DEQ-AQD Detroit Office
Joe Hoffman, Governmental Compliance Specialist, Ilmor Engineering

Purpose of Activity

A self-initiated inspection of the Ilmor Engineering, Inc. facility (hereinafter "Ilmor") in Plymouth was conducted on Friday, July 13, 2018. The Ilmor facility was on my list of sources targeted for an inspection during FY 2018. The purpose of this inspection was to determine compliance of operations at the Ilmor facility with applicable rules, regulations and standards as promulgated by Public Act 451 of 1994 (NREPA, Part 55 Air Pollution Control), and with applicable Federal standards. The facility is also subject to the terms and conditions of DEQ-AQD Permit to Install (PTI) No. 208-98J.

Facility Site Description

The Ilmor facility is located on a roughly 5.5 acre parcel on the east side of Plymouth Oaks Boulevard in the Plymouth Oaks Business Park, which is located on the east side of Sheldon Road south of the M-14 freeway in Plymouth. The Business Park is bounded on the east and south by the CSX Transportation railroad tracks and associated right-of-way property. The Ilmor facility is located on the eastern end of the Business Park. The Tower Automotive facility (SRN N7871) is located directly to the south of Ilmor, while the property immediately to the north is currently an undeveloped, wooded lot. Alta Plastics and Crown Forklifts are located across the street, to the west of Ilmor. The property's eastern boundary backs up to the CSX property, which includes a railyard. The nearest residential area begins south of the railroad tracks, about ¼ mile south of the Ilmor facility.

The Ilmor facility consists of a roughly 44,000 square foot building. According to the company's website (www.ilmor.com), the facility houses design, engineering, engine building, engine testing/dynamometer, and development operations. Ilmor began operations at this location in 1998.

Facility Operations

Ilmor Engineering, Inc. is part of Ilmor Engineering Limited, a company based in the United Kingdom. According to the company website, Ilmor develops and manufactures high performance racing and recreational marine

engines. Ilmor Engineering, Inc. is the American arm of the company, and is based at the Plymouth facility which serves as Ilmor's North American headquarters.

Ilmor designs, develops and produces automotive racing engines and commercial marine engines (pleasure craft type boats), as well as some engines for racing boats. The automotive racing engines are used in vehicles that compete in the ARCA (Automobile Racing Club of America) stock car series, NASCAR, and Indy car. Ilmor develops Indy car series engines for Honda and Chevrolet, and they manufacture Indy car engines for Chevrolet at their Northampton, UK facility. Marine engines are manufactured at Ilmor's facility in Mooresville, NC. These engines are designed and developed at the Plymouth facility. Part of the design and development process involves testing engines for performance and durability. The Plymouth facility currently has four dynamometer engine test cells that are used to test automotive and marine engines. The test cells can operate on a 24 hour per day, 7 days per week schedule, but the typical operating schedule for the test cells is 7:00am through 4:00pm, Monday through Friday with occasional shifts on weekends. An exception to this operating schedule is durability testing, during which an engine is tested in a longer, continuous test run. The test cells are located in the eastern portion of the building; this portion of the building is structured like a separate wing that is connected to the rest of the building via a corridor. A rendering of the facility is attached to this report that shows the locations of some of the operations in the building.

The Ilmor facility also has a couple of engine component assembly operations on-site. There is a marine engine exhaust manifold production operation located in the eastern portion of the main building (the main building being the portion of the facility's building infrastructure located to the west of the portion of the building that contains the engine test cells). This operation consists of three CNC lathe-type machines that produce cast iron or aluminum exhaust manifolds. The machines are vented in-plant, and metal turnings from the lathes are collected for recycling. Adjacent to exhaust manifold production area is a small milling area that is used to produce pistons for racing engines that is also vented in-plant. The exhaust manifold production currently operates two shifts from Monday through Friday, from 7:00am through 4:00pm, and from 4:00pm through 12:00am.

There is also an engine production operation located in the southern part of the building, just behind the facility's office area. Here, automotive racing engines are serviced and reassembled; the Plymouth facility does not perform the initial/original manufacturing of these engines. Per Indy car racing regulations, a fixed number of racing engines are produced. Ilmor currently supplies engines for 11 Indy cars. An 8 cylinder marine engine is also assembled in this portion of the facility. The marine engine production is of a low volume, typically 20-50 per year.

The western end of the building contains the office portion of the facility.

I was told that building heat at the facility is provided by an HVAC system, with a few ceiling mounted natural gas-fired heaters in the larger, more open portions of the facility, namely in the area of the marine engine exhaust manifold production operation. There are no boilers at the facility.

From the perspective of air quality regulations, the following is a listing of the process equipment that is included in the Ilmor facility's current DEQ-AQD permit:

- FGTestCells – four 1,000 hp dynamometer engine test cells in which engines are tested for various performance parameters. The engines that are tested in the test cells are permitted to be fueled with methanol, ethanol, unleaded gasoline, or leaded gasoline.
- FGPartsCleaners – this flexible group currently lists 11 solvent-based parts cleaners and 4 water-based parts cleaners.

Inspection Narrative

I arrived at the facility at 9:45am. I entered the main entrance, and I was met in the lobby area by Joe Hoffman. After signing in at the security desk, Joe and I proceeded to a conference room in the office area of the facility to begin the site visit.

We first discussed the facility background. Joe provided the company background, stating that Ilmor produces automotive racing and commercial marine engines. He told me that Ilmor moved to the Plymouth facility from a location in Redford Township in 1996, and that the Plymouth facility serves as Ilmor's North American

headquarters. Joe told me that the marine engines produced by Ilmor are built at the company's North Carolina facility, and that the racing engines are built at Ilmor's facility in Northampton, UK.

Joe told me that some of the racing engines that have been developed and tested at the facility were carbureted engines that ran on leaded fuel. In order to meet permit limits for lead, Ilmor tried to modify the stack flow with fans to achieve greater dispersion. The use of leaded gasoline and the effort to address lead emissions were the focus of the last few iterations of the facility's Permit to Install (specifically, PTI Nos. 208-98H, I and J). Joe told me that the racing engine series that involved the use of leaded fuel was short-lived, and that leaded fuel engines are no longer being tested at the facility. I inquired whether there are any future plans to test engines that use leaded fuel, and Joe replied that there are no plans at this time. He also told me that the facility is no longer testing engines that use methanol; this fuel was used by some competitive racing automotive and boat engines.

Joe provided the operating schedule of the facility, which is typically from 7am – 4pm Monday through Friday, with an occasional weekend. He provided the caveat that the test cells are capable of operating on a 24/7 basis, and that if a durability test is being run, it can last part normal operating hours. He also mentioned that the facility produces marine engine exhaust manifolds, with production occurring over two shifts from 7am-midnight, Monday through Friday. Joe said that the facility currently has 82 employees.

We left the conference room, and began the walkthrough of the facility by walking outside to look at the engine test cell ambient exhaust stacks. The stacks for Test Cells A, B and C are located on the north side of the building. Joe told me that each of these test cells has a dual exhaust, with each bank of the engine exhausting a yolk, with the exhaust being drawn by a fan to a single stack for ambient discharge. The exhaust stack for Test Cell D is located at the southeast corner of the test cell portion of the building. We observed the storage tank on the east side of the building. Joe provided that the storage tank has a 6,000 gallon storage capacity, and that it is divided into three compartments (2,000 gallons each) for storage of the various fuels used at the facility. The storage tank is a dual-walled interstitial construction. Joe told me that the monitoring system for the storage tank was recently checked by an outside contractor.

We proceeded inside of the building, and first visited the area where the marine engine exhaust manifolds are produced. I looked at the three CNC lathe machines, and observed one of them in operation. I took a look at some of the manifolds that had been produced awaiting shipment offsite. I inquired as to how the building is heated. Joe told me that the building has an HVAC (heating, ventilation, air conditioning) system, and that there are a few small ceiling-mounted natural gas heaters to supplement heat in areas such as the production area where we currently were. He stated that there are no boilers at the facility. I asked whether Ilmor has any emergency engines/generators to provide back-up power to the facility in case of a utility interruption. Joe told me that the only form of back-up power currently used at the facility is for the computer servers and some individual workstations, which is accomplished with battery-driven reserve power Auxiliary Power Units (APUs).

We then toured the test cell area, taking a look at each of the test cells. Test Cell A is used to test automotive racing engines, and it was undergoing renovations at the time of my site visit. Test Cell B is used to test Indy racing series engines. These engines run on ethanol, and the testing is low volume in terms of use. There are no emission controls on this test cell as there are no regulations on Indy engines, and the tests emulate real-use conditions of the engines being tested. Test Cell C is used to test automotive racing engines. Test Cell D is used for emissions certification testing of commercial marine engines. These engines are catalyzed, and are fueled with unleaded gasoline. The testing that takes place in Test Cell D is used for certification of the marine engines produced by Ilmor with EPA, CARB, and EU (European Union) emission standards. Joe told me that Ilmor makes all of the engines for MasterCraft boats.

After touring the test cells, we walked back to the main building and looked at the cleaning area, which is referred to as the Wash Rack Room. Here, internal components from automotive racing engines, such as crankshafts and connecting rods, are cleaned to remove any cutting oil residue. This area consists of two rooms. Solvent cleaning occurs in the right (east) room. The facility uses Safety Kleen cleaner; Safety Kleen delivers fresh solvent as needed, reclaims the used solvent, and provides Ilmor with records of the material delivered and the amount of solvent that was reclaimed. Ilmor has the orange DEQ-AQD cold cleaning labels posted at each solvent cleaner, as well as on the wall near each workstation. Joe mentioned that he could use some new labels, so I provided him with some. The left (west) room involves aqueous cleaning using a soap and water solution.

We left the Wash Rack Room, and as we walked back towards the office area of the facility, we stopped and looked at the engine production operation that is located adjacent to the office area. I observed a few staff who

were working on servicing engines. There were no marine engines being assembled during the time of my visit. The operations in this area all appear to be exempt from DEQ-AQD permit requirements, and the work stations all look to vent in-plant.

After completing our walk-through of the facility, we went to Joe's office and reviewed facility records. We went through each of the conditions in PTI No. 208-98J, and Joe discussed how the facility demonstrates compliance with the permit. Joe showed me the electronic records that the facility maintains to track the fuel usage and emission calculations associated with the operation of the test cells. Joe demonstrated how the various records, which are kept at different frequencies (i.e. 8 hour, 24 hour, 3 month, 12 month rolling) are kept. We went through several of the entries/cells in the spreadsheet for which Joe showed me the formulas used to calculate and determine the fuel usage and emissions. He also showed me how the recordkeeping database includes color coding in order for him and other facility staff to know how close they are to the permitted limits. The cells in the spreadsheet that contain the required records are colored green if the number is well below the limit, amber if the number is approaching the limit, and red if the number has exceeded the limit. I received some samples of the records, which are attached to this report for reference.

After we completed our discussion about the permit, we had a brief conversation to summarize my site visit. I left the facility at 12:40pm.

Permits/Regulations/Orders/Other

Permits

The Ilmor facility currently has an active DEQ-AQD Permit to Install (PTI), PTI No. 208-98J. This permit covers the operation of the four test cells – EUTestCellA, EUTestCellB, EUTestCellC and EUTestCellD. In the permit, these test cells are addressed in the FGTestCells Flexible Group. This Flexible Group includes an opt-out limit for CO emissions, and various recordkeeping requirements. This permit also contains a Flexible Group, FGPartsCleaners, that addresses the 11 solvent based and four water-based parts cleaners in use at the facility.

The following provides a description of the Ilmor facility's compliance with the Special Conditions put forth by Permit to Install No. 208-98J.

FGTestCells

I. Emission Limits

Special Conditions (SCs) I.1 through I.9 limit the CO, lead, 1,3-butadiene and formaldehyde emissions from the test cells over various averaging times. For CO, there is an 8 hour rolling limit (SC I.1), a tons per year limit (I.2), and a pounds per gallon of gasoline limit (I.3); for lead there is a 3 month rolling limit (I.4) and a pounds per gallon of gasoline limit (I.5); for 1,3-butadiene, there is a pounds per gallon of gasoline limit (I.6), a 24 hour rolling limit (I.7) and a tons per year limit (I.8); and for formaldehyde, there is a tons per year limit (I.9). During the site visit, Joe showed me records dating from 2017 through June 2018 that compile the emissions information for these pollutants. Based on the information that I reviewed, for the random dates that I looked at, the cells in the spreadsheet that contain the recorded values for the emission totals were colored green to indicate compliance.

Joe and I looked through the daily records for June. Due to the size of the spreadsheet, there was no practical way to print much out from it. I requested that Joe print out the entry for June 6, 2018, which I randomly selected while looking at the records, a copy of which is attached to the report for reference. The records are formatted such that an entry for fuel usage, as well as entries for emission estimates for CO and 1,3-butadiene, are provided for each hour, each day that the test cells operate. Formaldehyde is not included in this particular spreadsheet as it only has a yearly emission limit in the permit, and lead is not included as the facility is currently not using leaded fuel, so the short term lead emissions from operation of the test cells are negligible. Joe provided me with another spreadsheet that provides the 12 month rolling emissions of CO, lead, 1,3-butadiene and formaldehyde, a copy of which is attached to this report.

The information for June 6, 2018 indicates that the rolling 8 hour CO emissions were 180.54 pounds (vs. the permit limit of 4,800 pounds/8 hours), and the rolling 24 hour 1,3-butadiene emissions were 0.1733 pounds (vs. the permit limit of 3.74 pounds per day). The spreadsheet that shows the 12 month totals indicates that the 12 month rolling CO emissions for June 2018 were 1.057 tons (vs. the permit limit of 89.6 tpy); the 12 month rolling 1,3-butadiene emissions for June are 0.000923 tons (vs. the permitted limit of 0.05 tpy); and the 12 month rolling formaldehyde emissions for June are 0.0016 tons (vs. the permitted limit of 0.15 tpy). Joe told me that Ilmor removed the 3 month rolling lead emission calculation from the spreadsheet when the facility last used leaded

fuel in a test cell in March 2018. On a side note regarding the color coding used by Ilmor in their spreadsheets to represent the compliance status of emissions, I was shown the color coding associated with the 8 hour CO emission limit during the site visit. The cell is colored green if the calculated 8 hour rolling CO emissions are less than 4,000 pounds per 8 hours, it is colored amber if the CO emissions are between 4,000 and 4,800 pounds per 8 hours, and it is colored red (non-compliance) if the calculated 8 hour rolling CO emissions exceed 4,800 pounds.

Based on the information that I reviewed while at the facility, Ilmor appears to be demonstrating **compliance** with these conditions.

II. Material Limits

Special Conditions II.1 through II.6 limit the fuel usage in the test cells. SCs II.1 through II.5 limit fuel usage over various averaging times. SC II.1 puts forth an hourly limit for all fuels; SC II.1a puts forth an hourly limit for gasoline; SC II.1b limits the hourly use of gasoline in test cells with no emission controls; SC II.2 limits the total amount of all fuels that can be used in an 8 hour rolling time period; SC II.3 limits the total amount of all fuels that can be used in a 24 hour rolling time period; SC II.4 limits the amount of leaded gasoline that can be used in a 3 hour rolling time period; and SC II.5 limits the total amount of all fuels that can be used during a 12 month rolling time period. SC II.6 limits the types of fuel that can be used in the test cells to methanol, ethanol, unleaded gasoline and leaded gasoline. Ilmor has only used these fuels in their test cells, and the facility has ceased using methanol and leaded gasoline.

As with the emission limits, Joe showed me records dating from 2017 through June 2018 that compile the fuel usage records in the various time frames in which fuel usage is limited in the permit. Based on the information that I reviewed during the site visit, for the random dates that I looked at, the cells in the spreadsheet that contain the recorded values for fuel usage were colored green to indicate compliance. The same records that Joe provided for the emission limits also contain fuel usage information that addresses the permit limits. These include the spreadsheet for June 6, 2018, the spreadsheet that shows 12 month rolling totals, and an additional spreadsheet that Joe provided to me that shows the hourly fuel usage, as determined for each clock hour, for Test Cell C for the month of June 2018.

The information from the June 6, 2018 spreadsheet indicates that the highest hourly total fuel usage on that day was 14.8 gallons (vs. the permit limit of 340 gallons per hour), which is also the highest report hourly uncontrolled gasoline usage (vs. the permit limit of 235 gallons per hour). The highest reported 8 hour rolling total fuel usage on that day was 56.52 gallons (vs. the permit limit of 964.4 gallons per 8 hour rolling time period), while the highest reported 24 hour rolling total fuel usage was 68.22 gallons (vs. the permit limit of 1,368.4 gallons per day). Recall that the facility is no longer using leaded fuel, so the reported leaded gasoline usage for June 6 is zero. The spreadsheet that provides 12 month rolling totals shows a 12 month rolling total for all fuels used in the test cells, compiled at the end of June 2018, of 12,428.1 gallons (vs. the permit limit of 36,005.6 gallons per 12 month rolling time period).

Based on the information that I reviewed while at the facility, Ilmor appears to be demonstrating **compliance** with these conditions.

III. Process/Operational Restrictions

There are no process/operation restriction conditions in this PTI.

IV. Design/Equipment Parameters

SC IV.1 states that Ilmor may, at their discretion, maintain any of the test cells with a catalytic oxidizer. Currently, Test Cells A, B and C are uncontrolled. Test Cell D, which is used for emission certification testing, involves engines that are equipped with catalysts. Compliance.

SC IV.2 requires that the facility maintain some kind of measure, such as fencing, signs and/or another type of security measure, to prevent unauthorized persons from entering the facility property and buildings. The building at the Ilmor facility is limited to employee access via an electronic security and entry system. The facility property has some signs noting private property, and there is facility staff and security that monitor the premises. Ilmor also utilizes gates and security cameras around the test cell portion of the facility. The facility is considered as being in compliance with the requirements of this SC.

V. Testing/Sampling

SC V.1 requires that Ilmor sample the lead content of the leaded fuel at the facility. As mentioned previously in this report, Ilmor ceased using leaded gasoline. Joe and I discussed the sampling procedure that was used at the facility prior to leaded fuel being discontinued. Joe told me that every batch was sampled and tested by Paragon Laboratories. The facility was using less than 100 gallons of leaded gasoline per quarter. The last load of leaded gasoline was delivered to the facility in September of 2017, and sampled and analyzed in the first week of October 2017. Joe provided me with a copy of the fuel analysis, which is attached to this report for reference. The sample report shows a lead content of 6.685grams/gallon, which equates to 0.01473 pounds per gallon. This meets the permitted lead in fuel limit in SC I.5. The facility did not appear to be performing the leaded fuel sampling as frequently as required in this SC, but the leaded fuel usage was much lower than the permitted limit; Ilmor reported using just under 265 gallons of leaded gasoline in 2017, and the permitted limit is 5,800 gallons per 3 month rolling period. Compliance.

SC V.2 requires that a representative uncontrolled test cell, utilizing gasoline, be tested for CO emissions to determine a CO emission factor. The test was to be performed by August 17, 2015. This condition was satisfied via a compliance emissions test that was performed on August 12, 2015. A copy of the test report is in the Ilmor facility file. The test report presents the results of the compliance emissions test, which showed a three test run average of 2.10 pounds of CO per gallon of gasoline. This is in compliance with the established CO emission factor of 4.977 pounds of CO per gallon. According to the footnote associated with the Emission Limits in the PTI, the CO emission factor measured during the compliance emissions test is to be used to calculate CO emissions for engine tests in which gasoline is used, and no emission controls are in place.

SC V.3 puts forth that 1,3-butadiene emissions may be required to be tested, upon request from DEQ-AQD. The testing would be performed on a representative, uncontrolled test cell using gasoline. DEQ-AQD has not requested testing for this compound. It was proposed to include 1,3-butadiene emission testing with the CO compliance emissions test that was performed in August 2015 to demonstrate compliance with SC V.2. However, during the finalizing of PTI No. 208-98J, which occurred around the same time that the compliance emissions testing was to take place, it was decided, based on a recommendation of DEQ-AQD Technical Programs Unit (TPU) staff, that testing for 1,3-butadiene from engines test cells typically yields poor results that are below the detection limit. As such, 1,3-butadiene was not tested during the August 2015 compliance emissions test. DEQ-AQD still maintains the ability to request a 1,3-butadiene emissions test.

VI. Monitoring/Recordkeeping

The facility is **in compliance** with the special conditions (VI.1 through VI.5) in this section. Per SC VI.1, Ilmor maintains the required records in the required timeframes.

SC VI.2 requires that monthly records be kept for fuel usage, CO emissions, lead emissions, 1,3-butadiene emissions and formaldehyde emissions. Records for 2017 and 2018 were shown to me during the site visit, and some examples of the records are attached to this report.

SC VI.3 requires the daily records be kept for fuel usage, CO emissions and 1,3-butadiene emissions. Again, records for these parameters were shown to me during the site visit, and some examples are attached to this report for reference.

SC VI.4 requires that certain hourly records be kept for fuel usage. I was told during the site visit that the clock hour fuel usage information is provided by the dynamometer operators, who enter the information on to the facility's server. I was provided with a printout of the records for Test Cell C for June 2018, which shows the clock hour fuel readings for uncontrolled gasoline.

SC VI.5 requires that the facility keep records of each batch of leaded fuel that is delivered to the facility. Joe showed me a sampling of these records. Recall that the facility has ceased the use of leaded fuel, and last received a batch of leaded gasoline in September 2017.

VII. Reporting

There are no reporting requirements put forth in this PTI.

VIII. Stack/Vent Restrictions

The stack parameters specified in this section were evaluated as part of the PTI review process. The stack parameters were not verified during this site visit.

IX. Other Requirements

There are no conditions in this section of the PTI.

FGPartsCleaners

This Flexible Group addresses the solvent and water-based cleaners use in the Ilmor facility's Wash Rack Room. We discussed the conditions in this Flexible Group as we walked through this part of the facility. Ilmor is in compliance with the conditions in the Material Limits section. SC III.1 requires that the solvent-based cleaners not be operated at a temperature of 120°F or greater. I was told that Ilmor operates their solvent-based cleaners at ambient temperature. Regarding the conditions in section IV (Design/Equipment Parameters), all of the solvent-based parts cleaners are equipped with covers that are closed at all times that parts are not being handled (SC IV.1), and the parts cleaners are equipped with baskets that allow cleaned parts to drain back into the cleaner.

Regarding the conditions in section VI (Monitoring/Recordkeeping), Ilmor maintains written operating procedures and has the orange DEQ-AQD cold cleaner stickers posted on all of the solvent-based parts cleaners, and in other locations in the Wash Rack Room. The facility maintains manufacturer's (Safety Kleen) information about the solvent-based cleaners that are used at the facility. Compliance.

Regulations

The engine test cells at the Ilmor facility are subject to the terms and conditions of PTI No. 208-98J, which is a synthetic minor permit for the emissions from the test cells. The PTI limits CO emissions to below the Title V major source threshold. The Ilmor facility is considered a true minor, or area source of HAP emissions. The facility does not have any boilers, and I confirmed with Joe that the facility does not currently utilize any emergency generators or engines. The HVAC and ceiling-mounted heaters should contribute very small amounts of combustion by-product related emissions (CO, NOx), so the facility wide emissions should currently be below the Title V major source thresholds.

40 CFR Part 63, Subpart ZZZZ (the area source portion of the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) does not apply per the provisions of 63.6585, which specifies that a source is not subject if a stationary reciprocating internal combustion engine (RICE) is being tested at a stationary RICE test stand. This facility operates such testing processes and is therefore not subject.

40 CFR Part 63, Subpart PPPPP (National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands) does not apply per the provisions of 63.9285, which specifies that this MACT standard applies only to engine test stands located at a major source of HAPs. The Ilmor facility is a minor (area) source of HAP emissions.

Storage Tank Regulations

As referenced earlier in this report, the Ilmor facility has a fuel storage tank that stores the fuel that is fired in the engine test cells. 40 CFR Part 63, Subpart CCCCCC (National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities) applies to the operation of gasoline storage tanks, including those used at the Ilmor facility. Ilmor utilizes their gasoline storage tank to dispense gasoline into motor vehicle engines, in their case test engines. Per the applicability provisions of this regulation, this type of use classifies the Ilmor facility as a gasoline dispensing facility, or GDF. Ilmor has a relatively low annual fuel throughput, and Subpart CCCCCC puts forth limited requirements on GDF's with a monthly gasoline throughput of less than 10,000 gallons. Facilities with less than 10,000 gallons of monthly throughput do not need to submit an Initial Notification, nor a Notification of Compliance Status, to EPA relating to Subpart CCCCCC. Facilities with less than 10,000 gallons of monthly gasoline throughput are required to implement and maintain management practices, as put forth in 40 CFR 63.11116, that prevent handling gasoline in a manner that results in vapor releases to the atmosphere for extended periods of time. These facilities are also required to maintain records of gasoline throughput to demonstrate that their monthly throughput is less than 10,000 gallons. There are no Federal air quality regulations that apply to the non-gasoline fuel storage tanks at the facility. It should be noted that DEQ-AQD does not have delegated authority for Subpart CCCCCC; EPA is the delegated authority to determine the facility's compliance with this Subpart.

In terms of **State regulations**, some of DEQ-AQD's Part 7 rules apply to certain gasoline storage tanks. Specifically, Rule 703 requires that storage tanks at gasoline distribution facilities that were installed after July 1, 1979 and have a storage capacity of greater than 2,000 gallons be equipped with a permanent

submerged fill pipe, and such tanks that are located in the metropolitan Detroit area be equipped with a vapor balance system (or an equivalent control system that has been approved by DEQ). As with the Federal regulations, there is not an applicable State air quality regulation that is applicable to storage tanks for fuels other than gasoline.

Compliance Determination

Based upon the results of the July 13, 2018 site visit and a review of the facility's compliance records, the Ilmor Engineering, Inc. facility in Plymouth appears to be **in compliance** with applicable rules and regulations, including with the terms and conditions of Permit to Install No. 208-98J.

Attachments to this report: records of the 12 month rolling total fuel usage and emissions associated with the test cells; a print out of the daily records of fuel usage and emissions for June 6, 2018; a print out of the clock hour uncontrolled gasoline usage for Test Cell C during June 2018; a copy of the analysis performed on the load of leaded gasoline that was delivered to the facility in September 2017; a picture showing the layout of the facility.

NAME David W. Lee DATE 9/17/18 SUPERVISOR JK