

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

N772332687

FACILITY: DTE ENERGY SERV-FORD MOTOR CO WORLD HEADQUARTERS		SRN / ID: N7723
LOCATION: 17600 MICHIGAN AVE, DEARBORN		DISTRICT: Detroit
CITY: DEARBORN		COUNTY: WAYNE
CONTACT: Tom Shoemaker , Supervising Operator		ACTIVITY DATE: 12/16/2015
STAFF: Katherine Koster	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY2016 Scheduled Inspection		
RESOLVED COMPLAINTS:		

Reason for Inspection: Targeted

Personnel present: Tom Shoemaker, DTE Supervising Operator, Don Januszek, DTE Corporate, Mr. Stewart, DTE Maintenance Manager

Inspected by: Katie Koster, AQD

Facility phone number: 734-302-5344

FACILITY BACKGROUND

DTE Energy Services (DTEES) owns and operates four diesel fired generators, 2 MW each, which provide power to the Ford World Center Complex in the event that the supply from the power grid is reduced or eliminated. These generators do not have dedicated on-site staff. Staff is present as needed for routine maintenance and troubleshooting.

Under the current contracts, Ford accepts electricity at a reduced rate from Edison in exchange for granting Edison the flexibility of reducing or interrupting the load at any time Edison chooses; hence the need for the emergency generators which Edison agreed to install. Edison operates the generators and access to the building is restricted to Ford personnel unless there is an emergency. DTE is responsible for environmental compliance and permits. DTE also has the final authority to decide load curtailments. Based on a review of the contracts, AQD staff previously determined that these sources should be considered two separate sources (please see facility manila file for full analysis and explanation). The current contract was renewed in 2015 and according to DTE, remains almost entirely unchanged. If the two sources were considered one stationary source, Ford World HQ would be a major source of NOx and subject to ROP requirements.

COMPLAINT/COMPLIANCE HISTORY

I last inspected this facility in 2009. At that time, the fuel exceeded the allowable sulfur content based on sample results. A violation notice was issued.

OUTSTANDING CONSENT ORDERS

None

OUTSTANDING LOVs

None

INSPECTION NARRATIVE

On December 16, 2015, AQD inspector Katie Koster arrived at the DTE generators located in the parking lot of the Ford World Headquarters building. I observed the two stacks belonging to the four DTE emergency generators. No visible emissions were observed.

I met with Mr. Thomas Shoemaker, Supervising Operator, and his maintenance manage (Mr. Stewart), and Don Januszek, DTE Corporate office. The inspection was scheduled since the site is not staffed full time. Emergency generators are labeled: B1, C1, A1, and C2. All generators are 2 MW or 2600 hp, air cooled, diesel fueled. Diesel is stored in a 10,000 gallon above ground tank and pumped to a 250 gallon day tank on each generator. The generators were installed in 1996. According to Mr. Shoemaker, on average, the facility receives

one or two shipments of fuel oil a year. Apart from the times the generators are needed for actual energy supply, the generators are run every other week for ½ hour. While the generators can be remotely started, they have to be manually reset on site by DTE. There are two exhaust stacks on the roof of the building. According to Mr. Shoemaker, the generators cannot be used for peak shaving anymore “because of the RICE MACT.”

Hour clock readings were as follows (hours are total since installation):

- B1 – 466 (410 previous 2009 reading)
- C1 – 463 (411 previous 2009 reading)
- A1 – 462 (408 previous 2009 reading)
- C2 – 463 (411 previous 2009 reading)

Mr. Shoemaker stated that only routine maintenance has been performed on the generators. Maintenance records were presented and are attached. We also discussed the recordkeeping associated with the permits. He presented the operations manual where all the records are kept. I requested copies to be submitted via email. The generators are subject to the RICE MACT. The facility has chosen to do the oil analysis program in lieu of changing the oil annually. The air cleaner, spark plugs, hoses, belts, intake and exhaust are inspected monthly. This is more frequent than the annual requirement in the RICE MACT. However, for 2015, from April – October, no inspections were performed. Mr. Shoemaker attributed this to an employee who has now been fired. As the RICE MACT requires annual inspections, the required frequency was still met.

Mr. Shoemaker obtained a sample of fuel oil for sulfur analysis for me around 2:15 p.m. I left the facility at 2:30 p.m.

I relinquished the sample to UPS for Merit Laboratories for analysis on December 19. However, I have not yet received the results.

APPLICABLE RULES/PERMIT CONDITIONS

Permit 183-00A – This is an opt out permit for NOx (Permit conditions have been paraphrased for brevity)

S.C. 1 **NOT APPLICABLE.** This condition is obsolete.

S.C. 2 **IN COMPLIANCE.** The four generators are as stated. Exhaust gases from B1 and C1 exhaust out of a common vertical stack and A1 and C2 out of a common vertical stack on the roof of the building.

S.C. 3 **IN COMPLIANCE.** Shall not operate any of the generators for more than 250 hours per 12 month rolling time period as determined at the end of each calendar month. Each generator is well below this limit (11.9 hours is the highest 12 month rolling for any generator since 2007). Written log of hours shall be kept on file for five years. See Appendix A.

S.C. 4 **UNABLE TO DETERMINE.** Visible emissions shall not exceed a six minute average of ten percent. Generators were not in operation at the time of the inspection.

S.C. 5 **IN COMPLIANCE.** NOx emissions shall not exceed 24.3 tons per year based on a 12 month rolling time period as determined at the end of each calendar month. Records shall be kept on file for a period of five years. See Appendix A. The highest NOx 12 month rolling emissions for the last five years, from 2007-present, were 1.11 tons

S.C. 6 **IN COMPLIANCE.** Sulfur content in the fuel oil fired in generators shall not exceed .05% by weight. The most recent fuel shipment was received on 12/8/15 from D&W oil (note: this occurred after the facility was notified of the AQD inspection). DTE provided their own analysis dated 12/9/15 which was .0061% sulfur. They also provided a fuel sample analysis from 3/2/15 with a result of .00948% and 1/8/2014 for .00039% sulfur. 1/8/14 was the date of the prior fuel shipment. I have not yet received the results of my sample.

RICE MACT

As the engines were installed in 1996, this is an existing source. Based on 63.6595(a)(1) (attached) it appears that existing stationary SI RICE at an area source of HAPs are required to comply by October 19, 2013.

Table 2d, Condition 4 is applicable: Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

<p>4. Emergency stationary CI RICE and black start stationary CI RICE.²</p>	<p>a. Change oil and filter every 500 hours of operation or annually, whichever comes first;¹</p> <p>b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and</p>
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c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

¹Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

IN COMPLIANCE – Facility presented and submitted records indicating that required inspections are performed monthly. Facility has chosen to utilize the oil analysis program. Oil analysis results for each engine starting in 2011 were submitted and are attached. TBN, viscosity, and % water are all parameters evaluated in the lab report and did not change more than the maximum amount allowed in 63.6625(i). The “when new” values are in the attached Conoco specs. The thresholds that have to be met in order to avoid an oil change are: a minimum of 6.65 TBN, viscosity between 12 and 18, and %water less than 0.5. Attached lab results indicate compliance with these values.

63.6625 (i) states: “ If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.”

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements, Condition 9, requires that the work or management practices require “i. operating and maintaining the stationary RICE according to the manufacturer’s emission-related operation and maintenance instructions or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.”

IN COMPLIANCE – According to attached SOP for maintaining and operating the engines, facility is following the established procedures.

APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS

N/A. All lots are paved.

MAERS REPORT REVIEW

2014 MAERS was submitted timely and reviewed as part of this inspection. Emissions were reduced by 74% from the previous year. This is directly correlated with a 74% reduction in fuel usage from the prior year. NOX emissions were approximately 0.31 tons for 2014.

FINAL COMPLIANCE DETERMINATION

At the time of the inspection, facility appears to be in compliance with state and federal regulations in this report.

NAME *John Kase* DATE *1/16/10* SUPERVISOR *W.M.*