

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Self Initiated Inspection**

P082945701

FACILITY: Sebewaing Light and Water Dept.		SRN / ID: P0829
LOCATION: 120 West Main Street, SEBEWAING		DISTRICT: Saginaw Bay
CITY: SEBEWAING		COUNTY: HURON
CONTACT: Melanie McCoy , Superintendent		ACTIVITY DATE: 08/01/2018
STAFF: Matthew Karl	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Self Initiated Inspection to determine compliance with PTI No. 164-17.		
RESOLVED COMPLAINTS:		

**On Wednesday (8/1/18) I (Matt Karl) conducted a self-initiated compliance inspection at Sebewaing Light & Water located at 120 West Main Street, Sebewaing, MI. 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; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Administrative Rules; Permit-to-Install (PTI) No. 164-17. Ms. Melanie McCoy, Superintendent, assisted during the inspection.**

Sebewaing Light & Water owns and operates an electrical power generating facility. The operations include six (6) engines for electrical power generation. Engines 1-4 and 6 were installed prior to August 1967 and have not been modified or reconstructed and are considered "grandfathered" from Rule 201 permitting requirements. Engine 5 is a Fairbanks Morse & Co. 12.9 MMBtu/hr. heat input (1140 KW; 1600 HP), dual fuel, compression ignition (CI) engine and was installed in 1979 and is the reason for Opt-Out PTI No. 164-17.

Opt-Out PTI No. 164-17 restricts Engine 5 to burn only natural gas or No. 2 fuel oil and a 12,500 MMBtu per 12 month rolling time period. Emission limits for EUENGINE5 include 25.5 TPY of NOx and 660 lb./yr. formaldehyde per 12 month rolling time period. Melanie McCoy informed me that the only time Engine 5 ran during 2018 was for the catalytic converter (oxidation catalyst) performance and compliance test. Engines 1, 3, 4, and 5 are equipped with catalytic converter (oxidation catalyst) and are RICE compliant (see table below). Engine 2 is not equipped with a catalytic converter (oxidation catalyst) and is kept as an emergency stationary RICE. Engine 6 is retired, and while still stored on site, will not operate again.

I sent a records request to Melanie McCoy via email to determine compliance with the recordkeeping requirements in Opt-Out PTI No. 164-17 on Friday (8/3/18).

On Tuesday (8/14/18) I received records from Melanie McCoy to determine compliance with the requirements in Opt-Out PTI No. 164-17. The records received spanned from February 2018 to July 2018. Over this time period, ENGINE5 was the only engine to operate, and it only operated in June 2018.

#### EUENGINE5 VI.2 and FGFACILITY VI.2: Compliant

A record of the types of fuel burned in EUENGINE5 and in FGFACILITY and the total MMBtu of all fuels in EUENGINE5 and in FGFACILITY were kept in a satisfactory manner. During June 2018, 6 MMBtu of Natural Gas and 1 MMBtu of No. 2 Fuel were burned in EUENGINE5. This is on track to be well below the 12-month rolling time period limits of 12,500 MMBtu/yr. for EUENGINE5 and 44,000 MMBtu/yr. for FGFACILITY.

#### EUENGINE5 VI.3 and FGFACILITY VI.3: Compliant

A record of the emissions of NOx and formaldehyde emissions from EUENGINE5 and NOx emissions from FGFACILITY were kept in a satisfactory manner. During June 2018, 27.68 lbs. of NOx were emitted from EUENGINE5 and FGFACILITY and approximately 0.331 lbs. of formaldehyde were emitted from EUENGINE5. This is on track to be well below the 12-month rolling time period limits of 25.5 TPY of NOx for EUENGINE5 and 89.8 TPY for FGFACILITY; 660 lbs./yr. of formaldehyde for EUENGINE5.

#### EUENGINE5 VI.4: Compliant

A record of the specification of the No. 2 fuel oil used in EUENGINE5 was provided from the supplier. It was an SDS for Marathon Petroleum No. 2 Ultra Low Sulfur Diesel fuel. SDS ID No. 0290MAR019. Contains a trace amount of sulfur (<0.0015%).

#### EUENGINE VI.5: Compliant

A Notification of Compliance Status Report for Stationary Reciprocating Internal Combustion Engines 40 CFR part 63, subpart ZZZZ was submitted. The results of the compliance test are summarized in the table below. From the Permit to Install Evaluation Document "The control efficiency for the oxidizing catalyst was 70% for

both the VOC and CO.”

Unit No.	Test Date	CO % Reduction	CO Outlet (ppm)	Catalyst Inlet Temp (°F)	Catalyst Pressure Drop (“W.C.)	Startup Minutes
1	8/3/2017	93.55	18.6	951.2	0.3	20
3	8/1/2017	87.15	22.3	658.9	2.2	30
4	8/2/2017	83.04	14.1	575.1	2.1	23
5	8/2/2017	84.69	13.9	594.1	2	16

**EUENGINE5 VI.6: Compliant**

There were no repair and maintenance activities performed on EUENGINE5 and the oxidation catalyst over the period from February 2018- July 2018.

**EUENGINE5 IX.1: Compliant**

The facility appears to be in compliance with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR, Part 63, Subpart A and Subpart ZZZZ, as they apply to EUENGINE5.

A summary of the requirements and reporting for the facility are included below:

40 CFR Appendix Table 2B to Subpart ZZZZ of Part 63- Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

For each...	You must meet the following operating limitation, except during periods of startup...
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust using and oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450° F and less than or equal to 1350°F.

40 CFR Appendix Table 2D to Subpart ZZZZ of Part 63- Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

For each...	You must meet the following requirement, except during periods of startup...	During periods of startup you must...
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O <sub>2</sub> ; or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Reduce CO emissions by 70 percent or more.	

40 CFR Appendix Table 3 to Subpart ZZZZ of Part 63- Subsequent Performance Tests

For each...	Complying with the requirement to...	You must...
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CU stationary RICE >500 HP that are limited use* stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

40 CFR Appendix Table 7 to Subpart ZZZZ of Part 63- Requirements for Reports

For each...	You must submit a...	The report must contain...	You must submit the report...
1. Existing non-emergency,	Compliance report	a. If there are no deviations	i. Semiannually according to

<p>non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE &gt;500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE &gt;300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE &gt; 500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP</p>		<p>from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or</p>	<p>the requirements in § 63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and                  ii. Annually according to the requirements in §63.6650 (b)(6)-(9) for engines that are <u>limited use</u>* stationary RICE subject to numerical emission limitations.</p>
		<p>b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in § 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), the information in § 63.6650 (e); or</p>	<p>i. Semiannually according to the requirements in § 63.6650(b).</p>
		<p>c. If you had a malfunction during the reporting period, the information in § 63.6650(c) (4).</p>	<p>i. Semiannually according to the requirements in § 63.6650(b).</p>

§63.6675 What definitions apply to this subpart?

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

NAME Matthew R. Kord

DATE 8/21/18

SUPERVISOR C. Shaw