detroit renewable power

VIA CERTIFIED MAIL

October 16, 2018

Todd Zynda, Environmental Engineer
Michigan Department of Environmental Quality
Air Quality Division
3058 W. Grand Boulevard, Suite 2-300
Detroit, MI 48202-6058

RE: M4148 Detroit Renewable Power – Response to Violation Notice dated September 25, 2018

Dear Mr. Zynda:

This correspondence is Detroit Renewable Power's (DRP) response to the Violation Notice (VN) dated September 25, 2018 for alleged violations based upon Michigan Department of Environmental Quality, Air Quality Division (AQD) review of the Second Quarter 2018 (2Q2018) Continuous Emissions Monitoring Systems (CEMS) Report.

The following table summarizes the AQD alleged violations along with DRP's response to each event. Explanation of the causes and corrective actions implemented, as applicable, is provided after the table.

Process Description	Rule/Permit Condition	Summary of AQD Comments	DRP Response
Boiler 13	ROP No. MI-ROP-M4148- 2011a, FGBOILERS011-013, SC I.11.b	CO emissions based on a 1-hour block average exceeded 267 ppmv for two consecutive hours on 6/15/18 (0:00 to 2:00 – 640 ppmv and 273 ppmv).	The elevated CO was the result of a large clinker upsetting combustion. DRP implemented corrective actions by lowering boiler load, adjusting air dampers, inserted ignitors, and removed the clinker from the grates.

Process Description	Rule/Permit Condition	Summary of AQD Comments	DRP Response
Boiler 11	ROP No. MI-ROP-M4148- 2011a, FGBOILERS011-013, SC I.13.a	NOx emissions based on a 1-hour block average exceeded 247 ppmv on 5/22/2018 (22:00 to 23:00 – 250 ppmv)	The elevated NOx emissions were the result of a plugged RDF feed auger which allowed for a large volume of ingress air. DRP implemented corrective actions to normalize combustion and lower NOx.
Boilers 11, 12, and 13	ROP No. MI-ROP-M4148- 2011a, FGBOILERS011-013, SC III.3	The facility reports the flue gas oxygen content less than 4% on various dates in the Second Quarter 2018.	DRP continues to review options to modify this permit condition as it does not correlate to compliance with the regulated emissions from the facility.

The following summarizes the response of each of the items listed in the above table.

Carbon Monoxide 1-hour Block Average – FGBOILERS011-013, SC I.11.b

The attached minute date for boiler 13 on 6/15/18 from 00:00 through 02:00 shows the elevated CO emissions as a result of a large clinker and DRP's steps in implementing corrective actions:

00:06-00:13	CO emissions begin to rise,
00:13	DRP inserts ignitors and begins firing auxiliary oil
00:13-00:19	DRP reduces RDF load by approximately half
00:20-00:26	CO emissions lower before beginning to rise again
00:26-01:20	DRP removes clinker and adjusts fuel on grates to normalize combustion
01:20	Combustion normalizes and CO concentrations plummet

While it appears that the excess emissions continue for two hours, in reality, the facility immediately responded to rising pollutant emissions and continued to implement corrective actions for the approximately 70 minutes of elevated emissions, which bridged two hours and resulted in two averaged hours over the 267 ppmv limit. As noted in the corrective action timeline, a reduction in CO emissions was experienced before the second hour; however, a second process incident, likely a disruption in the fuel bed after clinker was removed, resulted in an additional hour of excess CO emissions.

DRP continues to evaluate the boiler operations and good combustion practices to minimize CO emissions. In addition, DRP is evaluating adjusting the CO one-hour emission limit through a permit to install modification.

Nitrogen Oxide 1-hour Block Average – FGBOILERS011-013, SC I.13.a

The attached minute data for boiler 11 on 5/22/18 from 22:00 through 23:00 shows the nitrogen oxide (NOx) as a result of plugged augers and a high volume of ingress air. DRP decreased the RDF feed