

October 25, 2024

Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division - Grand Rapids District
350 Ottawa Avenue NW, Unit 10
Grand Rapids, MI 49503-2316
Attn: Eric Grinstern

RE: Brightmark Willow Point RNG LLC – Response to Violation Notice

Dear Mr. Grinstern:

Brightmark Willow Point RNG LLC (“Willow Point”) provides this response to the September 25, 2025, violation notice (“VN”) sent by the Michigan Department of Environment, Great Lakes, and Energy (“EGLE”) Air Quality Division (“AQD”). Based on my October 4 e-mail request for an extension and AQD’s October 7 e-mail approval, this letter timely responds to the VN.

The VN contains four allegations based on Willow Point’s air permit, PTI #185-20. Each of the alleged violations are addressed in turn below.

AQD Comment #1:

Operation of the of EUGCU without the thermal oxidizer (TO) operating in a satisfactory manner (FGFLARE SC IV.3).

Willow Point Response #1:

As disclosed in Brightmark’s June 24, 2024, self-audit disclosure made pursuant to Part 148 of NREPA (“Part 148 Self-Audit Disclosure”), Willow Point identified the basis for this issue: “During startup of the EUGCU, there were observed periods where the methane content in the tail gas flow is both too high for the thermal oxidizer and too low for the EUFLARE. During these periods, tail gas was routed to the EUFLARE and may not have been fully combusted since the minimum methane content [for optimal flare operation] was not achieved.”

To address this issue, Willow Point identified a response strategy that first looks at whether changes to the system equipment or programming is advised, before then considering whether to propose changes to the MAP and/or PTI, including the startup and shutdown provisions.

The facility completed some TO adjustments on October 11, 2023, and then some additional TOU adjustments on January 1, 2024, to close this gap (where methane concentrations are too low for the flare but too high for the TO). The adjustments were intended to enable the TO to handle a higher percentage of methane, especially when starting up the GUILD system, but the TOU is not currently able to handle up to 25% methane as originally designed.

AQD Comment #2:

Exceedance of the SO₂ limit of 39.9 tons per year (FGFLARE SC I.1)

Willow Point Response #2:

As disclosed in the Part 148 self-audit disclosure summary, regarding S.C. IV.3., Willow Point noted: “H₂S meters were not operating in a satisfactory manner and also observed instantaneous H₂S concentration spikes above permit limits, as noted below.”

Willow Point has data suggesting an exceedance both in July and August 2024, but there is reason to believe that data is incorrect. Specifically, Willow Point believes that the average H₂S to EUGCU and the average H₂S to EUFLARE (during startup) are lower than what currently is being measured. The H₂S is measured after the gas goes through a Pressure Swing Adsorption system, which fluctuates in pressure as it fills and empties. The resulting fluctuations lead to an increase in H₂S partial pressure. By contrast, the meter is calibrated to read the number of H₂S molecules at atmospheric pressure, and Willow Point’s process does not remain at atmospheric pressure. This fact changes the calculated volume of H₂S because, when the system pressure is higher than atmospheric pressure, the meter overestimates the amount of H₂S in the waste gas stream.

Since the H₂S is very likely lower than what is being measured, the total SO₂ emissions are in turn very likely lower than what is being measured.

A new SulfiLogger H₂S meter was ordered for a different Brightmark facility as a “trial” or pilot project prior to ordering the same meter for Willow Point. The meter was installed at the other Brightmark facility in September. According to the manufacturer of this meter, the meter should adjust for pressure differences when taking a H₂S reading, and therefore the meter should be able to measure and record the concentration of H₂S after it goes through the Pressure Swing Adsorption system. Thus, this meter should measure H₂S to the thermal oxidizer of EUGCU and to EUFLARE during periods of startup and variable pressure conditions.

In early October, however, the SulfiLogger stopped working at the other Brightmark facility. In fact, multiple SulfiLoggers in the Brightmark network had sensors that stopped working around the same time. The operators contacted the manufacturer of the meter, who is located in Denmark, and a replacement sensor was sent. Last week, the meter was repaired.

Due to the issues with the SulfiLogger meters, Willow Point is ordering a different type of meter, a KECO analyzer. The KECO is also reportedly able to correct for changes in pressure. The KECO will be ordered by November 1, 2024, and should be installed within 4 weeks of arrival at the facility. The meter will be integrated into the SCADA (historian) within 6 weeks of arrival at the facility.

AQD Comment #3:

Exceedance of the calendar month average and maximum H₂S concentration limit for biogas combusted in EUFLARE (FGFLARE Special Condition II.3. & II.6)

Willow Point Response #3:

The issue with FGFLARE Special Condition II.3 was disclosed in Willow Point's Part 148 Self-Audit Disclosure.

Willow Point believes that the calendar month average and maximum H₂S concentration for biogas combusted in EUFLARE (during startup of the GUILD system) is lower than what is being measured. Since the associated data has issues so we are unable to quantify the level of bias. Please see response #2 above for why Willow Point believes this and how the facility plans to address the violation notice.

With regards to the exceedances of the calendar month average and maximum H₂S limit for biogas combusted in EFULARE which excludes startup of the GUILD system, Willow Point disclosed during the self-audit summary that "The environmental auditors observed H₂S concentrations in exceedance of permit conditions."

Willow Point is currently evaluating treatment technologies for potential trial at the site. Willow Point will resolve this violation through either one of these treatment technologies or a permit modification.

AQD Comment #4:

Exceedance of the calendar month average and maximum H₂S concentration limit for biogas combusted in the TO from EUGCU (FGFLARE Special Condition II.4. & II.7)

Willow Point Response #4:

The issue with FGFLARE Special Condition II.4 was disclosed in Willow Point's Part 148 Self-Audit Disclosure.

Willow Point believes that the calendar month average and maximum H₂S concentration for biogas combusted in the TO from EUGCU is lower than what is being measured.

Willow Point expects that the steps taken to resolve the issue in Response #2 above will also resolve this issue.

Please do not hesitate to contact Lillian Burns with any questions or concerns regarding this RVN.

Sincerely,

**Joseph Atkinson**

Senior Director, EHS

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