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March 4, 2019

Mr. Robert Joseph  
Michigan Department of Environment Quality  
Air Quality Division  
SE MI District  
27700 Donald Court  
Warren, Michigan 48092

Subject: Violation Notice Response  
Oakland Heights Development, Inc. – MI-ROP-N6008-2015  
Auburn Hills, MI

Dear Mr. Joseph;

This letter responds to MDEQ's Violation Notice dated February 11, 2019, pertaining to the flare downtime that occurred January 28, 2019 through January 30, 2019 (the "NOV"). The following describes what caused the flare at Oakland Heights Development Landfill ("OHD") to shut down and the actions that were taken to make the flare operational again.

#### **BACKGROUND**

On January 28, 2019, Monitoring Control and Compliance (MCC), the site operations and maintenance consultant, was notified that the flare shut down. When the technician from MCC arrived on site, he found the block valve to the flare had malfunctioned and closed as designed. The closed valve prevented gas from being routed to the flare so there was no venting of gas through the flare to the atmosphere. MCC filled the block valve with additional hydraulic fluid, verified that the valve was functioning, and attempted to restart the flare. After several attempts, MCC found that the pilot flame could not maintain a high enough temperature to start the flare due to ambient conditions, which consisted of temperatures in the teens and wind gusts of over 20 mph. A summary of the weather conditions during this malfunction are provided in the table below. After further investigation and troubleshooting, it was determined that the propane orifice at the top of the flare stack was preventing fuel delivery for ignition. A man lift was ordered, but the rental company stopped all deliveries because of adverse road conditions due to the heavy snow in the area. Therefore, no other repairs could be completed at that time.

The man lift was delivered the next day, at 10:00 AM on January 29, 2019. The spark plug and other equipment on the pilot assembly were inspected but a seized steel conduit inhibited the removal of the pilot assembly. A technician from John Zink (flare manufacturer) was contacted via telephone to provide assistance and it was determined that they would need to come to the site to assist. Additionally, due to extremely cold temperatures, it was unsafe for prolonged exposure and work was concluded for the day.

On January 30, 2019, the temperatures were again extremely cold. Therefore, the amount of time that technicians could safely be in the man lift was limited. The pilot assembly was disassembled, and the blockage

was removed. After the blockage was removed, the assembly would only intermittently produce a spark for re-start and additional parts and work were necessary. This did not inhibit the flare operation, just any restarting that might occur. The flare was brought back into service at 6:24 PM. New parts were ordered and scheduled to be delivered on February 1, 2019 to further correct the issue with the pilot assembly.

The flare was shut down at approximately 10:00AM on February 1, 2019 to remove and rebuild the pilot assembly. After the final repair, the flare started smoothly. It was observed for several hours and was determined that the issue was resolved and no further action was required.

During the entire malfunction event, Michigan was experiencing a “Polar Vortex” and heavy snowfall. These extreme conditions did not allow for safe transportation of personnel, parts, and the man lift. The conditions were also unsafe for prolonged human exposure. The table below provides a summary of the weather conditions.

Date	Low Temp	Average Temp	High Temp	Max Windspeed
01/28/19	-1	17	34	24
01/29/19	0	10	19	22
01/30/19	-14	-7	0	23
01/31/19	-14	-6	3	17
02/01/19	-6	4	14	7

It should be noted that on January 28, 2019, the high was achieved at 9:53 PM. The highest temperature during normal working hours was 24°F at 6:06 PM. Similarly, the high temperature for January 29, 2019 was at 12:53 AM. The temperatures fell throughout the day.

#### **CITED VIOLATION AND RESPONSE**

This section contains the violations cited in the NOV in italics followed by OHD's response.

EULANDFILL, Special Condition IV.2(a)(b)

*A control system designed and operated to reduce NMOC by 98 weight percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in 40 CFR 60.754(d). (40 CFR 60.752(b)(2)(iii)(B), 40 CFR 63.1955(a)(1))*

The flare at Oakland Heights is designed and meets the requirements of 40 CFR 60.18. A stack test was performed on February 6, 2018 to demonstrate compliance with the NSPS requirements. The test was submitted to the MDEQ and no further comment was made.

During the time period cited in the NOV, no gas was being routed to the flare and the block valve was closed so no gas could vent through the flare. Therefore, there was no destruction efficiency or minimum NMOC emission rate to meet.

#### **EUALGCS Special Condition IV.1(c)**

*Collect gas at a sufficient extraction rate. (40 CFR 60.752(b)(2)(ii)(A)(3), 40 CFR 63.1955(a))*

The facility submitted a Gas Collection and Control Plan on July 7, 2010. This plan met the requirements of 40 CFR 60.752(b)(2)(ii)(A)(3). The flare experienced a malfunction. 40 CFR 60.755(e) states that:

*The provisions of 40 CFR Part 60, Subpart WWW, apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.*

The malfunction did not exceed 5 days. Therefore, there was not a violation of the NSPS.

#### **EUALGCS Special Condition IV.2**

*The permittee shall design the collection system so that all collected gases are vented to a control system designed and operated in compliance with §60.752(b)(2)(iii). (40 CFR 60.753(e), 40 CFR 63.1955(a))*

The facility submitted a Gas Collection and Control Plan on July 7, 2010. This plan met the requirements of 40 CFR 60.752(b)(2)(ii)(A)(3). The flare experienced a malfunction. 40 CFR 60.755(e) states that:

*The provisions of 40 CFR Part 60, Subpart WWW, apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.*

The malfunction did not exceed 5 days. Therefore, there was not a violation of the NSPS.

#### **EUFLARE1 Special Condition III.9**

*The permittee shall operate the control system such that all collected gases are vented to a control system designed and operated in accordance with 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.<sup>2</sup> (40 CFR 60.753(e), 40 CFR 63.1955(a))*

The flare is equipped with a fail-safe valve. As indicated above, when the block valve malfunctioned, it shut down as designed preventing gas from going to the flare or being vented to the atmosphere. Therefore, no gas was being vented to the flare or the atmosphere as a result of the malfunction and this condition was met.

#### **Air-cleaning devices – Rule 910**

*An air-cleaning device shall be installed, maintained, and operated in accordance with existing law.*

The Flare is installed, maintained, and operated in accordance with all applicable rules. Malfunctions are recognized in both State of Michigan rules, as well as the NSPS, as exceptions to the normal operating standards of a control device. Therefore, this rule does not apply during the time period cited.

In addition, the NOV included some statements that are incorrect. The NSPS does not require redundant devices for landfill gas collection. That being said, the flare at OHD serves as back-up control to the primary control of landfill gas – the pipeline that conveys OHD's landfill gas to GM's Lake Orion Plant. We disagree

with the statement that more redundancy is legally required in OHD's landfill gas collection system. This position is contrary to the NSPS's requirements and also fails to acknowledge the existence of the current control system's redundancies.

Finally, the NOV referenced other times when the gas collection system was down "due to weather" for more than one hour. In no event was the gas collection system down for more than five days in violation of the NSPS and there were no instances of gas venting to the atmosphere as a result of the malfunction for more than one hour. In addition, those malfunction events were not weather related. On December 1, 2017 and December 27, 2017, landfill gas was not being removed due to fluctuations in pressures on the GM Lake Orion pipeline. The pressure fluctuations caused the flare at OHD to shut down. Once the pressures in the pipeline stabilized, the flare operated according to its programming. The March 29, 2018 incident was caused by low temperatures at the control thermocouple and high landfill gas flows. Because the presence of a flame could not be verified by the flare, the flare shut down. This is a built-in protection to ensure that the flare does not operate without a flame present. The control thermocouple was repositioned and the flare returned to normal operations. While the flare was not operational during both of these events, the root causes of the malfunctions were different. As with the current event, in both prior events, the malfunction did not last more than five days and gas was not vented to the atmosphere for more than an hour and as such, no violations occurred.

### **CONCLUSION**

OHD was both surprised and disappointed with DEQ's response to this event. Despite unusually challenging weather conditions, the malfunction event was resolved within two days and no gas was vented to the atmosphere as a result of the malfunction event. The system operated as designed and OHD's response was both prompt and effective. No violation occurred. In addition, it is worth noting that OHD, as has been its practice, voluntarily notified DEQ of the malfunction event.

For the reasons set forth above, OHD requests that this NOV be rescinded. If MDEQ does not agree with the assertions that are put forth in this response, OHD requests a meeting, with legal counsel present, to further discuss the issue.

For any correspondence, or if you have any questions regarding this information, please contact Robb Moore at 810-655-6906.

Sincerely,

OAKLAND HEIGHTS DEVELOPMENT, INC.



Robb Moore, P.E.  
Environmental Manager

cc: Ms. Mary Ann Dolehanty, DEQ  
Dr. Eduardo Olugar, DEQ  
Mr. Christopher Ethridge, DEQ  
Ms. Jenine Camilleri, DEQ  
Ms. Joyce Zhu, DEQ  
Mr. Greg Morrow, DEQ  
Mr. Alexander Whitlow, DEQ  
Site Operating Record