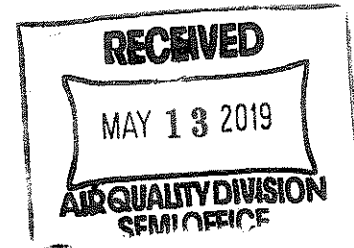




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May 1, 2019

Mr. Robert Joseph
Michigan Department of Environment, Great Lakes and Energy
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;

Thank you for taking time to meet with us regarding Oakland Heights Development (“OHD”). As follow up to our meeting of April 18, 2019, OHD provides the following additional information pertaining to the malfunction event that occurred on January 28, 2019 resulting in the Notices of Violation dated February 11, 2019 and March 25, 2019 (the “NOV”). We have included an updated description of the events and issues that caused the flare at OHD to shut down, as well as the actions taken by OHD to address the malfunction.

Since the malfunction event occurred, OHD has reviewed the details of the events with our operations team, reviewed flow meter data and interviewed the responders to get a clearer picture of what occurred. Shortly after midnight on January 28th, the flare went down because of low temperature. There are thermocouples at the top of the flare stack that monitor the internal temperature of the flame. The purpose of the low temperature alarm is to ensure that proper combustion is occurring, and the flare is not venting gas. The flare is programmed to automatically try to restart itself if there is a soft shutdown due to low temperature. During the restart, the block valve failed to fully open causing a hard shutdown which turned the system off (block valve closed, blowers stopped turning, no gas emitted). At approximately 6:30AM in the morning when our technician came out to manually restart the system, he noted that the hydraulic fluid level in the valve was low and that the heat trace had tripped and turned off.

There were no previous indications of a leak from the block valve. We believe that the pressure of trying to open the valve during the initial restart attempt caused a seal to fail and the valve to leak enough oil so that it was unable to fully open. We were able to get the valve operational after this malfunction event but have decided to replace it with a pneumatic valve to avoid issues with hydraulics in the future. The valve has been ordered and we are awaiting delivery. We anticipate we should be able to install the valve and complete the necessary programming upgrades by the end of May. With respect to the heat trace, we do not know when the breaker on the heat trace tripped off.

We place insulation and heat trace around the valve and drain lines during the winter to help with operations by keeping these components from freezing. Before next fall, we are going to install a signal that will confirm whether electricity is being supplied to the heat trace, so we will know if the breaker has tripped.

As we discussed at the meeting, there are a couple of points we made in our initial response that need clarification. First, it is important to note that since the flare was installed in 2015, its annual runtime has averaged 96-98%. Most recently, the OHD flare ran 98% of the time in 2018. This includes downtime associated with flare and wellfield maintenance along with power outages. We perform regular maintenance on the gas control system which includes an annual inspection by the flare manufacturer. Secondly, with respect to the flare losing temperature, this is not related to the weather being cold. The flare is impacted by wind direction and speed in two ways. First, the wind direction can move the flame away from the multiple thermocouples that are installed to monitor temperature. Secondly, strong winds can lift the flame up which moves it away from the thermocouples. Both conditions cause the thermocouples to record lower flame temperatures. We have performed a number of enhancements to the flare to improve operational temperature. This includes installing a swirl tip, installing a new shroud (windscreen), removing the swirl tip, installing longer thermocouples and adjusting the position of thermocouples. These adjustments were made to try to get the thermocouples in the main portion of the flame, so they record a higher operating temperature which would reduce the impact of wind speed and direction. We continue to work with the manufacturer to determine if there are any other adjustments we can make to mitigate the impact of wind on flare temperature and operation.

During the malfunction event, there was a secondary impact to the flare. While attempting to restart the flare, moisture built up on the orifice plate. This moisture eventually froze because of the extremely cold ambient temperatures. When the orifice plate is blocked, it prevents fuel from being delivered during start-up and the flare cannot lite. The orifice plate is located near the top of the flare stack which requires the use of a manlift to access the components, so they can be thawed out. We are currently evaluating options to address the issues we incur when the pilot freezes during shutdowns in winter months. We have had discussions with the flare manufacturer about relocating the pilot orifice and mixing chamber to the lower portion of the flare so a manlift would not be required to thaw out these components. Heat trace would help the moisture on the orifice plate from freezing, but the heat tape we use on other components at the base of the flare would melt at the higher temperatures next to the flame. So, we are also researching the heat trace to determine if there is any that is resistant to higher temperatures, so it doesn't melt next to the flame. While we do not know if either of these options will be feasible, it demonstrates our continuing efforts to provide the most efficient system we can.

OHD has and will continue to research opportunities to improve the key components of our gas control system. Later this year we will be adding a third blower on our existing blower skid. This will provide additional redundancy to this portion of our system. Given the upgrades we have scheduled and our continued efforts to improve the flare operation, we believe we have adequately addressed the malfunction event that occurred on January 28, 2019.

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Again, thank you for taking the time to meet with us and we apologize if previous correspondence seemed unclear. We were truly trying to be as communicative as possible during the malfunction. 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: Mr. Jeff Rathburn, EGLE
Mr. Greg Morrow, EGLE
Mr. Alexander Whitlow, EGLE
Site Operating Record