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VIA EMAIL

April 26, 2022

Jonathan Lamb, Senior Air Quality Analyst
Michigan Department of Environment, Great Lakes, and Energy (EGLE)
Air Quality Division
3058 W. Grand Boulevard
Suite 2-300
Detroit, MI 48202

RE: EQ Detroit, Inc. (DBA US Ecology – Detroit South) – Response to Violation Notice dated April 5, 2022, for Alleged Nuisance Odors on March 31, 2022

Dear Mr. Lamb:

Please accept this letter as US Ecology – Detroit South's (USE-DS) response to the Violation Notice (VN) dated April 5, 2022, regarding odors allegedly caused by USE-DS's operations in violation of PTI No. 269-04H; General Condition 6 and R336.1901(b) on March 31, 2022. The letter stated that inspections conducted by EGLE-AQD in response to complaints reportedly found persistent and objectionable odors of moderate to strong intensity (level 3 and 4), attributable to US Ecology's operations, impacting residential areas downwind of the facility.

A call was received by USE-DS personnel from EGLE at 6:40pm on Thursday, March 31st informing USE-DS that EGLE was investigating an odor complaint. USE-DS personnel conducted an odor survey of the area and confirmed intermittent odors were detectable east of the facility between Kirby St. and Warren St. from St. Aubin St. to Chene St. However, the odors were not persistent enough to utilize the scentometer. The scentometer is a device used to determine the level of odor. It has a carbon filter that allows for increments of dilution of the suspected odorous air. The amount of dilution required to smell the odor is the basis for the scale. In this case the intensity of the odor was not at a level in which the scentometer could be used and therefore the odor level was lower than the lowest dilution level of two (the State of Illinois allows up to a dilution level of 8). At the time of this complaint, EGLE found what they considered to be level 3 and 4 odors in the same area. Note that the level 3 and 4 identified by EGLE is a subjective evaluation. The EGLE field investigator decided odors were sufficiently intense to support a violation of Rule 901(b).

Root Cause

On March 31, 2022 a contractor arrived onsite to conduct preventive maintenance on the boiler used to produce steam for the oil water separation processes onsite. The contractor did not check in with Operations Personnel prior to starting the maintenance work nor following completion of the work. The contractor inadvertently left the boiler running and the steam on. The steam entered tank 103 (oily wastewater separation tank) through a valve which was stuck open. The steam was entering

the tank above the liquid but the residue in the tank heated up causing the odor. As a side note, emission calculations are done monthly, and they conservatively assume a worst-case scenario.

Initially it was thought that the odor was due to the combination of high winds and an oily waste stream taken in Chemical Fixation. However, on the morning of April 1, 2022, the boiler was found to be on and the steam going into tank 103 which was determined to be the cause of the odors.

Actions Taken by USE-DS

Once the odor complaints were received on March 31, 2022, an operator from the Chemical Fixation Building conducted an odor survey of the area and confirmed the odors were detectable east of the facility between Kirby St. and Warren St. from St. Aubin St. to Chene St. The following morning the root cause was identified, as noted above, and the boiler was shut down. The valve is on order and due to arrive on April 25, 2022. The valve will be replaced once the tank is empty. In addition, in response to this and previous odor violations, USE-DS continues to take the corrective actions below:

- Prior to acceptance of a waste stream on-site, the customer must provide USE-DS with details on the waste stream. The preapproval of waste streams is evaluated with more stringent criteria to identify potential odor issues before approving a customer's waste. Waste streams are not approved, at times, solely due to the potential odorous properties.
- Screening of samples for odors is a continuous process at the site. Once the waste stream arrives on-site, a sample is pulled for evaluation. If operations or laboratory personnel determine the sample of a waste stream may be too odorous, the waste stream will not be accepted on-site for treatment. Consequently, the waste will be rejected back to the customer or transshipped to another location.
- Once a waste stream is identified as odorous, these waste streams are no longer treated on site. The approvals for these wastes have been changed to 'not acceptable on-site for treatment' or 'transshipment to another facility.'
- As waste streams are identified as containing ammonia and amines, they are evaluated to determine if they should continue to be received on-site for treatment. This has, and continues to, reduce the volume of ammonia and amines waste streams received for treatment.
- The treatment process is a chemical reaction that can liberate odors from the process. To reduce odors, the drying time has been increased, which is essentially slowing the chemical reaction and consequentially reducing odors.
- Frequently the odor associated with the treatment process is from the reagents, such as lime, used to bind and dry the waste for landfill disposal. The volume of these reagents has been reduced when treating non-hazardous waste streams.
- Treatment of the waste streams occurs in batches. Another tactic taken to reduce odors is reducing the batch size. Ideally, this minimizes odors as well.
- To understand the treatment process and odor production from the process, the temperature of the vaults is being logged daily to determine if there is a correlation between odor complaints and higher temperature vault activity.
- The weather conditions are also considered. The wind direction is reviewed daily as part of operation's odor evaluation. The direction of the wind is an indicator of where odors may travel and the potential receptors downwind of the site. When the humidity is higher, it traps the odor and causes it to travel farther and linger longer. Also, high winds have been found

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to contribute to odor complaints off-site. Operations personnel use this information to make operational decisions to further reduce the potential to impact nearby receptors. Treatment is rescheduled as appropriate.

- Personnel conduct odor evaluations each day the facility is operating in the morning and in the evening. The evaluations are completed between 7:00 am to 9:00 am and again between 7:00 pm to 9:00 pm. If odor is detected, a scentometer is utilized to determine the level of odor detected.
- USE-DS has an on-site initiative to encourage personnel to “say something if they smell something.” This initiative has led to earlier investigation of the potential for off-site odors and efforts to remedy the odors before they contribute to any off-site impact.

To enable USE-DS to respond most effectively to odor concerns, we ask that AQD field personnel make every effort to notify me as soon as possible with all essential details when any odor complaint potentially relating to USE-DS is received. This will allow USE-DS to immediately investigate and potentially respond to the complaint and report the results.

If you have questions concerning this response, please feel free to contact me at (313) 347-1300.

Sincerely,
John Barta

John C. Barta
General Manager

cc (via email):

Paul Max, City of Detroit, BSEED
Rich Conforti, EGLE
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