US ecology

1923 Frederick Street, Detroit, MI 48211
P 313.347.1300 F 313.923.3375

VIA EMAIL

November 19, 2021

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 November 1, 2021, for Alleged Nuisance Odors on October 18, 19, and 26, 2021

Dear Mr. Lamb:

Please accept this letter as US Ecology – Detroit South's (USE-DS) response to the Violation Notice (VN) dated November 1, 2021, regarding odors allegedly caused by USE-DS's operations in violation of PTI No. 269-04H; General Condition 6 and R336.1901(b) on October 18, 19, and 26, 2021. 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.

Several calls were received by USE-DS personnel from EGLE regarding the investigation of odor complaints on the following dates and times:

- October 18, 2021, from 10:10 am to 10:55 am
- October 19, 2021, from 11:30 pm to 12:15 am
- October 26, 2021, from 7:50 pm to 8:40 pm

<u>October 18, 2021</u>

On the morning of October 18, 2021, USE-DS personnel conducted an odor survey of the area and detected faint, fleeting odors under ambient conditions. 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). To reduce the odors, the fan speed on the dust collection system was turned down. This action

seemed to help according to USE-DS personnel evaluations and the fan speed was left in this lower state.

October 19, 2021

The following evening of October 19, 2021, additional complaints were received and EGLE completed an evaluation after 11:30 pm. The processing of the waste was concluded three hours earlier at 8:30 pm. The operators reported that there were no unusual reactions or odors in the building or outside the facility. The fan speed was in the lower state and increased the following morning as the change did not seem to be helping the odors in the area based on the residential complaints.

October 26, 2021

On October 26, 2021, odor complaints were received and confirmed between 7:50 pm and 8:40 pm. EGLE found what they considered the odors to be level 3 and 4 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).

USE-DS personnel found that the odor was from an epoxy resin waste being processed in the Chem Fix building. Upon receipt of the epoxy resin waste, procedures were followed to evaluate the odor of the waste stream prior to processing. At the time of the evaluation, experienced personnel determined the waste stream was not too odorous for processing. Additionally, since approximately a thousand 55-gallon drums, thirteen hundred 5-gallon buckets, and one hundred 300-gallon totes of the epoxy resin waste have been processed without incident since 2015, the waste was cleared for processing. Note that at the time of these complaints, the epoxy resin waste was in the batch and processing had ceased.

In this case, the screening of the waste stream prior to processing did not catch the odorous material. However, the process of evaluating the waste stream has been extremely effective in the reduction of odors from the process over the past year. Currently, there are no changes needed to the odor evaluation of waste streams.

Potential Root Causes

On October 18 and 19, 2021 the weather and fan speed seemed to be the likely factor for the complaints. USE-DS is working with a consultant to evaluate the weather data for this timeframe to determine the correlation between odors in the neighborhood and weather. Once a pattern is identified then plans can be established to operate the process in anticipation of specific weather events.

On October 26, 2021, a specific waste stream was identified as a contributor to the odors and the generator of that waste stream was notified of the fact that the waste stream will no longer be accepted at USE-DS for treatment. This odorous waste stream will be transshipped to another location or direct shipped to another location.

Actions Taken by USE-DS

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 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 contact Tabetha Peebles, Environmental Compliance Manager at (313) 347-1328.

Sincerely,

JCB

John C. Barta
General Manager

cc (via email):

Hosam Hassanien, City of Detroit, BSEED
Crystal Rogers, City of Detroit, BSEED
Eduardo Olaguer, EGLE
Christopher Ethridge, EGLE
Jenine Camilleri, EGLE
Greg Morrow, EGLE
Mary Ann Dolehanty, EGLE
Jennifer Hazelton, EGLE
April Wendling, EGLE
Jeff Korniski, EGLE
Mary Carnagie, EGLE
Phil Tannian, USE