SCS ENGINEERS

September 15, 2017 File No. 23212007.05

Ms. Tracy Buchanan Ohio EPA Southwest District Office 401 East Fifth Street Dayton, Ohio 45402-2911 Submitted Electronically

Subject: Village of St. Bernard Landfill

Quarterly Probe Monitoring Results, and

MP-10 & MP-7E Contingency Probe Monitoring Results, September 12, 2017

MP-7E Contingency Probe Monitoring Results, September 14, 2017

Dear Ms. Buchanan:

Enclosed please find the results of the contingency gas monitoring at MP-10 and MP-7E performed on behalf of the Village of St. Bernard at the closed St. Bernard Landfill on September 12, 2017 and the contingency gas monitoring performed at MP-7E on September 14, 2017.

MP-10 had a sustained reading of 23.2 percent combustible gas. The verification reading had a sustained reading of 6.6 percent. Contingency monitoring will therefore continue to be implemented for MP-10.

The sustained reading at MP-7E on September 12th was 1.9 percent. Because the reading was below 5 percent, a second reading was performed during this week to begin the process of collecting the 4 readings over a minimum 2-week period required to terminate contingency monitoring. On September 14th, the sustained reading at MP-7E was 0.9 percent.

Following the initial and verification sampling for this contingency monitoring event, MP-10 was pumped for 20 minutes, at a rate of approximately 550 cc/min., using the GEM 5000. Approximately 19 casing volumes were removed from MP-10 and the combustible gas concentration was 4.9 percent. The falling methane concentration during the 20 minute purge indicates that the elevated concentration of methane is present in a small area, i.e. only a small volume of soil gas with an elevated concentration of methane is present.

Should you have any questions or comments, please contact the undersigned.

Sincerely,

Randall C. Mills, P.G.

Senior Project Professional **SCS ENGINEERS**

James J. Walsh, P.E.

Principal

SCS ENGINEERS

cc: Chuck DeJonckheere, Hamilton County Public Health

Nick Schapman, GHD

Kandall C. Mills

John Estep, Mayor, Village of St. Bernard

Enclosures

Compliance Probe Monitoring Form for St. Bernard Landfill

| Date: | 09/12/17 | | | | Sampler: Mike Broyles | | | |
|------------------------|----------|---|----------------------------|----------------------------|-------------------------------|--|--|-----------------------------|
| Instrument | GEM 5000 | | | | Weather: sunny | | | |
| Calibration Prior to S | Sampling | : | Yes | | Ambient Air Temperature (°F): | | | 66 |
| Calibration Gas: | | CH ₄ 15%, CO ₂ 15%, O ₂ 4% | | | Barometric Pressure (in Hg): | | | 29.83 |
| Recalibration: | | No | | | Relative Humidi | | | 87 |
| | • | | | | , (11) | | | |
| | Start | Stop | Gas Pressure (inches | Initial CH ₄ (% | Sustained CH ₄ | Depth to Water Level (feet below ground | Depth to Top of Screen (feet below ground | Open Screen [#] |
| Probe ID | Time | Time | water) | by Volume) | (% by Volume) | surface) | surface) | (feet) |
| MP-1 | 40.45 | 40.50 | 0.04 | 0.7 | 4.0 | 7.70 | not known | 4.0 |
| MP-7E first reading | 16:45 | 16:50 | 0.04 | 0.7 | 1.9 | 7.79 | 3 | 4.8 |
| MP-7H | | | | | | | 2 | |
| MP-8F MP-9 | | | | | | | 4 | |
| MP-10 first reading | 16:08 | 16:13 | 0.01 | 12.6 | 23.2 | 4.92 | 2 2 | 2.9 |
| MP-16 | 10.00 | 10.13 | 0.01 | 12.0 | 23.2 | 4.32 | 2 | 2.9 |
| MP-17 | | | | | | | 2 | |
| MP-7E verification | 16:50 | 16:55 | -0.03 | 1.9 | 1.1 | | | |
| MP-7E purge | 16:55 | 17:15 | -0.04 | 1.1 | 0.7 | | | |
| MP-10 verification | 16:13 | 16:18 | -0.13 | 23.1 | 6.6 | | | |
| MP-10 purge | 16:18 | 16:38 | -0.11 | 6.6 | 4.9 | | | |
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[#] A zero or negative value indicates that the probe is watered in.

Compliance Probe Monitoring Form for St. Bernard Landfill

| Date: | | 09/14/ | ′17 | | Sampler: | Mike Broyles | | |
|----------------------|---------------|---|--------------------------------------|--|---|--|--|---------------------------------------|
| nstrument GEM 5000 | | | | | Weather: | overcast, light i | | |
| Calibration Prior to | Sampling | j: | Yes | | Ambient Air Ter | mperature (°F): | | 68 |
| Calibration Gas: | | CH ₄ 15%, CO ₂ 15%, O ₂ 4% | | | Barometric Pressure (in Hg): | | | 29.94 |
| Recalibration: | • | No | | | Relative Humidity (%): | | 81 | |
| | • | | | | , , , | | | |
| Probe ID | Start Time | Stop Time | Gas Pressure (inches water) | Initial CH ₄ (% by Volume) | Sustained CH ₄ (% by Volume) | Depth to Water Level (feet below ground surface) | Depth to Top of Screen (feet below ground surface) | Open Screen [#] (feet) |
| MP-1 | | | | | | | not known | |
| MP-7E | 12:53 | 12:58 | 0.03 | 0.8 | 0.9 | (not taken) | 3 | |
| MP-7H | | | | | | | 2 | |
| MP-8F | | | | | | | 4 | |
| MP-9 | | | | | | | 2 | |
| MP-10 | | | | | | | 2 | |
| MP-16 | | | | | | | 2 | |
| MP-17 | | | | | | | 2 | |
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