

SCS ENGINEERS

June 16, 2017
File No. 23212007.05

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

Subject: Village of St. Bernard Landfill
Contingency Monitoring at MP-10

Dear Ms. Buchanan:

This letter is intended to meet the 7-day reporting requirements contained in OAC 3745-27-12 (E)(5)(g)(i). The steps taken during the first seven days on behalf of the Village of St. Bernard at the closed St. Bernard Landfill to protect human health and the environment include:

- The gas extraction system was checked to confirm it was working properly.
- The vacuum was increased in the EW-4S segment of the gas collection system by decreasing the vacuum applied to the selected other segments. The EW-4S segment is the segment immediately adjacent to MP-10.

No additional monitors are proposed at this time. All, but one of the adjacent residences are equipped with combustible gas indicators (CGIs) (Schrenk's requested their CGI be removed earlier this year). The existing permanent monitors are sufficiently closely spaced that additional monitors are not needed.

Enclosed please find the results of the initial contingency gas monitoring performed at MP-10 on June 14, 2017. Combustible gas concentrations above the compliance threshold were still detected at MP-10. The absence of pressure at MP-10 indicated that there is no driving force to cause gas migration over a significant distance. The methane detected at MP-10 is likely either a localized concentration or is present due to migration driven only by a concentration gradient/diffusion.

Following the initial and verification sampling for this contingency monitoring event and the the initial and verification sampling for the quarterly monitoring event when the exceedance was originally detected, MP-10 was pumped for 30 minutes, at a rate of approximately 550 cc/min., using the GEM 5000. Approximately 25 casing volumes were removed from MP-10. The falling methane concentration during the 30 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
John Estep, Mayor, Village of St. Bernard
Tom Paul, Service Director, Village of St. Bernard

Enclosures

Compliance Probe Monitoring Form for St. Bernard Landfill

Date: <u>06/14/17</u>	Sampler: <u>Randall Mills</u>
Instrument: <u>GEM 5000</u>	Weather: <u>overcast, light breeze</u>
Calibration Prior to Sampling: <u>Yes</u>	Ambient Air Temperature (°F): <u>75</u>
Calibration Gas: <u>CH₄ 15%, CO₂ 15%, O₂ 4%</u>	Barometric Pressure (in Hg): <u>30.05</u>
Recalibration: <u>No</u>	Relative Humidity (%): <u>81</u>

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							3	-3.0
MP-7H							2	-2.0
MP-8F							4	-4.0
MP-9							2	-2.0
MP-10	13:39	13:40	0.01	19.5	22.2	4.73	2	2.7
MP-16							2	-2.0
MP-17							2	-2.0
MP-10	13:43	13:44	0.02	22.0	21.3	--	--	--
MP-10	13:47	14:17	0.01	18.0	3.1	--	--	--

Notes:

Signature: *Randall C. Mills*

[#] A zero or negative value indicates that the probe is watered in.