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SCS ENGINEERS

October 28, 2016
File No. 23212007.04

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

Subject: Village of St. Bernard Landfill
Probe Monitoring Results, October 27, 2016

Dear Ms. Buchanan:

Enclosed please find the results of the contingency gas monitoring performed at MP-10 on behalf of the Village of St. Bernard at the closed St. Bernard Landfill on October 27, 2016.

Combustible gas concentrations above the compliance threshold were detected at MP-10. MP-10 had an initial concentration of 39.2 percent and a sustained concentration of 39.9 percent. The immediate verification sample at MP-10 had an initial concentration of 39.4 percent and a sustained concentration of 38.6 percent. Contingency Monitoring at MP-10 will therefore continue as described in the EGMP. To evaluate whether the methane detected at MP-10 is a localized pocket, MP-10 was pumped for 30 minutes at a rate of approximately 550cc/min using the GEM 5000. Approximately 25 casing volumes were removed from MP-10. A reading was taken after this purging. The results were an initial reading of 28.5 and a final reading of 5.8 percent methane.

The absence of any significant pressure at MP-10 indicated that there is no driving force that could cause gas migration over any significant distance. The falling methane concentration during the 30 minute purge indicates that either 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. The methane detected at MP-10 is likely either a localized concentration or is present due to migration driven by a concentration gradient/diffusion.

SCS is having the condensate tank pumped the week of October 31st to evaluate whether liquid may be accumulating in the condensate drain line due to the elevated condensate level in the tank and, as a result, allowing water to accumulate in the perforated collection line. At this time, no further remedial actions are proposed.

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

Enclosures

Compliance Probe Monitoring Form for St. Bernard Landfill

Date:	10/27/16	Sampler:	Randall Mills
Instrument	GEM 5000	Weather:	overcast, light breeze
Calibration Prior to Sampling:	Yes	Ambient Air Temperature (^{o}F):	56
Calibration Gas:	CH_4 15%, CO_2 15%, O_2 4%	Barometric Pressure (in Hg):	30.19
Recalibration:	No	Relative Humidity (%):	72

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	
MP-7H							2	
MP-8F							4	
MP-9							2	
MP-10	2:14	2:15	0.04	39.2	39.9	5.02	2	3.0
MP-16							2	
MP-17							2	
MP-10	2:16	2:17	0.03	39.2	38.6	- -	- -	- -
MP-10	2:20	2:50	0.06	28.5	5.8	- -	- -	- -

Notes:

Signature: Randall C. Mills

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