Wexford County
Landfill
LLC

March 10, 2021

Rob Dickman
Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division - Cadillac District Office

Via Electronic Mail - DickmanR@michigan.gov

RE: WEXFORD COUNTY LANDFILL TIER 2 RESULTS
MANTON, WEXFORD COUNTY, MICHIGAN
ROP PERMIT NUMBER MI-ROP-N3862-2017 (WDS NO. 470336)

Dear Mr. Dickman:

Wexford County Landfill, LLC (WCL), conducted a Tier 2 evaluation of NMOC emissions in accordance with Title 40 of the Code of Federal Regulations, specifically 40 CFR 60.754(a)(2). The Tier 2 results indicate that the WCL will not emit NMOC at a rate of or greater than 50 megagrams per year (Mg/yr) as indicated in the attached NMOC calculations.

A Tier 2 Work Plan was submitted to the Michigan Department of Environment, Great Lakes, and Energy on April 28, 2020, revised September 28, 2020 and approved by EGLE on May 12, 2020.

1.0 REQUIREMENTS – NSPS WWW

The New Source Performance Standards (NSPS) for Municipal Solid Waste landfills were promulgated by the USEPA in March 1996 and apply to landfills that:

- accepted waste after May 30, 1991;
- have a maximum design capacity equal to or greater than 2.5 million megagrams (Mg) or
- 2.5 million cubic meters; and
- have potential annual NMOC emissions of 50 Mg or above.

Landfills exceeding these thresholds are required to meet the NSPS.

If the resulting NMOC mass emission rate predicted is less than 50 Mg/yr, a landfill gas collection system is not required, and the landfill must submit an annual estimate of the emission rate report as provided in 40 CFR 60.757(b)(1) and retest the site-specific NMOC concentration every 5 years. Previous Tier 2 sampling at the Site occurred April 6-8, 2011 and March 28-30, 2016.

990 North Mackinaw Trail, Manton, Michigan 49663
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2.0 BACKGROUND

WCL is a municipal solid waste landfill located in Wexford County, Michigan. The Landfill has an active LFG collection and control system (LFG-CCS) consisting of vertical and horizontal extraction wells connected to a vacuum that is applied from the blower unit of the landfill gas flare assembly (LFG Collection System). Approximately 39 of the 44 fill acres[1] are controlled by the LFG-CCS. The Landfill is subject to 40 CFR Part 60, Subparts A and WWW.

The previous Tier 2 sampling event and the LandGem model in March 2016 estimated a maximum NMOC emission rate of 31.04 Mg/yr.

3.0 FIELD ACTIVITIES

Tier 2 field sampling and analysis were performed in accordance with 40 CFR 60.754(a)(3), following EPS Reference Method 25C for NMOC and Method 3C for methane, carbon dioxide, nitrogen, and oxygen. Pescador conducted the site specific NMOC testing January 19-21, 2021. Six (6) borehole sample locations were drilled within the fill acres that are not controlled by the LFG CCS (approximately 2-acres): cells denoted as Cell G3 and the southern portion of Cell D/E. One of the borehole sample locations VP-6, was not able to be used. On the day of sampling, staff were unable to establish airflow at VP-6. It is possible that moisture accumulated in the tubing and froze prior to sample collection. The remaining fill acres were tested via sampling the landfill gas at the flare assembly.

Pescador staff conducted a LFG surface scan and collected twelve (12) samples over the course of the three day sampling event, compositing the samples into seven (7) SUMMA canisters for testing. Each sample composited used approximately similar pounds per square inch (psi) of pressure from the SUMMA canisters. The samples were then packed and sent to Enthalpy Analytical for laboratory testing. Copies of field notes, the chain of custody, and sample location map are included in Appendix A.

3.1 Surface Gas Monitoring

Prior to collecting the LFG samples, a Landtec GEM-2000 portable monitoring unit was used to scan and measure methane, carbon dioxide, and balance gas (assumed to be nitrogen) surface emission concentrations near the surface of the landfill unit. The surface scan was performed on January 19-20, 2021 by traversing the 44 acres controlled by the LFG CCS with the Landtec GEM-2000 held 4-6" from ground surface, recording measured detections. Staff traversed the field as depicted by the pre-defined grid on Figure 3 which was spaced at a distance of 100-feet. Results of the scan were used to ensure that the LFG-CCS was functioning.

Staff noted one detection of methane at a concentration of 0.01 ppm as marked on the Figure 3-Tier 2 LFG Surface Scan Map, a copy of which is included with the field notes in Appendix A.

[1] Fill acres – areas where waste has been in place for at least 2-years

3.2 Soil Sampling

Soil gas samples were collected through the use of a hydraulic push rig (Geoprobe™) operated by Shepler Well Drilling. The direct push rig drilled a 2-inch diameter borehole which housed the ¼-inch poly tubing well. Fitted with a 3/4-inch lotted Sintered Brass Filter for sample collection. The borehole was backfilled with a 1-foot thick sand filter pack overlain by Benseal Bentonite to the surface. Sampling locations VP-3 and VP-4 included waste younger than 2-years, placed over older waste. The other sample locations were in areas where the waste mass was older than 2-years placed. The borehole and sample depth for the sample locations was 5 feet below the surface grade as shown on the Vapor Point Logs included in Appendix B.

Prior to collecting the LFG samples from the boreholes, a Landtec GEM-2000 portable monitoring unit was used to measure methane, carbon dioxide, and balance gas (assumed to be nitrogen) concentrations as a check for any indication of air intrusion in the sample probe and potentially in the LFG sample collected. The concentrations were observed to be within the limits allowed under EPA Method 25C for NSPS Tier 2 testing.

Three (3) six-liter Summa canisters were used to collect eight (8) LFG samples (including the duplicate sample) from the boreholes drilled within the waste mass. Samples were collected in stainless steel Summa canisters partially filled with helium by the analytical laboratory. All steel canisters were leak-tested by the analytical laboratory to verify that the valve and collection port on each tank was not leaking. Each canister was used to collect composite samples of two to three samples per canister. The canisters were filled at a rate of approximately 500 milliliters per minute (ml/min) or less at each sample location. Equal volumes of LFG were collected at each location and included in a composite sample by evenly dividing the vacuum used in collecting samples. A copy of the field notes is provided in Appendix A.

3.3 LFG Sampling

Three (3) discrete samples were collected at the flare assembly. An additional sample was collected from the Cell A passive vent[2]. The LFG CCS gas samples were collected at the header prior to the knockout pot and blower. A six-liter summa canister was used for each sample. Field sampling was conducted to assure the samples were valid (less than 5% oxygen and 20 % for balance gas). Landfill gas flow measurements were recorded prior to and directly after the collection of each canister. The samples were analyzed for oxygen and nitrogen following Method 3C to document suitability for Method 25C analysis of methane, carbon dioxide and NMOC.

4.0 LABORATORY RESULTS

LFG samples were packaged by the sampler and shipped to Enthalpy Analytical in Richmond, Virginia, for analysis by Method 25C and Method 3C (CFR, 2007 Appendix A). Pressurization of the Summa® canisters with helium was performed in the laboratory prior to analysis. The laboratory results are reported as total NMOC by volume as carbon and have been corrected for temperature and pressure as indicated by the dilution factor incorporated within the laboratory results. The laboratory results were also corrected for the moisture content and measured nitrogen content present in the samples as discussed in EPA Method 25C. The laboratory report for the Method 25C and 3C results is provided in Appendix C. A summary of the results is provided below in Table 1.

[2] Cell A is located underneath Cell F and cannot be tested using probe sampling methods. Therefore, Cell A was sampled from the passive vent riser pipe that was installed along the length of that cell.

Table 1 - Laboratory Summary

Sample Location	Sample Date	Method 3C Results (% by Volume)				Acceptable Sample for Estimation	Method 25 C Results		Comments
		Methane	Carbon Dioxide	Oxygen	Nitrogen		NMOC` (ppm as C)	NMOC (ppm as C6)	
Flare @ 13:23	1/19/2021	41.10	31.60	0.90	25.90	Yes	2,100.0	350.0	
Flare @ 15:15	1/19/2021	41.80	32.10	0.94	26.30	Yes	2,320.2	386.7	
Flare @ 8:53	1/20/2021	40.20	30.70	0.78	25.00	Yes	2,140.2	356.7	
Cell A Candy Cane 14:27	1/19/2021	<0.45	<0.45	20.50	73.80	No	51,100.2	8,516.7	Sample ruled as ambiant air and not indicative of LFG that may have been present
VP-1, VP-2 Composite	1/22/2021	31.70	26.30	9.60	34.50	Marginal	4,960.2	826.7	Elevated levels of Oxygen and Nitrogen due to the age of waste - filling has occurred on top of old waste within the last 3-years
VP-3, VP-4, VP-5 Composite	1/22/2021	17.40	11.90	16.00	57.30	Marginal	10,200.0	1,700.0	Elevated levels of Oxygen and Nitrogen due to the age of waste - filling has occurred in the area within the last 2-years. Sample results do not align with the duplicate taken at the same location
VP - Composite DUP	1/22/2021	28.20	20.00	12.20	43.00	Marginal	5,710.2	951.7	Elevated levels of Oxygen and Nitrogen due to the age of waste - filling has occurred in the area within the last 2-years

Samples collected at locations VP-3, VP-4 and VP-5 was noted to have a mean NMOC concentration of 10,200 parts per million by volume (ppmv) as carbon. The reason for the high reading was unknown. The Duplicate was also taken from these three sample locations and was noted to have a mean NMOC concentration of 5,710 parts per million by volume (ppmv) as carbon. As a conservative assumption, the NMOC concentration from these sample locations was averaged between the two sample results and used in the calculation of the weighted average NMOC concentration for the site as discussed below.

A weighted average of the NMOC concentration (ppmv as carbon) for each sample was calculated. Results were within the acceptable range of data collected at landfills. This value was then divided by six to convert from ppmv NMOC as carbon to ppmv NMOC as hexane and used as the site-specific NMOC concentration.

Table 2 - Weighted Average Concentrations

Sample Location	Coverage (Acres)	Weighting Factor (1)	Method 25 C Results NMOC (ppm as C6)		Weighted Results NMOC (ppm as C6)	
			Average	Maximum	Average	Maximum[2]
Landfill Gas Flare	44.13	0.89	364.5	386.7	324.1	343.9
VP-1, VP-2 Composite	2.23	0.05	826.7	826.7	37.2	37.2
VP-3, VP-4, VP-5 Composite/Duplicate[3]	3.26	0.07	1325.9	1700.0	87.1	111.6
TOTAL WEIGHTED AVERAGE					**448.4**	**492.7**

The average NMOC concentration at the site ranged from 356.7 to 1,700.0 parts per million-hexane (ppmh) for all samples analyzed except for sample location Cell A Candy Cane 14:27 as noted in the comments of Table 1. The weighted NMOC concentration was identified to be 454.9 ppmh on average and 503.1 ppmh using maximum detected concentrations for the samples. Both NMOC concentrations were used to evaluate NMOC emissions.

5.0 NMOC EMISSION RATE CALCULATION

A NMOC emission rate calculation was performed with the site-specific NMOC concentration. The calculation was performed using the USEPA LFG Emission Model Version 3.02 (LandGEM) (Clean Air Act [CAA] default values – k=0.02/year and L_0=170 m3/Mg), the site-specific NMOC concentration (433 ppmv), historical waste receipts for degradable solid waste, and the projected future waste acceptance rates for the WCL using the equation specified in 40 CFR 60.754 displayed below:

$$MNMOC = \sum 2\ k\ L_o\ Mi\ (\ e^{-kti})\ (C_{NMOC})\ (3.6\ x10^{-9})$$

where:

MNMOC = Total emission rate from landfill – (Mg/yr)
k = Methane generation constant = 0.02/yr (representative of an arid climate.)
L_o = Methane generation potential = 170 cubic meters per Megagram (m3/Mg)
M_i = Mass of waste in the ith section – Mg
ti = Age of the ith section of waste - years
CNMOC = Site-specific NMOC concentration of 433 ppmv (as determined from sample analyses)

Based on the site-specific NMOC concentration, the LandGEM yielded an average NMOC emission rate of 35.81 Mg/yr for the year 2021. LandGEM results have been provided in Appendix D of this report. The NMOC emission rate calculation indicates that the WCL does not exceed 50 Mg/yr for 2021 and is not expected to exceed the 50 Mg/yr threshold limit value over the next five years as summarized below.

Table 3 - NMOC Predicted Emission Rate

Year	Refuse in Place (Mg)	NMOC - average		NMOC - maximum	
		(Mg/yr)	(m^3/yr)	(Mg/yr)	(m^3/yr)
2021	4,090,050	35.81	9,989.47	38.64	10,778.47
2022	4,295,540	37.69	10,515.94	40.67	11,346.52
2023	4,501,030	39.51	11,021.76	42.63	11,892.29
2024	4,706,520	41.25	11,507.75	44.51	12,416.67
2025	4,912,010	42.92	11,974.69	46.31	12,920.48
2026	5,117,500	44.53	12,423.31	48.05	13,404.54
2027	5,322,990	46.08	12,854.35	49.72	13,869.62
2028	5,528,480	47.56	13,268.48	51.32	14,316.46
2029	5,733,970	48.99	13,666.37	52.86	14,745.78
2030	5,939,460	50.36	14,048.67	54.33	15,158.27

Predicted NMOC generation rates will continue to be conducted annually. As required, if the landfill generates 50 Mg/yr or more NMOC, then it must comply with the control and reporting requirements under 40 CFR 60.752(b)(2).

6.0 CONCLUSION

The LandGEM model predicts an average NMOC generation of 35.81 Mg/yr and a maximum NMOC generation rate of 38.64 Mg/yr based on the Tier 2 data, both below the NSPS emission threshold of 50 Mg/yr. The LandGEM model further predict that the site will remain below the 50 Mg/yr threshold over the next five years. The year 2028 and 2030 is estimated to exceed this threshold based on the average and maximum NMOC generation rates, respectively. In the event that actual waste acceptance rates differ significantly than those estimated in this report, the Wexford County Landfill will recalculate the NMOC emission rate using the NMOC concentration determined in this report and actual waste acceptance.

The site remains in compliance with NSPS-WWW and an active landfill gas collection system is not required. To maintain this exemption, retesting must occur by January 19, 2026: within 5-years of this last test.

If you have any questions regarding this work plan, please contact me at 248-255-8280.

Sincerely;

Vicki R. Garon, P.E.

Encl.: Appendix A – Field Notes
Appendix B – Vapor Point Logs
Appendix C – Analytical Data
Appendix D – LandGEM Results

cc: Mr. John Ozoga, EGLE - via Electronic Delivery (OzogaJ@michigan.gov)

Appendix A
Field Notes

Tier 2 Field Sample Log

PROJECT Wexford Land Fill
SUBJECT Vapor Sample

SHEET 1 of 2
JOB #
DATE 1-19-21
SAMPLED BY ~~RF~~ GEI

Tank No.	Sample No.	Pre-Test Field Results			Tank Sampling Record						Post-Test Field Results		
					Start Time 13:23				Stop Time 13:43				
		CH_4 [%]	CO_2 [%]	O_2 [%]	Ambient Pressure*	Ambient Temp [°F]	Pressure [in. Hg]	Flow Rate [L/min]	Pressure [in. Hg]	Flow Rate [L/min]	CH_4 [%]	CO_2 [%]	O_2 [%]
SN 18163	Flare @ 13:23	40.8	31.7	0.3	Bara 28.24	22° F	28" Hg	300mL	20" Hg	300mL	40.9	32.2	0.5
		H_2S	CO	Bal							H_2S	CO	Bal
		119	8	26.5							118	8	26.3
					Time	14:27			Time	15:04			
SN 37809	Cell A Candy Cane @ 14:27	0.0	0.1	21.4	28.25	22° F	30" Hg	400mL/	2" Hg	400mL/	.1	0	23.6
		H_2S	CO	Bal							H_2S	CO	Bal
		0	3	78.5							0	2	76.3
					Time	15:15			Time	15.59			
SN 37814	Flare @ 15:15	41.3	32.4	.7	Bara 28.23	21°F	30" Hg	300mL/	20" Hg	300mL/	40.7	32.2	0.5
		H_2S	CO	Bal							H_2S	CO	Bal
		117	6	25.4							114	7	26.5

*For composite samples use a separate row to record field readings for each sample location.
**Specify units
Comments:

SMITH GARDNER

Tier 2 Field Sample Log

PROJECT Wexford Landfill

SUBJECT Vapor Samples

SHEET 2 of 2
JOB #
DATE 1-20-21
SAMPLED BY RE EEI

Tank No.	Sample No.	Pre-Test Field Results			Tank Sampling Record						Post-Test Field Results		
					Start Time 8:53				9:03 Stop Time				
		CH_4 (%)	CO_2 (%)	O_2 (%)	Ambient Pressure*	Ambient Temp (°F)	Pressure (in. Hg)	Flow Rate (L/min)	Pressure (in. Hg)	Flow Rate (L/min)	CH_4 (%)	CO_2 (%)	O_2 (%)
Serial # 37859	Flare @ 8:53	46.5	31.6	0.3	28.32	16°F	28" Hg	300 mL/min	20" Hg	305 mL/min	41.4	31.7	0.4
		H_2S	CO	Bal							H_2S	CO	Bal
		119	5	26.5							117	8	26.6

*For composite samples use a separate row to record field readings for each sample location.

**Specify units

Comments:

SMITH GARDNER

Canister # 37814

Flare @ 15:15

VP- Date 1-19-21

RE
GEI

Purge Target

Purge 30 ML/Ft

Time	Notes
15:10	Use gem to take vapor readings
15:12	I used syringe to purge 240 mL from line and manifold
15:15	Start sample 28" Hg 300mL/min
15:59	Stop sample 19" Hg 300 mL/min
	Manifold 20" Hg 42° F
16:00	Air temp 19°F wind 9 MPH from west

PID Reading	O2	LEL	VOC	Co				

Canister # 18163

Flare @ 13:23

~~VP~~- Date 1-19-21

RE
GEI

Purge Target 240 mL

~~Purge 30 ML/Ft~~

Time	Notes
13:10	I used syringe to purge 240 ML from line
	and manifold
	Air temp warmer near flare
	Approx 27° @ flare 22° other areas
	Wind approx 7 MPH From west
13:23	Start sample 28" Hg
	Flare manifold 20" Hg 414° F
13:29	22" Hg 300 ML/min Flow
13:32	21" Hg 200 ML/min Flow
13:34	20" Hg Stop sample

PID Reading	O2	LEL	VOC	Co				

Flare @ 8:53

Canister # 37859

VP- Date 1-20-21

Purge Target

Purge 30 ML/Ft

Time	Notes
8:46	Start GEM
8:49	Man. fold Pressure 20" HG
man	Temp 10° F
8:51	Hooked up tank and purged 240 mL from line and manifold
8:53	Start Sample
	Wind 7 MPH from West
	Air temp 16°F
	28" Hg 300 mL/min
9:03	Stop sample 20" Hg same as manifold
	Vacuum for flare.

PID Reading	O2	LEL	VOC	Co				

Cell A Canister # 37809 RE
Candy Cane GEI
VP- Date 1-19-21

Purge Target

Purge 30 ML/Ft

Time	Notes
14:20	I put ziplock bag over vent inlet and used
	duct tape to seal.
14:22	I took readings with gem meter.
	No vapor was purged from Candy Cane
	before sampling or gem readings
	Gem was hooked up approx 1.5 minutes
14:27	Start sample 30" Hg Flow 400 ML/min
14:49	20" Hg 400 ML/min
15:04	2" Hg 400 ML/min end sample

PID Reading	O2	LEL	VOC	Co				

PROJECT Wexford Landfill

SUBJECT Vapor Sampling

Tier 2 Field Sample Log

Composite VP-1 VP-2

SHEET 1 of 4

JOB #

DATE 1-22-21

SAMPLED BY

Tank No.	Sample No.	Pre-Test Field Results			Tank Sampling Record						Post-Test Field Results		
					9:56 Start Time				10:05 Stop Time				
		CH_4 (%)	CO_2 (%)	O_2 (%)	Ambient Pressure*	Ambient Temp (°F)	Pressure (in. Hg)	Flow Rate (L/min)	Pressure (in. Hg)	Flow Rate (L/min)	CH_4 (%)	CO_2 (%)	O_2 (%)
31011	VP-1	61.8	41.8	0.0	28.31	13°F	28" Hg	400 mL/min	15" Hg	400 mL/min	61.9	41.8	0.0
		H_2S	CO	Bal							H_2S	CO	Bal
		> 500 ppm	22	>							> 500	20	>
					10:24				10:37				
31011	VP-2	55.9	44.1	0.0	28.31	13°F	15" Hg	400 mL/min	2" Hg	400 mL/min	55.5	44.5	0.0
		H_2S	CO	Bal							H_2S	CO	Bal
		10	22	0.0							9	25	0.0

*For composite samples use a separate row to record field readings for each sample location.

**Specify units

Comments:

SMITH-GARDNER

VP-3
VP-4 Composite
VP-5

Tier 2 Field Sample Log

VP-3
VP-4 - VP Duplicate
VP-5

PROJECT Wexford Landfill
SUBJECT Vapor Sample

SHEET 2 of 4
JOB #
DATE 1-22-21
SAMPLED BY

Tank No.	Sample No.	Pre-Test Field Results			Tank Sampling Record						Post-Test Field Results		
					10:52 Start Time				11:03 Stop Time				
		CH_4 (%)	CO_2 (%)	O_2 (%)	Ambient Pressure*	Ambient Temp (°F)	Pressure (in. Hg)	Flow Rate (L/min)	Pressure (in. Hg)	Flow Rate (L/min)	CH_4 (%)	CO_2 (%)	O_2 (%)
20589	VP-3	57.9	41.2	0.0	28.38	13°F	28" Hg	400 mL/min	19" Hg	400 mL/min			
		H_2S	CO	Bal									
		>500	20	.8									
					11:05				11:15				
20573	VP-3				28.38	13°F	30" Hg	400 mL/min	20" Hg	400 mL/min	58.0	41.7	0.0
											H_2S	CO	Bal
											>500	19	0.2

*For composite samples use a separate row to record field readings for each sample location.

**Specify units

Comments:

SMITH GARDNER

VP-3
VP-4 Composite
VP-5

Tier 2 Field Sample Log

PROJECT Wesford Landfill
SUBJECT Vapor Sample

VP-3
VP-4 - VP-Composite
VP-5

SHEET 3 of 4
JOB #
DATE 1-22-21
SAMPLED BY

Tank No.	Sample No.	Pre-Test Field Results			Tank Sampling Record						Post-Test Field Results		
					11:23 Start Time				11:31 Stop Time				
		CH_4 [%]	CO_2 [%]	O_2 [%]	Ambient Pressure*	Ambient Temp [°F]	Pressure (in. Hg)	Flow Rate (L/min)	Pressure (in. Hg)	Flow Rate (L/min)	CH_4 [%]	CO_2 [%]	O_2 [%]
20589	VP-4	55.5	44.7	0.0	28.39	13°F	19" Hg	400 mL/m.	10" Hg	300 mL/m.			
		H_2S	CO	Bal									
		13	14	0.0									
						11:33			11:43				
20573	VP-4				28.39	13°F	20" Hg	400 mL/m.	11" Hg	400 mL/m.	55.4	44.6	<
											H_2S	CO	Bal
											10	14	0.0

*For composite samples use a separate row to record field readings for each sample location.
**Specify units
Comments:

SMITH GARDNER

VP-3
VP-4 Composite
VP-5

Tier 2 Field Sample Log

VP-3
VP-4 VP Duplicate
VP-5

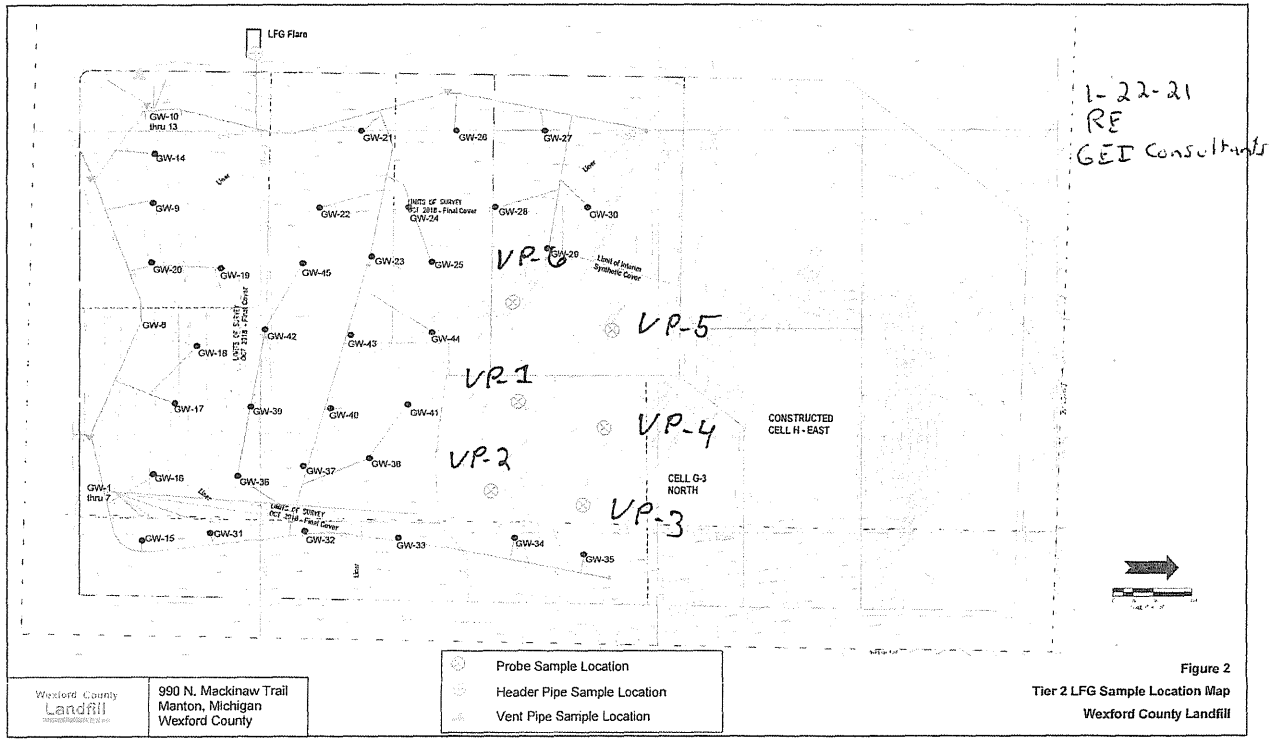
PROJECT Weyford Landfill
SUBJECT Vapor Sample

SHEET 4 of 4
JOB #
DATE 1-22-21
SAMPLED BY

Tank No.	Sample No.	Pre-Test Field Results			Tank Sampling Record						Post-Test Field Results		
					11:58 Start Time				1207 Stop Time				
		CH_4 (%)	CO_2 (%)	O_2 (%)	Ambient Pressure*	Ambient Temp (°F)	Pressure (in. Hg)	Flow Rate (L/min)	Pressure (in. Hg)	Flow Rate (L/min)	CH_4 (%)	CO_2 (%)	O_2 (%)
20589	VP-5	60.3	38.0	0.0	28.39	13°F	10" Hg	400 mL/min	1" Hg	300 mL/min			
		H_2S	CO	Bal									
		8	9	1.7									
					12:12				12:22				
20573	VR-5				28.39	13°F	11" Hg	400 mL/min	1" Hg	200 mL/min	60.2	38.2	<
											H_2S	CO	Bal
											7	7	1.8

*For composite samples use a separate row to record field readings for each sample location.
**Specify units
Comments:

SMITH GARDNER

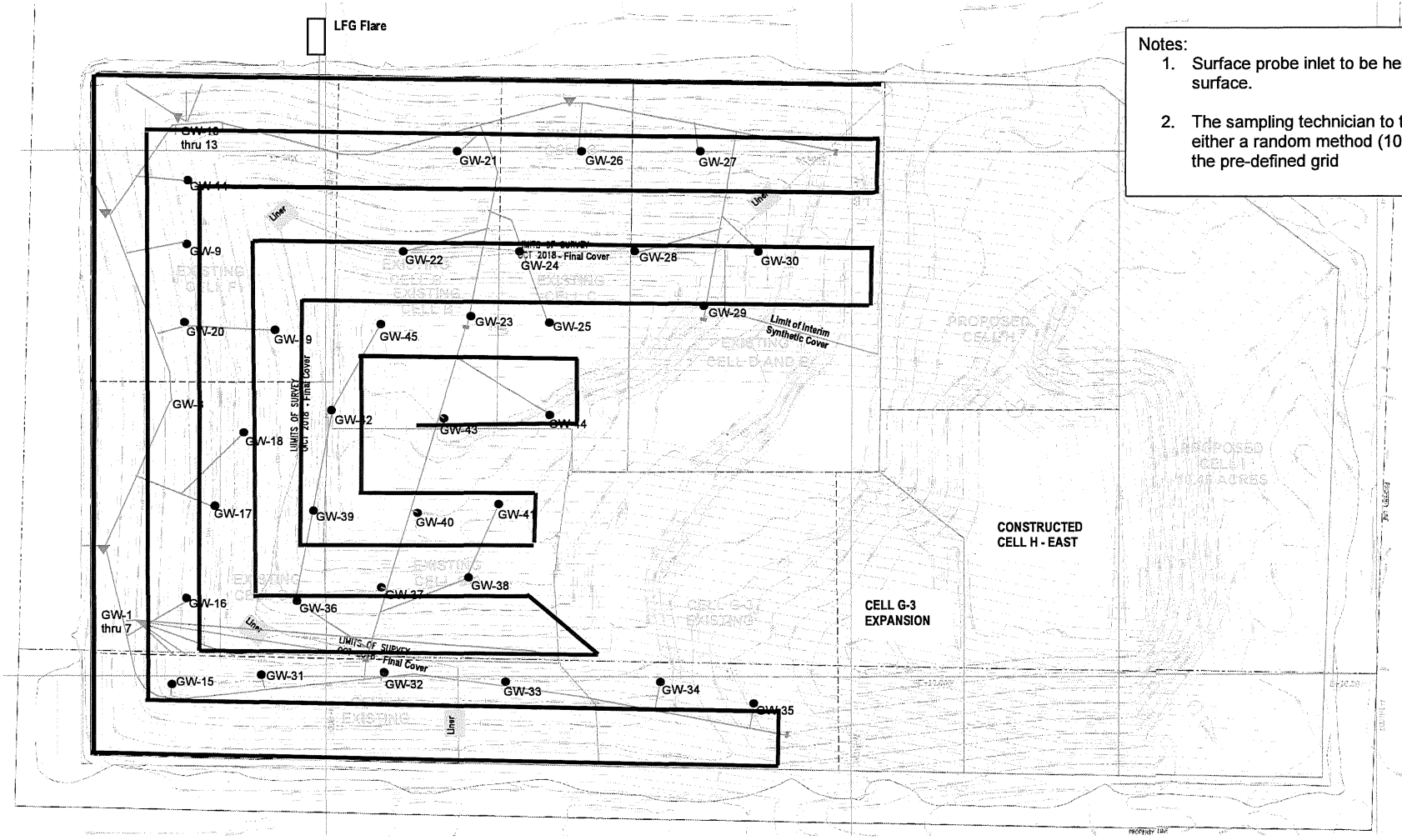


1-22-21
RE
GEI Consultants

Wexford County Landfill

990 N. Mackinaw Trail
Manton, Michigan
Wexford County

Figure 2
Tier 2 LFG Sample Location Map
Wexford County Landfill



Notes:

1. Surface probe inlet to be held 4-6" from ground surface.
2. The sampling technician to traverse the landfill in either a random method (100' spacing max.) or over the pre-defined grid

Wexford County Landfill

990 N. Mackinaw Trail
Manton, Michigan
Wexford County

Figure 3

Tier 2 LFG Surface Scan Map

Wexford County Landfill

Appendix B
Vapor Point Logs