

Annex G2

Landfill Gas Monitoring Results

Table G2.1 Landfill Gas Monitoring Results at Perimeter LFG Monitoring Wells (April 2023)

Location	Water Level (mPD)	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
LFG1	2.56	0.0	0.4	16.8
LFG2	2.69	0.0	0.6	17.2
LFG3	2.61	0.0	2.8	15.4
LFG4	2.45	0.0	0.1	19.5
LFG5	3.07	0.0	0.3	8.4
LFG6	2.73	0.0	0.1	19.5
LFG7	2.64	0.0	0.0	19.2
LFG8	2.27	0.0	0.0	19.8
LFG9	2.30	0.0	0.0	9.8
LFG10	1.98	0.0	0.2	10.3
LFG11	2.22	0.0	0.2	5.0
LFG12	1.97	0.0	0.0	19.4
LFG13	2.17	25.8	0.0	2.1
LFG14	2.53	0.0	0.1	9.0
LFG15	1.93	0.1	0.9	11.9
LFG16	2.51	0.0	0.1	20.1
LFG17	2.54	1.3	1.5	2.5
LFG18	2.47	0.0	0.2	19.3
LFG19	2.17	0.0	0.2	5.8
LFG20	3.03	0.0	0.7	17.3
LFG21	2.26	0.0	1.3	15.2
LFG22	2.77	0.0	1.3	10.4
LFG23	12.53	0.0	0.4	19.5
LFG24	5.81	0.0	0.0	20.3
GP1	Probe bent	0.0	4.3	15.2
GP2 (shallow)	Probe bent	0.0	1.3	10.4
GP2 (deep)	Probe bent	0.0	4.9	19.5
GP3 (shallow)	Probe bent	0.0	0.0	20.4
GP3 (deep)	Probe bent	0.0	0.0	20.4
GP4 (shallow)	Probe bent	0.0	0.0	20.3
GP4 (deep)	Probe bent	0.0	0.1	20.2
GP5 (shallow)	Probe bent	0.0	0.8	18.8
GP5 (deep)	37.99	0.0	0.1	20.2
GP6	36.07	0.0	5.6	13.6
GP7	35.84	0.0	0.2	19.8
GP12	2.25	0.0	0.2	19.7
GP15	2.59	0.0	0.0	20.2
P7	2.47	0.0	0.1	20.1
P8	2.45	0.0	0.0	20.2
P9	2.64	0.0	0.3	19.6

Table G2.2 Landfill Gas Monitoring Results at Perimeter LFG Monitoring Wells (May 2023)

Location	Water Level (mPD)	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
LFG1	2.51	0.0	0.7	15.6
LFG2	2.80	0.0	0.8	18.0
LFG3	2.61	0.0	3.2	15.1
LFG4	2.50	0.0	0.0	16.9
LFG5	2.66	0.0	0.9	15.3
LFG6	2.25	0.0	0.1	20.1
LFG7	2.98	0.0	0.0	18.0
LFG8	2.71	0.0	0.1	20.4
LFG9	4.20	0.0	0.3	10.2
LFG10	2.12	0.0	0.2	7.6
LFG11	3.00	0.0	0.2	4.6
LFG12	2.36	0.0	0.0	20.3
LFG13	2.28	0.4	0.0	19.7
LFG14	4.18	0.0	0.1	17.4
LFG15	2.38	0.0	0.6	15.6
LFG16	2.94	0.0	0.2	20.3
LFG17	4.45	0.0	0.1	19.7
LFG18	2.28	0.0	0.1	20.4
LFG19	3.00	0.0	0.0	6.9
LFG20	3.40	0.0	0.0	18.1
LFG21	5.38	0.0	0.9	11.7
LFG22	4.53	0.0	1.2	11.5
LFG23	12.49	0.0	0.1	20.0
LFG24	5.76	0.0	0.0	20.0
GP1	Probe bent	0.0	7.5	0.6
GP2 (shallow)	Probe bent	0.0	1.2	16.9
GP2 (deep)	Probe bent	0.0	0.4	19.1
GP3 (shallow)	Probe bent	0.0	0.1	19.7
GP3 (deep)	Probe bent	0.0	0.0	19.7
GP4 (shallow)	Probe bent	0.0	0.5	19.5
GP4 (deep)	Probe bent	0.0	0.2	19.4
GP5 (shallow)	Probe bent	0.0	0.2	19.3
GP5 (deep)	37.55	0.0	0.2	19.5
GP6	31.15	0.0	4.8	14.5
GP7	36.06	0.0	0.2	19.5
GP12	2.15	0.0	0.1	20.8
GP15	1.81	0.0	0.1	20.9
P7	2.34	0.0	0.1	20.1
P8	2.76	0.0	0.1	20.3
P9	2.34	0.0	0.0	20.2

Table G2.3 Landfill Gas Monitoring Results at Perimeter LFG Monitoring Wells (June 2023)

Location	Water Level (mPD)	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
LFG1	2.83	0.0	1.2	16.8
LFG2	2.56	0.0	1.5	18.9
LFG3	3.70	0.0	3.8	13.7
LFG4	2.46	0.0	0.0	19.7
LFG5	2.55	0.0	0.3	7.9
LFG6	2.50	0.0	0.0	20.0
LFG7	2.42	0.0	0.0	17.7
LFG8	2.54	0.0	0.0	20.0
LFG9	2.15	0.0	0.3	8.8
LFG10	2.44	0.0	0.1	13.3
LFG11	2.31	0.0	0.3	3.7
LFG12	2.43	0.0	0.0	20.1
LFG13	2.25	0.5	0.1	6.4
LFG14	1.97	0.0	0.3	8.4
LFG15	2.41	0.6	0.5	13.8
LFG16	3.90	0.0	0.0	20.3
LFG17	2.41	2.6	1.1	0.2
LFG18	3.66	0.0	0.0	20.3
LFG19	2.41	0.0	0.1	19.8
LFG20	2.64	0.0	4.5	5.8
LFG21	2.41	0.0	2.2	9.8
LFG22	3.40	0.0	0.0	20.2
LFG23	12.93	0.0	0.0	20.1
LFG24	7.54	0.0	8.4	19.0
GP1	Probe bent	0.0	0.1	20.3
GP2 (shallow)	Probe bent	0.0	0.2	19.7
GP2 (deep)	Probe bent	0.0	0.3	19.9
GP3 (shallow)	Probe bent	0.0	1.0	18.9
GP3 (deep)	Probe bent	0.0	0.0	20.2
GP4 (shallow)	Probe bent	0.0	0.1	20.1
GP4 (deep)	Probe bent	0.0	0.1	20.0
GP5 (shallow)	Probe bent	0.0	0.4	19.3
GP5 (deep)	38.00	0.0	0.0	20.0
GP6	36.00	0.0	4.3	14.8
GP7	34.95	0.0	0.1	19.7
GP12	1.91	0.0	0.1	19.9
GP15	2.65	0.0	0.0	20.1
P7	3.16	0.0	0.1	20.1
P8	2.50	0.0	0.4	19.6
P9	2.18	0.0	0.1	20.0

Table G2.4 Landfill Gas Monitoring Results at Service Voids, Utilities Pits and Manholes (April 2023)

Location	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
UU01	0.0	0.0	19.7
UU02	0.0	0.0	19.7
UU03	0.0	0.0	19.8
UU04	0.0	0.0	19.9
UU05	0.0	0.0	19.6
UU06	0.0	0.0	19.6
UU07	0.0	0.0	19.9
UU08	0.0	0.0	19.6
UU09	0.0	0.0	19.6
UU10	0.0	0.0	19.6
UU11	0.0	0.0	19.6
UU12	Voided due to latest site programme and on-going operation work		
UU13	0.0	0.0	19.6
UU14	0.0	0.0	19.7
UU15	0.0	0.0	19.7
UU16	0.0	0.0	19.8
UU17	Voided due to latest site programme and on-going operation work		
UU18	0.0	0.0	19.7
UU19	0.0	0.0	20.0
UU20	0.0	0.0	19.8
UU21	0.0	0.0	19.8
UU22	0.0	0.0	19.9
UU23	0.0	0.0	19.8
UU24	0.0	0.0	19.9
UU25	0.0	0.0	20.0
UU26	0.0	0.0	20.0
UU27	0.0	0.0	19.6
UU28	0.0	0.0	19.7

Table G2.5 Landfill Gas Monitoring Results at Service Voids, Utilities Pits and Manholes (May 2023)

Location	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
UU01	0.0	0.0	20.0
UU02	0.0	0.0	20.0
UU03	0.0	0.0	20.1
UU04	0.0	0.0	20.1
UU05	0.0	0.0	20.0
UU06	0.0	0.0	20.0
UU07	0.0	0.0	20.1
UU08	0.0	0.0	20.0
UU09	0.1	0.1	20.0
UU10	0.1	0.1	20.1
UU11	0.1	0.1	20.2
UU12	Voided due to latest site programme and on-going operation work		
UU13	0.1	0.1	20.2
UU14	0.1	0.1	20.2
UU15	0.1	0.1	20.0
UU16	0.0	0.0	20.2
UU17	Voided due to latest site programme and on-going operation work		
UU18	0.0	0.1	20.1
UU19	0.0	0.0	20.1
UU20	0.0	0.0	20.1
UU21	0.0	0.0	20.1
UU22	0.0	0.0	20.1
UU23	0.0	0.0	20.1
UU24	0.0	0.0	20.1
UU25	0.0	0.0	20.1
UU26	0.0	0.0	20.1
UU27	0.0	0.0	20.1
UU28	0.0	0.0	20.0

Table G2.6 Landfill Gas Monitoring Results at Service Voids, Utilities Pits and Manholes (June 2023)

Location	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
UU01	0.0	0.0	20.0
UU02	0.0	0.0	20.9
UU03	0.0	0.0	20.1
UU04	0.0	0.0	20.1
UU05	0.0	0.0	20.1
UU06	0.0	0.0	20.0
UU07	0.0	0.0	20.0
UU08	0.0	0.0	20.1
UU09	0.0	0.0	20.1
UU10	0.0	0.0	19.6
UU11	0.0	0.0	20.3
UU12	Voided due to latest site programme and on-going operation work		
UU13	0.0	0.0	20.2
UU14	0.0	0.0	20.2
UU15	0.0	0.0	20.0
UU16	0.0	0.0	20.2
UU17	Voided due to latest site programme and on-going operation work		
UU18	0.0	0.0	20.0
UU19	0.0	0.0	20.1
UU20	0.0	0.0	20.2
UU21	0.0	0.0	20.1
UU22	0.0	0.0	20.1
UU23	0.0	0.0	20.1
UU24	0.0	0.0	20.1
UU25	0.0	0.0	20.1
UU26	0.0	0.0	20.1
UU27	0.0	0.0	20.2
UU28	0.0	0.0	20.2

Table G2.7 Landfill Gas Bulk Gas Sampling Monitoring Results

Parameters	LFG1	LFG8
Methane (% (v/v))	<0.020	<0.020
Carbon Dioxide (% (v/v))	0.549	0.066
Oxygen (% (v/v))	16.1	20.0
Nitrogen (% (v/v))	81.3	77.5
Carbon Monoxide (% (v/v))	<0.020	<0.020
Hydrogen (% (v/v))	<0.020	<0.020
Ethane (ppmv)	<1.0	<1.0
Propane (ppmv)	<1.0	<1.0
Butane (ppmv)	<1.0	<1.0

Table G2.8 Flammable Gas Surface Emission Monitoring Results

Time	GPS Coordinates		Weather Condition	Temperature (°C)	Wind Direction (Deg)	Wind Speed (m/s)	Monitoring Results (ppm)
	Latitude (N)	Longitude (E)					
13:54	22°16'30"	114°16'36"	Cloudy	26.9	004	2.2	6
14:20	22°16'28"	114°16'26"	Cloudy	28.3	174	1.2	6