

Annex G2

Landfill Gas Monitoring Results

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

Location	Water Level (mPD)	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
LFG1	2.50	0.0	0.3	18.1
LFG2	2.25	0.0	0.3	19.9
LFG3	2.44	0.0	0.9	19.4
LFG4	2.50	0.0	0.1	20.5
LFG5	2.48	0.0	0.0	20.7
LFG6	2.32	0.0	0.1	20.6
LFG7	2.31	0.0	0.0	18.9
LFG8	2.40	0.0	0.0	21.0
LFG9	2.29	0.0	0.1	12.8
LFG10	2.21	0.0	0.1	15.9
LFG11	2.14	0.0	0.2	13.9
LFG12	2.16	0.0	0.0	20.9
LFG13	2.05	16.5	0.0	6.6
LFG14	1.94	0.0	0.0	17.8
LFG15	2.14	0.0	0.0	20.9
LFG16	2.20	0.0	0.1	20.9
LFG17	2.36	0.0	0.6	15.5
LFG18	2.03	0.0	0.2	20.4
LFG19	2.33	0.0	0.1	8.8
LFG20	2.16	0.0	0.2	20.6
LFG21	2.33	0.1	2.6	11.0
LFG22	2.28	0.1	0.6	18.6
LFG23	12.23	0.1	1.8	17.1
LFG24	5.99	0.1	0.5	20.4
GP1	Probe bent	0.3	5.6	13.5
GP2 (shallow)	Probe bent	0.2	1.7	16.6
GP2 (deep)	Probe bent	0.2	6.3	13.9
GP3 (shallow)	Probe bent	0.2	0.1	21.0
GP3 (deep)	Probe bent	0.2	0.2	20.8
GP4 (shallow)	Probe bent	0.1	0.1	20.9
GP4 (deep)	Probe bent	0.1	0.1	20.9
GP5 (shallow)	Probe bent	0.1	4.5	8.5
GP5 (deep)	38.47	0.1	0.1	21.0
GP6	36.90	0.1	5.2	15.3
GP7	36.19	0.1	0.1	21.0
GP12	1.23	0.0	0.0	21.0
GP15	2.69	0.0	0.1	20.9
P7	2.54	0.0	0.0	21.0
P8	2.57	0.0	0.0	21.0
P9	2.42	0.0	0.1	20.9

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

Location	Water Level (mPD)	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
LFG1	2.45	0.1	0.3	17.9
LFG2	2.31	0.1	0.4	18.6
LFG3	2.48	0.2	0.1	20.2
LFG4	2.37	0.2	0.1	19.2
LFG5	2.63	0.2	0.2	10.2
LFG6	2.31	0.3	0.1	19.6
LFG7	2.56	0.0	0.0	20.3
LFG8	2.42	0.0	0.1	20.2
LFG9	2.30	0.0	0.9	6.0
LFG10	1.90	0.0	0.1	20.4
LFG11	1.45	0.0	0.2	8.7
LFG12	2.05	0.0	0.0	20.3
LFG13	2.01	18.5	0.4	1.4
LFG14	1.71	0.0	0.1	20.6
LFG15	2.01	0.0	0.1	20.2
LFG16	2.09	0.0	0.1	17.6
LFG17	2.28	0.0	0.3	20.2
LFG18	2.30	0.0	0.7	18.7
LFG19	2.32	0.0	0.1	20.9
LFG20	2.28	0.0	0.3	20.2
LFG21	2.34	0.0	0.1	20.6
LFG22	2.38	0.0	0.2	20.1
LFG23	12.51	0.0	2.6	16.9
LFG24	5.97	0.0	0.3	20.2
GP1	Probe bent	0.0	5.2	14.3
GP2 (shallow)	Probe bent	0.0	3.0	12.5
GP2 (deep)	Probe bent	0.0	7.0	11.7
GP3 (shallow)	Probe bent	0.0	0.0	20.7
GP3 (deep)	Probe bent	0.0	0.0	20.8
GP4 (shallow)	Probe bent	0.0	0.1	20.6
GP4 (deep)	Probe bent	0.0	0.3	20.0
GP5 (shallow)	Probe bent	0.0	4.2	6.7
GP5 (deep)	38.33	0.0	0.1	20.6
GP6	36.39	0.0	5.5	14.6
GP7	35.91	0.0	0.0	20.9
GP12	1.91	0.1	0.0	20.2
GP15	2.41	0.0	0.0	20.3
P7	2.30	0.0	0.1	20.2
P8	2.50	0.0	0.2	20.0
P9	2.18	0.0	0.1	20.3

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

Location	Water Level (mPD)	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
LFG1	3.88	0.1	0.2	18.1
LFG2	4.13	0.1	0.1	18.8
LFG3	3.76	0.1	0.1	20.2
LFG4	4.01	0.1	0.1	20.0
LFG5	3.63	0.1	0.3	8.0
LFG6	4.11	0.2	0.2	19.4
LFG7	3.83	0.0	0.0	19.8
LFG8	3.85	0.0	0.0	19.9
LFG9	3.82	0.0	0.0	20.0
LFG10	3.97	0.0	0.0	19.8
LFG11	3.98	0.0	0.0	5.2
LFG12	3.88	0.0	0.0	19.7
LFG13	3.97	21.4	0.0	1.0
LFG14	5.24	0.0	0.0	19.9
LFG15	5.40	0.0	0.6	12.6
LFG16	5.08	0.0	0.1	19.5
LFG17	4.95	0.0	0.0	20.2
LFG18	5.36	0.0	0.1	19.5
LFG19	5.26	0.0	0.0	20.2
LFG20	5.54	0.0	0.8	18.3
LFG21	7.13	0.0	1.8	14.2
LFG22	7.84	0.0	0.0	20.2
LFG23	14.65	0.0	1.0	18.5
LFG24	26.35	0.0	0.3	19.8
GP1	Probe bent	0.0	5.5	14.6
GP2 (shallow)	Probe bent	0.0	1.4	16.4
GP2 (deep)	Probe bent	0.0	6.3	16.3
GP3 (shallow)	Probe bent	0.0	0.0	20.1
GP3 (deep)	Probe bent	0.0	0.5	19.2
GP4 (shallow)	Probe bent	0.0	0.1	20.1
GP4 (deep)	Probe bent	0.0	0.3	19.7
GP5 (shallow)	Probe bent	0.0	3.2	9.9
GP5 (deep)	14.14	0.0	0.1	20.0
GP6	11.69	0.0	4.6	15.4
GP7	3.02	0.0	0.0	20.3
GP12	2.64	0.1	0.0	20.1
GP15	3.94	0.1	0.0	19.8
P7	3.60	0.1	0.0	19.9
P8	3.11	0.1	0.0	19.9
P9	2.23	0.0	0.0	19.9

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

Location	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
UU01	0.00	0.0	20.8
UU02	0.00	0.1	20.7
UU03	0.00	0.0	20.7
UU04	0.00	0.0	20.7
UU05	0.00	0.0	20.6
UU06	0.00	0.0	20.6
UU07	0.00	0.1	20.6
UU08	0.00	0.0	20.5
UU09	0.00	0.1	20.3
UU10	0.00	0.0	20.1
UU11	0.00	0.1	19.8
UU12	Voided due to latest site programme and on-going operation work		
UU13	0.00	0.1	19.9
UU14	0.00	0.1	20.1
UU15	0.00	0.1	20.4
UU16	0.00	0.0	20.7
UU17	Voided due to latest site programme and on-going operation work		
UU18	0.00	0.1	20.5
UU19	0.00	0.1	20.6
UU20	0.00	0.0	20.7
UU21	0.00	0.0	20.7
UU22	0.00	0.0	20.6
UU23	0.00	0.0	20.6
UU24	0.00	0.0	20.6
UU25	0.00	0.0	20.6
UU26	0.00	0.0	20.6
UU27	0.00	0.1	19.4
UU28	0.00	0.1	19.6

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

Location	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
UU01	0.0	0.1	20.3
UU02	0.0	0.1	20.3
UU03	0.0	0.1	20.3
UU04	0.0	0.1	20.3
UU05	0.0	0.1	20.4
UU06	0.0	0.1	20.4
UU07	0.0	0.1	20.5
UU08	0.0	0.0	20.3
UU09	0.0	0.1	20.4
UU10	0.0	0.1	20.4
UU11	0.0	0.1	20.4
UU12	Voided due to latest site programme and on-going operation work		
UU13	0.0	0.1	20.5
UU14	0.0	0.1	20.5
UU15	0.0	0.1	20.3
UU16	0.0	0.1	20.1
UU17	Voided due to latest site programme and on-going operation work		
UU18	0.0	0.1	20.2
UU19	0.0	0.1	20.4
UU20	0.0	0.1	20.1
UU21	0.0	0.1	20.1
UU22	0.0	0.1	20.2
UU23	0.0	0.1	20.2
UU24	0.0	0.1	20.3
UU25	0.0	0.1	20.3
UU26	0.0	0.0	20.4
UU27	0.0	0.1	20.4
UU28	0.0	0.1	20.5

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

Location	Methane (% (v/v))	Carbon Dioxide (% (v/v))	Oxygen (% (v/v))
UU01	0.1	0.1	20.3
UU02	0.1	0.0	20.5
UU03	0.0	0.0	20.0
UU04	0.0	0.0	20.1
UU05	0.0	0.0	20.2
UU06	0.0	0.0	20.3
UU07	0.0	0.0	20.0
UU08	0.0	0.0	20.3
UU09	0.0	0.0	20.1
UU10	0.0	0.0	20.1
UU11	0.0	0.0	20.2
UU12	Voided due to latest site programme and on-going operation work		
UU13	0.0	0.0	20.2
UU14	0.0	0.0	20.3
UU15	0.0	0.0	20.2
UU16	0.0	0.0	20.1
UU17	Voided due to latest site programme and on-going operation work		
UU18	0.0	0.0	20.1
UU19	0.0	0.0	20.1
UU20	0.0	0.0	20.0
UU21	0.0	0.0	20.0
UU22	0.0	0.0	20.0
UU23	0.0	0.0	20.0
UU24	0.0	0.0	19.9
UU25	0.0	0.1	20.0
UU26	0.0	0.0	20.3
UU27	0.0	0.0	20.3
UU28	0.0	0.0	20.4

Table G2.7 Landfill Gas Bulk Gas Sampling Monitoring Results

Parameters	LFG1	LFG8
Methane (% (v/v))	<0.0200	<0.020
Carbon Dioxide (% (v/v))	0.318	0.068
Oxygen (% (v/v))	19	21.1
Nitrogen (% (v/v))	80.9	78.9
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)
13:44	22°16'29"	114°16'35"	Cloudy	18.9	205	3.5	16