

Licence No 4627 Publication of Monitoring Data M8 St Peters Interchange -10-16 Albert Street, St Peters

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Landfill Gas Monitoring – Subsurface Gas

EPL No: 4627

Date of Sampling 9, 10, 11, 12, 13 and 19 May 2022 Date Received 27 June 2022 Date of Publication 8 July 2022

Subsurface landfill gas monitoring is usually a number of measurements taken over time with two events. The first event is initial measurements and the second event is measurements after the air space in the well has been pumped out. The highest measurement in the first (initial) and second (post-purge) events are reported in the following table.

Where the groundwater level is above the well screen the high water level can interfere with the monitoring equipment and no measurement/s can be taken.

Monitoring Point	EPA Identification Number	Frequency	Pollutant										
			Carbon Dioxide (%v/v)		Carbon Monoxide (ppm)		Hydrogen Sulphide (ppm)		Methane (%v/v)		Oxygen (%v/v)		
			Initial	Post Purge	Initial	Post Purge	Initial	Post Purge	Initial	Post Purge	Initial	Post Purge	
LDS-GM-001	22	Quarterly	0.9	0.5	0	0	1	0	0.9	0.2	1.3	0.3	
LDS-GM-002	23	Quarterly	Well destroyed										
LDS-GM-002C		Quarterly	11.1	10.3	1	0	0	0	0	0	7.0	20.0	
LDS-GM-003A	24	Quarterly		Well destroyed									
LDS-GM-003B	25	Quarterly	Well destroyed										
LDS-GM-003C		Quarterly	12.1	3.4	98	0	0	0	0	0.1	19.2	17.5	

Monitoring Point							Poll	utant						
	EPA Identification Number	Frequency	Carbon Dioxide (%v/v)		Carbon Monoxide (ppm)		Hydrogen Sulphide (ppm)		Methane (%v/v)		Oxygen (%v/v)			
			Initial	Post Purge	Initial	Post Purge	Initial	Post Purge	Initial	Post Purge	Initial	Post Purge		
LDS-GM-004	26	Quarterly	5.6	5.5	0	0	0	0	10.0	10.4	1.2	0.7		
LDS-GM-005	27	Quarterly	14.8	15.1	1	1	3	3	0	0	19.9	2.3		
LDS-GM-006A	28	Quarterly	14.9	NR1	4	NR1	0	NR1	0	NR1	5.9	NR1		
LDS-GM-006B	29	Quarterly		High water level in well										
LDS-GM-007A	30	Quarterly		High water level in well										
LDS-GM-007B	31	Quarterly		High water level in well										
LDS-GM-008A	32	Quarterly	0.6	NR3	1	NR3	0	NR3	0	NR3	20.2	NR3		
LDS-GM-008B	33	Quarterly		1		1	High water	level in well		1				
LDS-GM-009C	34	Quarterly	16.3	0.8	50	15	0	0	0	0	14.6	20.1		
LDS-GM-009D	35	Quarterly	16.5	1.4	4	3	0	0	0	0	13.6	19.6		
LDS-GM-010A	36	Quarterly	3.1	4.7	0	1	0	0	0	0	18.1	16.7		
LDS-GM-010B	37	Quarterly	4.6	1.5	0	0	0	0	0	0	19.8	20.5		
LDS-GM-011A	38	Quarterly	0	0	9	0	0	0	0	0	14.6	14.5		
LDS-GM-012C	39	Quarterly	3.4	8.7	1	1	0	0	0	0	19.5	20.3		
LDS-GM-012D	40	Quarterly	8.7	6.7	0	1	0	0	0.1	0	18.1	18.5		
LDS-GM-013*	41	Quarterly	0.1	NR2	8	NR2	3	NR2	0	NR2	20.8	NR2		
LDS-GM-014	42	Quarterly	0.9	0.9	0	0	0	0	6.2	6.2	0	0		
LDS-GM-015	43	Quarterly	2.7	1.1	0	0	0	0	0	0	12.1	12.2		
LDS-GM-016	44	Quarterly	2.9	2.9	0	0	0	0	0	0	19.9	0.1		
LDS-GM-017	45	Quarterly	1.7	1.7	0	0	0	0	2.2	2.2	1.8	0.9		
LDS-GM-018	46	Quarterly	3.2	3.1	0	0	0	0	0.2	0	14.0	14.2		

Monitoring Point							Poll	utant						
	EPA Identification Number	Frequency	Carbon Dioxide (%v/v)		Carbon Monoxide (ppm)		Hydrogen Sulphide (ppm)		Methane (%v/v)		Oxygen (%v/v)			
			Initial	Post Purge	Initial	Post Purge	Initial	Post Purge	Initial	Post Purge	Initial	Post Purge		
LDS-GM-019	47	Quarterly	11.9	2.0	0	0	5	8	3.0	2.7	1.9	2.0		
LDS-GM-020	48	Quarterly	3.6	41	0	0	0	0	0.3	0	15.0	10.7		
LDS-GM-021	49	Quarterly	5.3	7.5	0	0	0	0	0	0	11.4	8.6		
LDS-GM-022A	50	Quarterly	11.6	11.7	2	0	0	0	0	0	16.9	3.1		
LDS-GM-023	51	Quarterly	0.4	0.3	1	1	0	0	0.1	0	6.8	12.1		
LDS-GM-024A	52	Quarterly	NR4	0.4	NR4	1	NR4	0	NR4	0	NR4	14.3		
LDS-GM-024B	53	Quarterly	2.3	2.3	1	0	0	0	0	0	9.8	9.8		
LDS-GM-025	54	Quarterly	2.1	2.1	0	0	0	0	0	0	16.5	16.8		
LDS-GM-026	55	Quarterly	1.9	2.6	0	0	0	0	0	0	4.1	3.4		
LDS-GM-027	56	Quarterly	47	1.20	0	0	0	0	0	0	5.8	17.5		
LDS-GM-028	57	Quarterly	28.1	28	0	0	0	0	99.4	99	0	0		
LDS-GM-029	58	Quarterly	7.7	7.6	0	0	168	460	4.4	4.2	20.3	0		
LDS-GM-030	59	Quarterly	11.1	11.2	0	0	0	0	0	0	6.6	6.0		
LDS-BH-10321A	17	Quarterly	2.7	1.6	2	0	0	0	0	0	11.3	13.4		
LDS-BH-10322	18	Quarterly	3.2	1.8	0	1	2	2	0	0	16.0	13.4		
LDS-BH-10329	19	Quarterly	Well destroyed											
LDS-BH-10329A		Quarterly	5.7	5.7	0	0	0	1	4.0	3.9	15.5	0.3		
LDS-BH-10331	20	Quarterly	1.3	4.6	0	0	1	2	0.5	0	18.3	9.2		
LDS-BH-10332	21	Quarterly	0.6	1.0	0	13	2	3	0	0	19.4	17.5		
LDS-GV-48	60	Quarterly	20.0	NR2	0	NR2	0	NR2	53.5	NR2	4.7	NR2		
LDS-GV-49	61	Quarterly	23.6	NR2	1	NR2	6	NR2	75.6	NR2	0	NR2		

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			Initial	Post Purge	Initial	Post Purge	Initial	Post Purge	Initial	Post Purge	Initial	Post Purge
LDS-GV-50	62	Quarterly	10.0	NR2	0	NR2	0	NR2	1.2	NR2	13.6	NR2

^{*}The well LDS-GM-013 has been converted to a passive gas vent – the gas vent methodology of pre-purge results has been include in this table.

NOTES:

EPL - Environment Protection Licence

%v/v - percentage by volume

ppm - parts per million

NR1 - no result 1 – the water level too high to take measurement

NR2 - gas vent monitoring methodology used – only pre-purge results recorded.

NR3 - equipment failure

NR4 - well cap not sealed - initial reading not able to be taken.

The wells LDS-GM-002, LDS-GM-003A, LDS-GM-003B and LDS-BH-10329 were destroyed before the present monitoring program started in October 2020. Replacement wells LDS-GM-002C and LDS-GM-003C have been installed adjacent to destroyed wells with the same depth and well screens Replacement well LDS-GM-0329A has been installed at an agreed nearby location.