SOIL GAS PROBE MEASUREMENTS

Trihydro CORPORATION

Well ID UW-139 (5) ☐ Sub-slab Probe ☑ Soil gas Probe

Date:	7-1-09	PID Model Number:	MiniRae 2000
Project Name:	Initial Sample Event	Landtech GEM 2000 Landfill Gas Meter Serial Number:	GEM2000
Project Number:	500-017-012	Helium Detector (model/serial number)	MGD302
Site Location:	Chevron Cincy	Weather:	Overcast 70°
Field Personnel:	JHill	Air Temperature (°C/°F):	70°
Recorded by:	JHill	Atmospheric Pressure (in. Hg):	29.13

Surface Type:	☐ Concrete	☐ Asphalt	☑ Grass	☐ Other
Surface Thickness (inches):		☐ Unknown		

Initial Pressure / Vacuum: 0.01	Time: 1010	Field Tubing blank reading (ppm): 0.0	Time: 10:10

Shut-in Testing		Start of Pneumatic Testing: 1011		
Prior to Pneumatic	OK ☑ @ 1011	Elapsed Time (min)	Pump Flow Rate (LPM)	Well Head Vacuum (in. Hg)
Prior to Purge	OK ☑ @ 1015	1	.1	-0.03
Prior to Sample Collection	OK ☑ @ 1041	2	.2	-0.09
		3	.5	-0.24

2009 Date	Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max	VOCs by PID (ppmv)	He
7/1	Pneumatic	—	—	—	—	—	~~0.0~~ 0.1	~~0.0~~ 6.3	16.1	NA		15.9	NA
7/1	1025	~~1028~~ 1030	5	1.0	.2	1.0	0.1	7.1	15.5	14	20	6.9	✓
7/1	1030	1035	5	1.0	.2	2.0	0.1	6.5	15.9	9	16	3.7	✓
7/1	1035	1040	5	1.0	.2	3.0	0.1	7.1	15.5	18	23.4	2.7	✓

Date	Time	Sample ID	Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum	Final Vacuum	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max
7-1-09	1042	UW-139(5)070109	~~[illegible]~~	6741	1029358	28.56	4.71	17.2	21.4
			36397						

Comments: OA-1 Started @ 0952 Upwind from UW-139 Light wind

SOIL GAS PROBE MEASUREMENTS

Trihydro CORPORATION

Well ID MW-139 (10) ☐ Sub-slab Probe ☑ Soil gas Probe

Date:	7-1-09	PID Model Number:	MiniRae 2000
Project Name:	Initial Sample Event	Landtech GEM 2000 Landfill Gas Meter Serial Number:	GEM 2000
Project Number:	500-017-012	Helium Detector (model/serial number)	MGD 2002
Site Location:	Chevron Craig	Weather:	overcast
Field Personnel:	J.H.H	Air Temperature (°C/°F):	70°
Recorded by:	J.H.H	Atmospheric Pressure (in. Hg):	29.13

Surface Type: ☐ Concrete ☐ Asphalt ☑ Grass ☐ Other

Surface Thickness (inches): ☑ Unknown

Initial Pressure / Vacuum: 0.61 Time: 1058

Field Tubing blank reading (ppm): 0.0 Time: 1058

Shut-in Testing

Prior to Pneumatic	OK ☑ @ 1058
Prior to Purge	OK ☑ @ 1101
Prior to Sample Collection	OK ☑ @ 1121

Start of Pneumatic Testing: 1058

Elapsed Time (min)	Pump Flow Rate (LPM)	Well Head Vacuum (in. Hg)
1	.1	-0.06
2	.2	-0.13
3	.5	-0.41

	Date	Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max	VOCs by PID (ppmv)	He
1	7-1		Pneumatic					0.1	4.4	17.8	~~N/A~~		4.0	0
2	7-1	11:05	11:10	5	1.0	.2	1.0	0.0	4.7	17.3	7	14	2.5	0
1	7-1	11:10	11:15	5	1.0	.2	2.0	0.0	4.4	16.9	8	10	1.8	0
2	7-1	11:15	11:20	5	1.0	.2	3.0	0.0	4.5	16.7	11	13	1.6	0

Date	Time	Sample ID	Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum	Final Vacuum	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max
7-1	11:22	MW-139(10)070109	12034	FC00540	1029358	28.73	1.9	8.0	15

Comments:

SOIL GAS PROBE MEASUREMENTS

Trihydro CORPORATION

Well ID VW-139 (65) ☐ Sub-slab Probe ☑ Soil gas Probe

Date:	7-1-09	PID Model Number:	Mini Rae 2000
Project Name:	Initial Sampling	Landtech GEM 2000 Landfill Gas Meter Serial Number:	GEM 2000
Project Number:	500-017-012	Helium Detector (model/serial number)	MGD 002
Site Location:	Clover Civic SW	Weather:	Overcast
Field Personnel:	S.H.M	Air Temperature (°C/°F):	70
Recorded by:	S.H.M	Atmospheric Pressure (in. Hg):	29.12

Surface Type: ☐ Concrete ☐ Asphalt ☑ Grass ☐ Other

Surface Thickness (inches): ☑ Unknown

Initial Pressure / Vacuum: 0.02 Time: 1136

Field Tubing blank reading (ppm): 0.0 Time: 1136

Shut-in Testing

Prior to Pneumatic	OK ☑ @	1135
Prior to Purge	OK ☑ @	1139
Prior to Sample Collection	OK ☑ @	1156

Start of Pneumatic Testing: 1136

Elapsed Time (min)	Pump Flow Rate (LPM)	Well Head Vacuum (in. Hg)
1	.1	-0.04
2	.2	-0.11
3	.5	-0.35

	2009 Date	Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max	VOCs by PID (ppmv)	He
1	7-1			Pneumatic				0.0	4.7	12.7	None		3.7	0
2	7-1	1140	1145	5	1.0	.2	1.0	0.0	4.7	12.6	15	17	2.0	0
1	7-1	1145	1150	5	1.0	.2	2.0	0.0	4.9	11.9	13.2	15.8	1.9	0
2	7-1	1150	1155	5	1.0	.2	3.0	0.0	4.8	12.3	15.8	17.7	1.4	0

2009 Date	Time	Sample ID	Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum	Final Vacuum	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max
7-1	1157	VW-139 (65) 070109	35603	FC00114	1029358	28.64	3.08	15	18

Comments:

SOIL GAS PROBE MEASUREMENTS

Trihydro CORPORATION

Well ID MW-139 (20') ☐ Sub-slab Probe ☑ Soil gas Probe

Date:	7-1-09	PID Model Number:	MiniRae 2000
Project Name:	Initial Sampling SVE	Landtech GEM 2000 Landfill Gas Meter Serial Number:	GEM2000
Project Number:	500-017-012	Helium Detector (model/serial number)	MGD2052
Site Location:	Chevron - Casper, SVE	Weather:	Cloudy
Field Personnel:	S. Hall	Air Temperature (°C/°F):	70
Recorded by:	S Hall	Atmospheric Pressure (in. Hg):	29.15

Surface Type: ☐ Concrete ☐ Asphalt ☑ Grass ☐ Other
Surface Thickness (inches): ☑ Unknown

Initial Pressure / Vacuum: 0.00 Time: 1210

Field Tubing blank reading (ppm): 0.0 Time: 1210

Shut-in Testing

Prior to Pneumatic	OK ☑ @	1210
Prior to Purge	OK ☑ @	1213
Prior to Sample Collection	OK ☑ @	1230

Start of Pneumatic Testing: 1210

Elapsed Time (min)	Pump Flow Rate (LPM)	Well Head Vacuum (in. Hg)
1	.1	-0.07
2	.2	-0.14
3	.5	-0.42

	Date 2009	Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max	VOCs by PID (ppmv)	He
1	7/1		Pneumatic					0.0	4.9	12.5	None		3.9	0
2	7/1	1214	1219	5	1.0	.2	1.0	0.0	5.1	12.1	7.4	11.3	1.8	0
1	7/1	1219	1224	5	1.0	.2	2.0	0.0	5.1	11.9	13.3	17.9	1.5	0
2	7/1	1224	1229	5	1.0	.2	3.0	0.0	5.1	11.9	13.7	15.3	1.2	0

Date	Time	Sample ID	Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum	Final Vacuum	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max
7-1-09	1232	MW-139(20),070109	35669	FC00776	1029358	28.56	3.68	8.8	14.7

Comments:

Trihydro Corporation

SOIL GAS PROBE MEASUREMENTS

Well ID: UW-139 (30)   ☐ Sub-slab Probe   ☐ Soil gas Probe

Date:	7-1-09	PID Model Number:	MiniRae 2000
Project Name:	Initial Sampling	Landtech GEM 2000 Landfill Gas Meter Serial Number:	GEM 2000
Project Number:	500-017-012	Helium Detector (model/serial number)	MGD 2002
Site Location:	Chevron Cincy SVQ	Weather:	Cloudy
Field Personnel:	JHill	Air Temperature (°C/°F):	70
Recorded by:	JHill	Atmospheric Pressure (in. Hg):	29.15

Surface Type:	☐ Concrete	☐ Asphalt	☑ Grass	☐ Other
Surface Thickness (inches):			☑ Unknown	

Initial Pressure / Vacuum: 0.01	Time: 1245	Field Tubing blank reading (ppm): 0.0		Time: 1245
Shut-in Testing		Start of Pneumatic Testing: 1245		
		Elapsed Time (min)	Pump Flow Rate (LPM)	Well Head Vacuum (in. Hg)
Prior to Pneumatic	OK ☑ @ 1245	1	.1	-0.10
Prior to Purge	OK ☑ @ 1254	2	.2	-0.23
Prior to Sample Collection	OK ☑ @ 1311	3	.3	-0.66

	Date 2009	Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%) Shroud Min	Max	VOCs by PID (ppmv)	He
1	7-1	Pneumatic						0.0	5.6	11.1	None		4.3	Ø
2	7-1	1255	1300	5	1.0	.2	1.0	0.0	5.8	10.9	25	27	2.3	Ø
1	7-1	1300	1305	5	1.0	.2	2.0	0.0	5.8	10.6	19.2	20	1.7	Ø
2	7-1	1305	1310	5	1.0	.2	3.0	0.0	5.8	10.6	9.9	12.2	1.7	Ø

Date	Time	Sample ID	Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum	Final Vacuum	Tracer Gas (%) Shroud Min	Max
7-1-09	1313	UW-139(30)_070109	36442	FC00832	1029358	28.59	-3.23	9.3	18.5

Comments:

SOIL GAS PROBE MEASUREMENTS

Trihydro CORPORATION

Well ID MW-139(40) ☐ Sub-slab Probe ☑ Soil gas Probe

Date:	7-1-09	PID Model Number:	Mini Rae 2000
Project Name:	Initial Sampling	Landtech GEM 2000 Landfill Gas Meter Serial Number:	GEM2000
Project Number:	500-017-012	Helium Detector (model/serial number)	MGD2062
Site Location:	Church Cincy SW	Weather:	Cloudy
Field Personnel:	S Hall	Air Temperature (°C/(F)):	70
Recorded by:	S Hall	Atmospheric Pressure (In. Hg):	29.16

Surface Type:	☐ Concrete	☐ Asphalt	☑ Grass ☐ Other
Surface Thickness (inches):		☑ Unknown	

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Initial (Pressure) / Vacuum: ~~0.02~~	Time: 1327	Field Tubing blank reading (ppm): 0.0	Time: 1327

Shut-in Testing		Start of Pneumatic Testing: 1328		
		Elapsed Time (min)	Pump Flow Rate (LPM)	Well Head Vacuum (In. Hg)
Prior to Pneumatic	OK ☑ @ 1327	1	.1	5.9
Prior to Purge	OK ☐ @	2	.2	12.3
Prior to Sample Collection	OK ☐ @	3	.3	22.7

Date	Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Cumulative Volume (L)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max	VOCs by PID (ppmv)

MW Sample Collected Prior

Date	Time	Sample ID	Canister ID	Flow Controller #	Vacuum Gauge #	Initial Vacuum	Final Vacuum	Tracer Gas (%) Shroud Min	Tracer Gas (%) Shroud Max

Comments: Flow Stopped, Could not Maintain >2 L/min.

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Douglas Paul Michalski

Collected by: (Print and Sign) John Hall

Company: Chevron Email: dmichalski@trihydro

Address: 5000 SR 128 City: Cleves State: OH Zip: 45002

Phone: 513-353-1325 x23 Fax: 513 353 4164

Project Info:

P.O. #

Project #: 500-017-012

Project Name: SouthWest Quad

Turn Around Time: ☑ Normal ☐ Rush ____ specify

Lab Use Only Pressurized by: Date: Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
	VW-139 (5), 070109	36397	7/1/09	1042	TO-15, ASTM1946 + He	28.56	4.71		
	VW-139 (10), 070109	12034	7/1/09	1102	TO-15, ASTM 1946 + He	28.73	1.9		
	VW-139 (15), 070109	35603	7/1/09	1157	TO-15, ASTM 1946 + He	28.64	3.08		
	VW-139 (20), 070109	35669	7/1/09	1232	TO-15, ASTM 1946 + He	28.56	3.68		
	VW-139 (30), 070109	36442	7/1/09	1313	TO-15, ASTM 1946 + He	28.59	3.23		
	OA-1, 070109	5770	7/1/09	1342	TO-15LL	29.30	9.19		

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
[signature] 7-2-09 / 1700	

Notes: Flow Controllers Returned: FC00540 FC00465 FC6741 FC00114 FC00776 FC00832

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact? Yes No None	Work Order #