

March 13, 2013

Mr. Ed Rawski, P.E.  
Pennsylvania Department of Environmental Protection  
Bureau of Waste Management  
909 Elmerton Avenue  
Harrisburg, PA 17110-8200

RE: Creswell Landfill GCMP; BWM Permit #100008

Dear Mr. Rawski:

Submitted herein is the data associated with the Gas Control and Monitoring Plan (GCMP) for the above referenced facility for the 4<sup>th</sup> Quarter of 2012. Lancaster County Solid Waste Management Authority (LCSWMA) personnel performed the required peripheral monitoring in September.

Attached, and included by reference are the following:

▪ **Attachment A**

Five (5) sheets containing a total of twelve (12) charts which depict historic results for the peripheral landfill gas monitoring wells and probes. As indicated previously, several of the locations had exceeded historic levels. It is evidenced that our efforts to reduce these levels have been somewhat successful to date.

▪ **Attachment B**

Contains quarterly results of the site perimeter locations monitored for percent L.E.L. Note the form has been revised to include the locations deleted or added as part of the Soil Borrow Project.



*Unlocking the Energy of Innovation*

Creswell Landfill GCMP; BWM Permit #100008

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In summary:

**Field Data**

- Samples taken from wells were analyzed for methane, carbon dioxide, oxygen, and "balance" (usually inferred to mean nitrogen) gases. "Balance" results, as always, are reported as a calculation based upon the measured values of the three (3) other landfill gas constituents.

We will continue quarterly GCMP monitoring and reporting with our next monitoring event (1<sup>st</sup> Quarter 2013) currently scheduled to be completed through March 2013. Feel free to call if you have any questions or comments.

Sincerely,

A handwritten signature in black ink that reads "Brooks K. Norris". The signature is written in a cursive style.

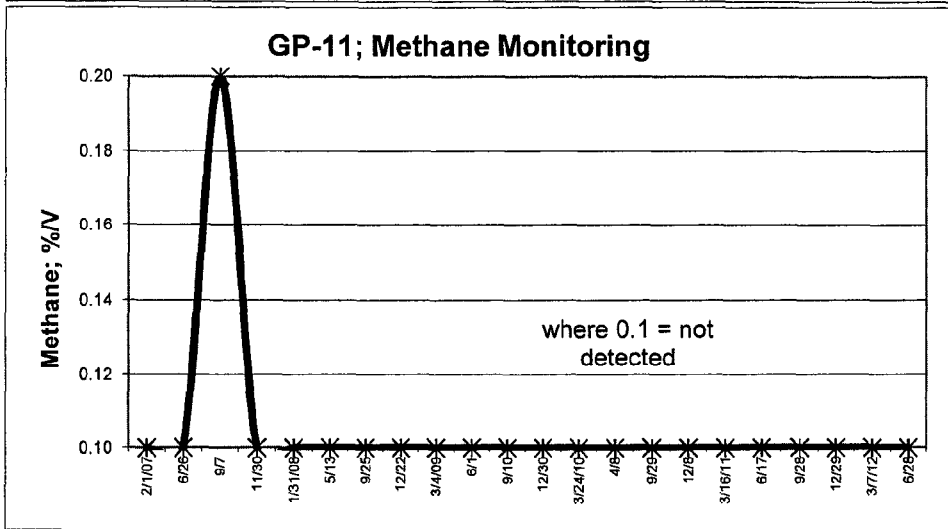
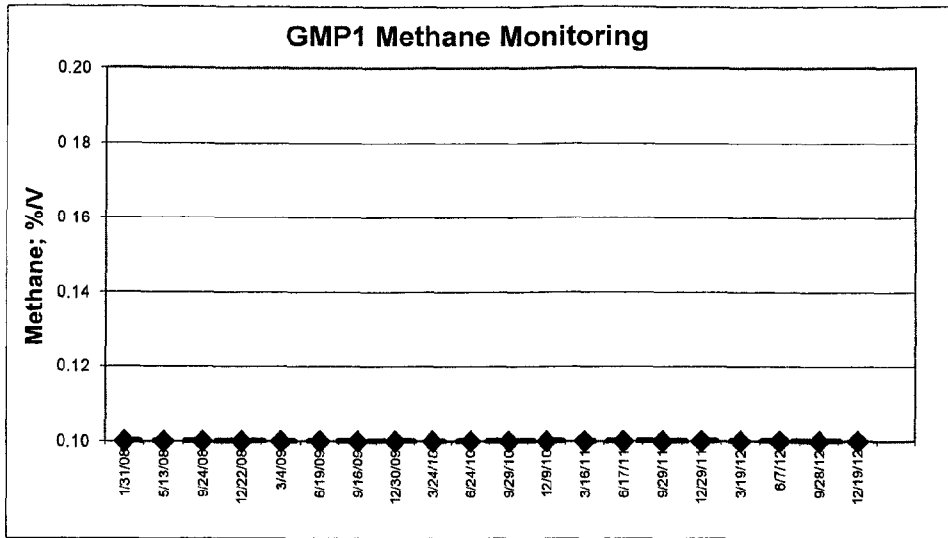
Brooks K. Norris  
Senior Manager; Technical Services

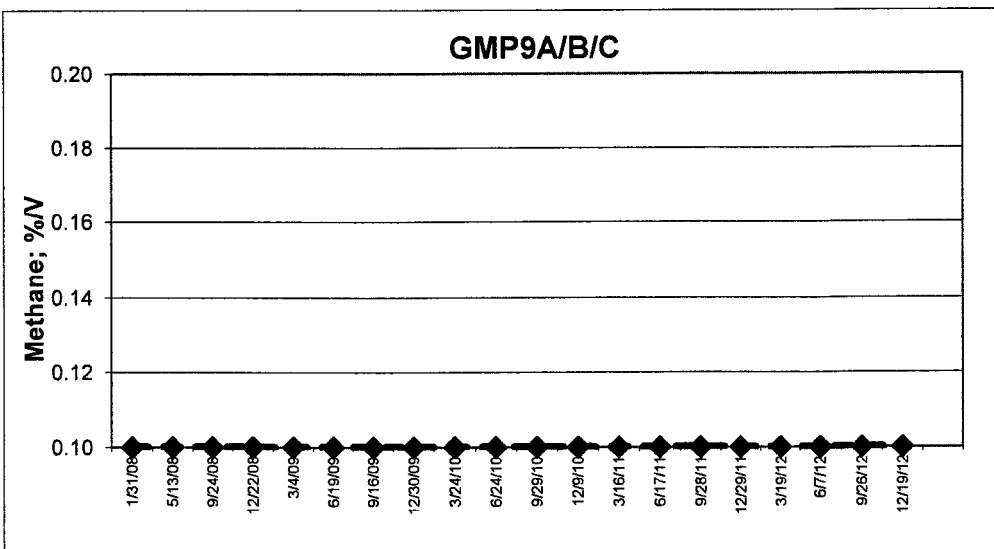
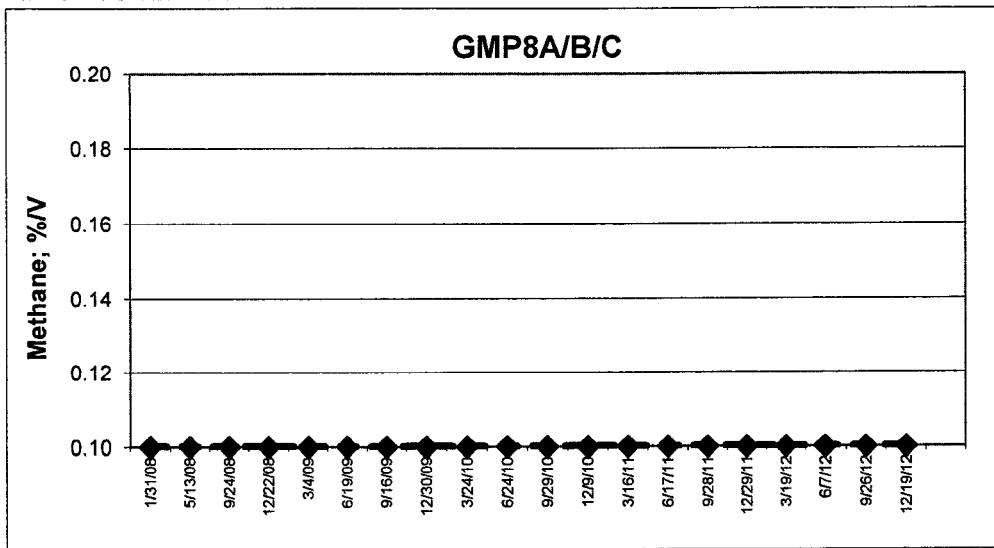
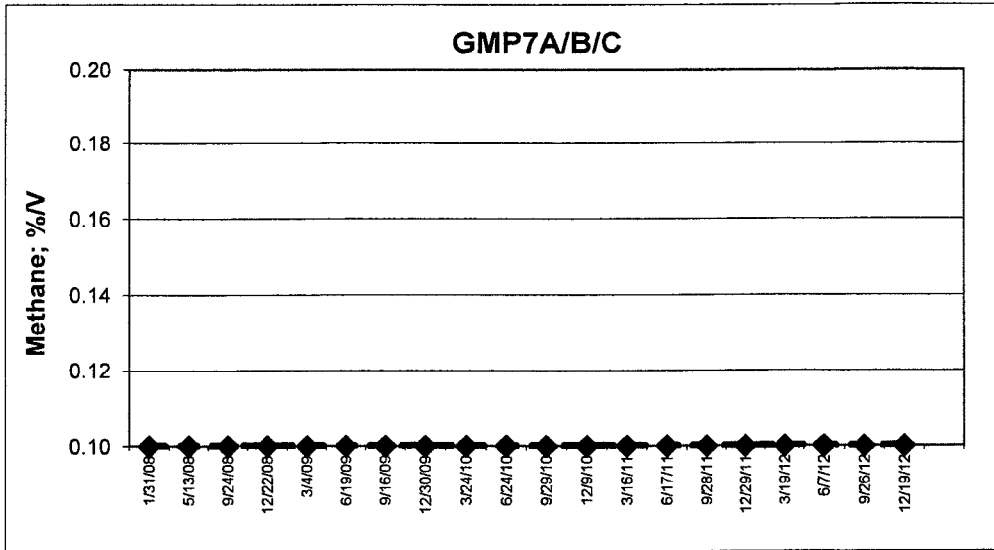
Enclosures

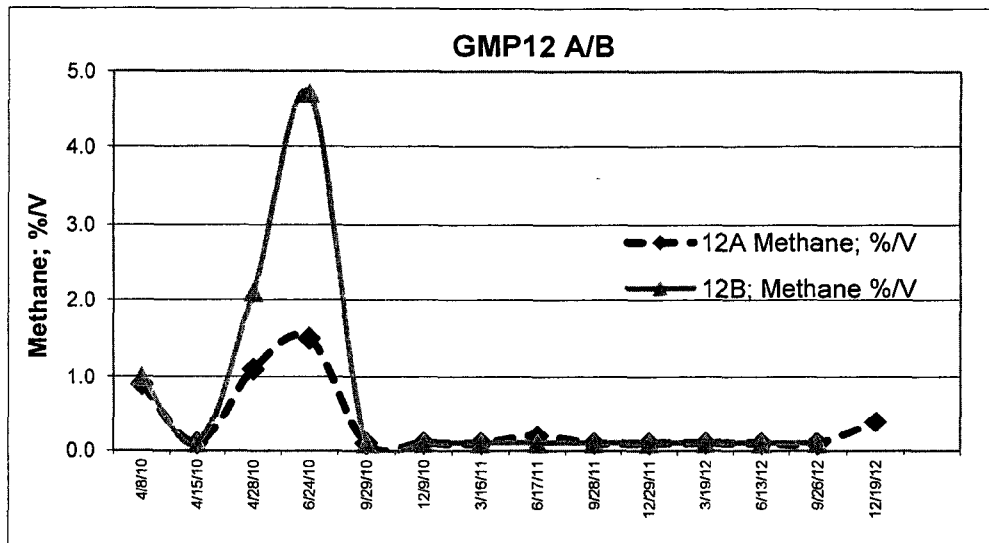
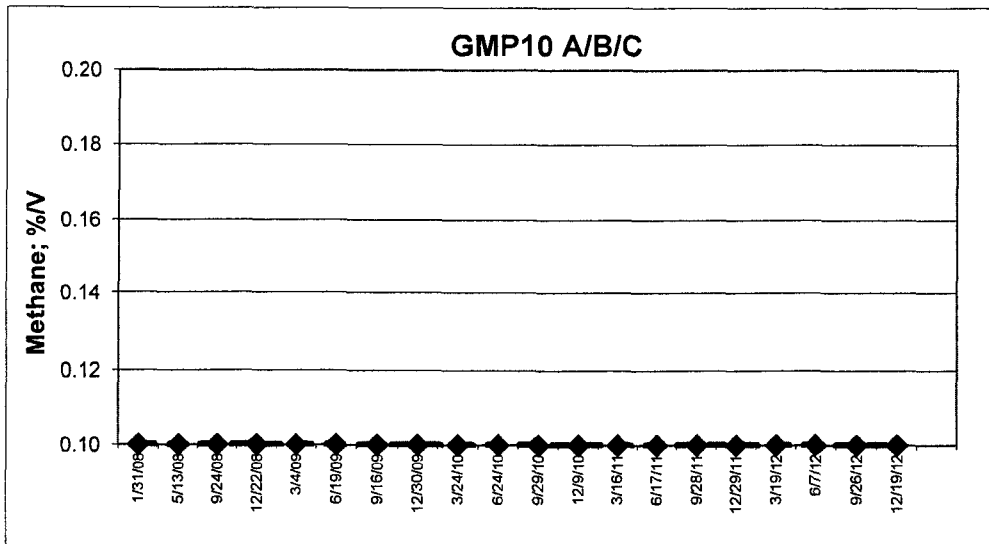
cc: Bob Zorbaugh  
Emily Kauffman (w/enc.)  
Bob Eshbach (w/enc.)  
Jeff Musser (w/enc.)  
Randy Weiss (PaDEP-Lancaster)  
Anthony Lutkus (PaDEP-Lancaster; w/enc.)

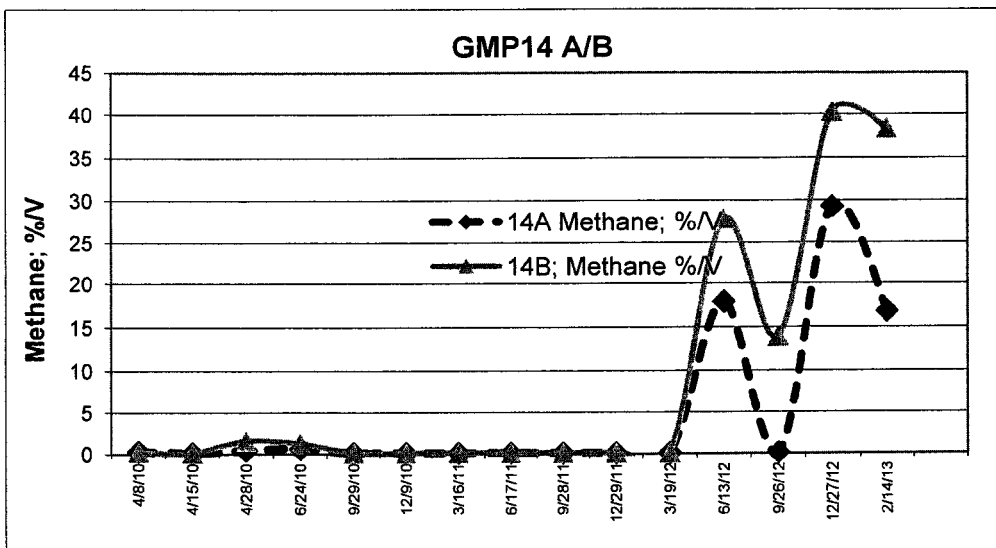
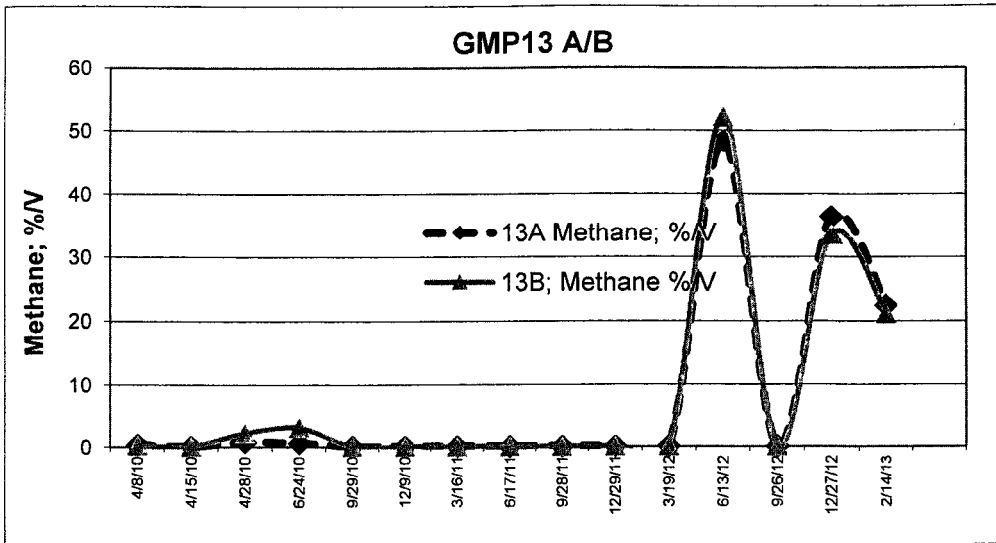
# **ATTACHMENT A**

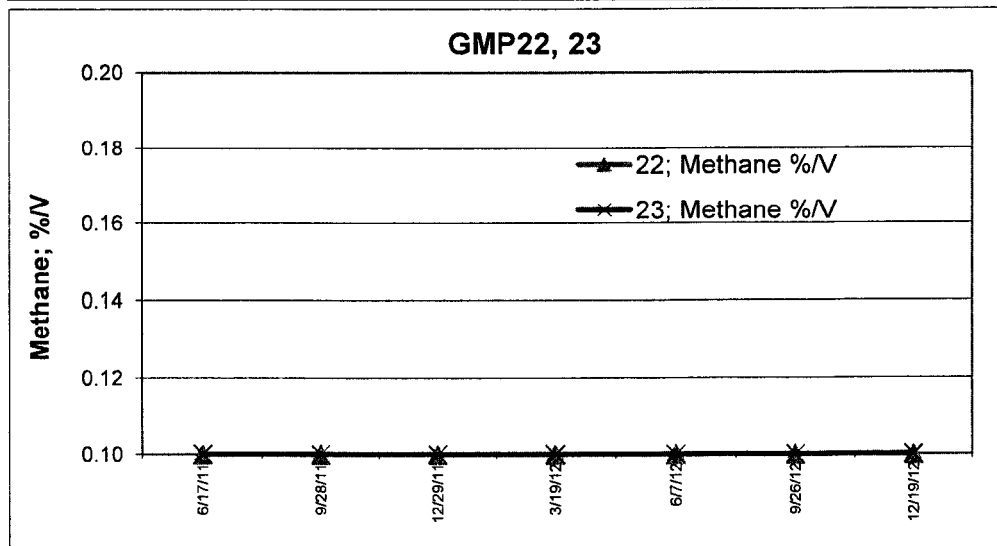
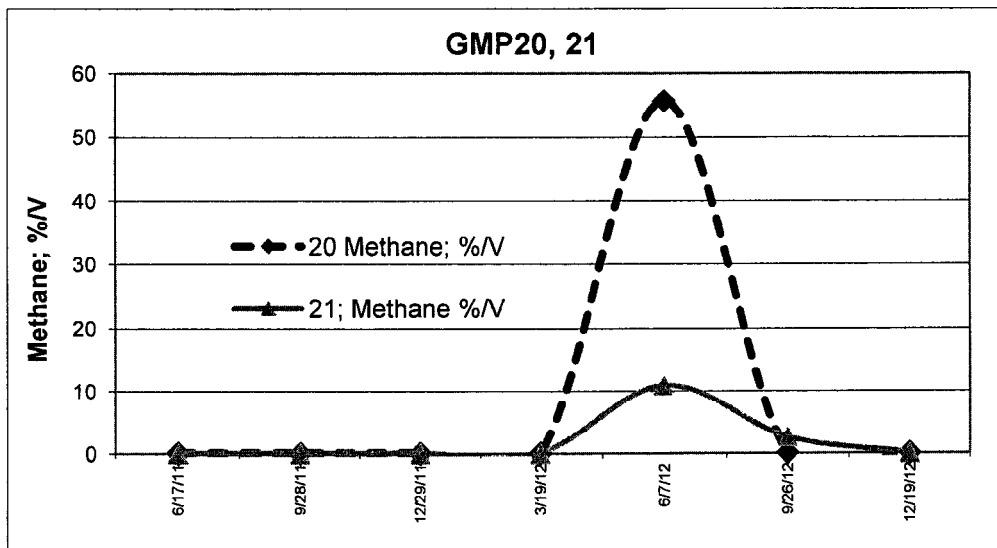
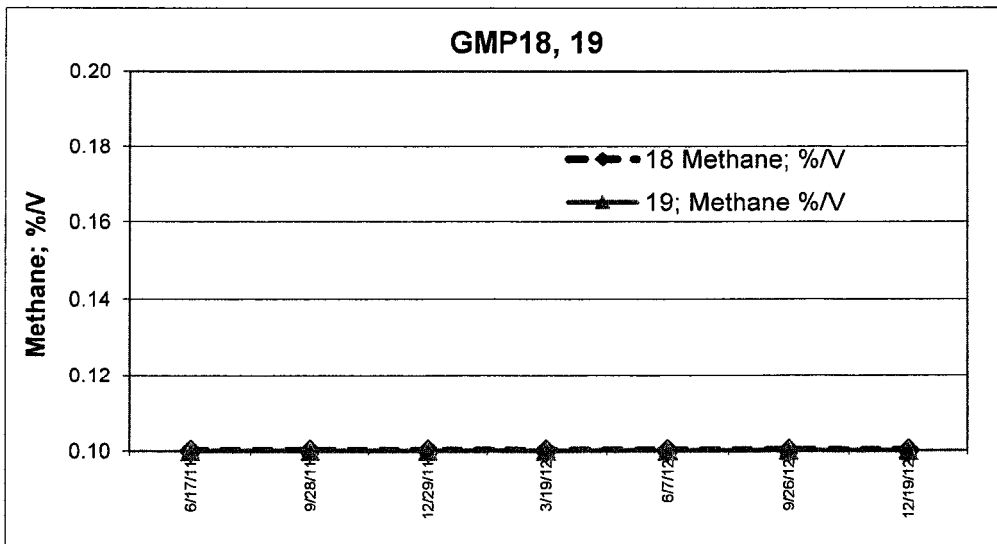
Graphs; Historic Results  
Peripheral LFG Monitoring Probes and Wells













# **ATTACHMENT B**

Quarterly Results  
Percent L.E.L. Monitoring

CRESWELL METHANE MONITORING PROGRAM  
SAMPLE POINT INSPECTION FORM

SAMPLE POINT NUMBER	DESCRIPTION	METHANE LEVEL (as % LEL)			
		DATE 6/15/12	DATE 6/19/12	DATE 9/26/12	DATE 12/10/12
1 to 15	GP WELLS	not included with this monitoring			
16	CONTROL BUILDING LAB	0	0	0	0
17	CONTROL BUILDING COMPRESSOR ROOM	0	0	0	0
18	CONTROL BUILDING LOCKER ROOM	0	0	0	0
19	NTHW PIT	no longer exists			
20	OTHW PIT	0	0	0	0
21	LTS AERATION PIT AT WEATHER STATION #1	0	3	0	0
22	LTS AERATION PIT AT WEATHER STATION #2	0	4	0	7
23	LTS WIRE TRENCH VENTS 1	0	0	0	0
24	LTS WIRE TRENCH VENTS 2	0	0	0	0
25	LTS WIRE TRENCH VENTS 3	no longer exists			
26	PUMP HOUSE	0	0	0	0
27	PUMP HOUSE WET WELL	0	0	0	0
28	MH #1	4	16	24	272
29	MH #2	25	607	18	265
30	INLET; STREAM R PIPE	0	0	0	0
31	OUTLET; STREAM R PIPE	0	0	0	0
32	UPPER END; RAVINE LEACHATE COLLECTION C.O.	no longer exists			
33	SEE MAP	0	0	0	0
34	SEE MAP	0	0	0	0
35	SEE MAP	0	0	0	0
36	SEE MAP	0	0	0	0
37	SEE MAP	0	0	0	0
38	SEE MAP	0	0	0	0
39	SEE MAP	0	0	0	0
40	SEE MAP	0	0	0	0
41	SEE MAP	0	0	0	0
42	SEE MAP	0	0	0	0
43	SEE MAP	0	0	0	0
44	SEE MAP	0	0	0	0
45	SEE MAP	0	0	0	0
46	SEE MAP	0	0	0	0
47	SEE MAP	0	0	0	0
48	SEE MAP	0	0	0	0
49	SEE MAP	0	0	0	0
50	SEE MAP	0	0	0	0
Atmospheric Pressure (in. Hg)		29.63"	29.56"	29.52"	29.15"
Air Temperature (Deg. C)		18.3	24.2	21.1	10.2

Revision Date: June 2011

Revisions: deleted points 62 to 66; added points 81 through 86

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CRESWELL METHANE MONITORING PROGRAM  
SAMPLE POINT INSPECTION FORM

SAMPLE POINT NUMBER	DESCRIPTION	METHANE LEVEL (as %LEL)			
		DATE 3/15/12	DATE 6/19/12	DATE 9/26/12	DATE 12/10/12
51	LTS DISCHARGE MH #1	0	0	0	0
52	LTS DISCHARGE MH #2	0	0	0	0
53	DRAIN PIPE UNDER RAVINE PHASE II	2	7	0	8
54	OLD SCALE HOUSE PIT	no longer monitored			
55	NEW SCALE HOUSE PIT	0	0	0	0
56	LAGOON LINER BALLOON	445	654	385	197
57	LEACHATE PIPE LOWER END OF RAVINE	capped; no longer monitored			
58	CWOB092W	0	0	0	0
59	CWOB093A	0	0	0	0
60	CWOB093B (aka CWMP016W)	0	0	0	0
61	CWOB080W (formerly CWMP006W)	0	0	0	0
62	CWGMP002; Gas monitoring probe	abandoned for Soil Borrow Project stockpile			
63	CWGMP04A; Gas monitoring probe				
64	CWGMP04B; Gas monitoring probe				
65	CWGMP06A; Gas monitoring probe				
66	CWGMP06B; Gas monitoring probe				
67	CWGMP08A; Gas monitoring probe	0	0	0	0
68	CWGMP08B; Gas monitoring probe	0	0	0	0
69	CWGMP08C; Gas monitoring probe	0	0	0	0
70	CWGMP10A; Gas monitoring probe	0	0	0	0
71	CWGMP10B; Gas monitoring probe	0	0	0	0
72	CWGMP10C; Gas monitoring probe	0	0	0	0
73	CWO100DW	0	0	0	0
74	CWO100SW	0	0	0	0
75	CWGMP12A; Gas Monitoring Probe	0	0	0	8
76	CWGMP12B; Gas Monitoring Probe	0	0	0	12
77	CWGMP13A; Gas Monitoring Probe	0	966	0	828
78	CWGMP13B; Gas Monitoring Probe	0	1042	0	740
79	CWGMP14A; Gas Monitoring Probe	0	358	0	542
80	CWGMP14B; Gas Monitoring Probe	0	556	278	856
81	CWGMP018; Gas Monitoring Probe	0	0	0	0
82	CWGMP019; Gas Monitoring Probe	0	0	0	0
83	CWGMP020; Gas Monitoring Probe	0	830	0	0
84	CWGMP021; Gas Monitoring Probe	0	22	52	0
85	CWGMP022; Gas Monitoring Probe	0	0	0	0
86	CWGMP023; Gas Monitoring Probe	0	0	0	0

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Revisions: deleted points 62 to 66; added points 81 through 86

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