

December 9, 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 4th Quarter 2013.

Attached, and included by reference are the following:

- **Attachment A**

Four (4) sheets containing a total of eleven (11) charts which depict historic results for the peripheral landfill gas monitoring wells and probes. As indicated, our efforts at reducing methane levels in the perimeter probes have produced favorable results as 0% LEL was measured during both the 3rd and 4th quarter monitoring events.

- **Attachment B**

Contains quarterly results of the site perimeter locations monitored for percent L.E.L.

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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 routine event (1st Quarter 2014) currently scheduled to be completed through March. Feel free to call if you have any questions or comments.

Sincerely,

A handwritten signature in cursive script that reads "Brooks K. Norris".

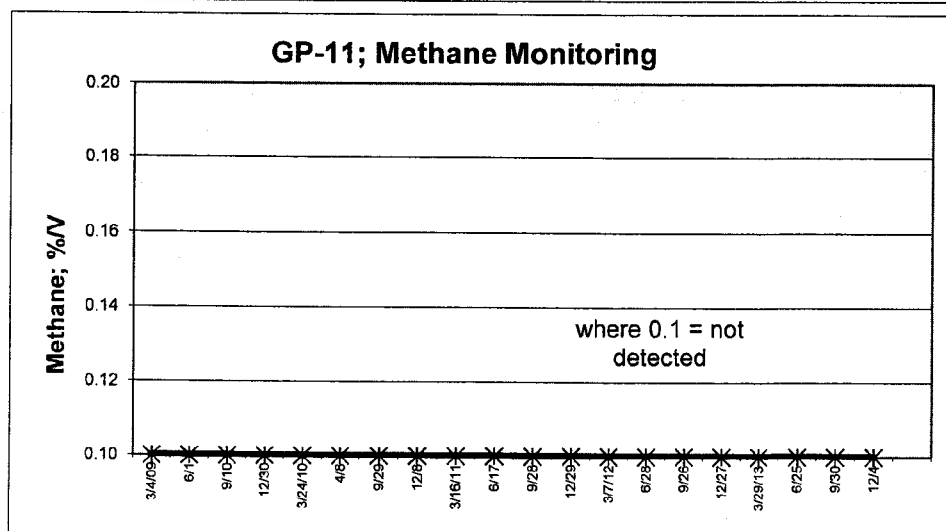
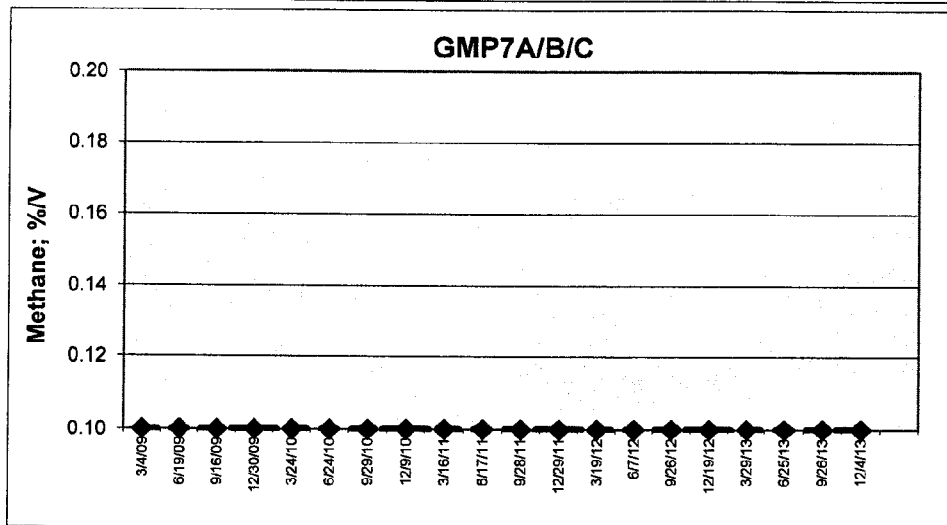
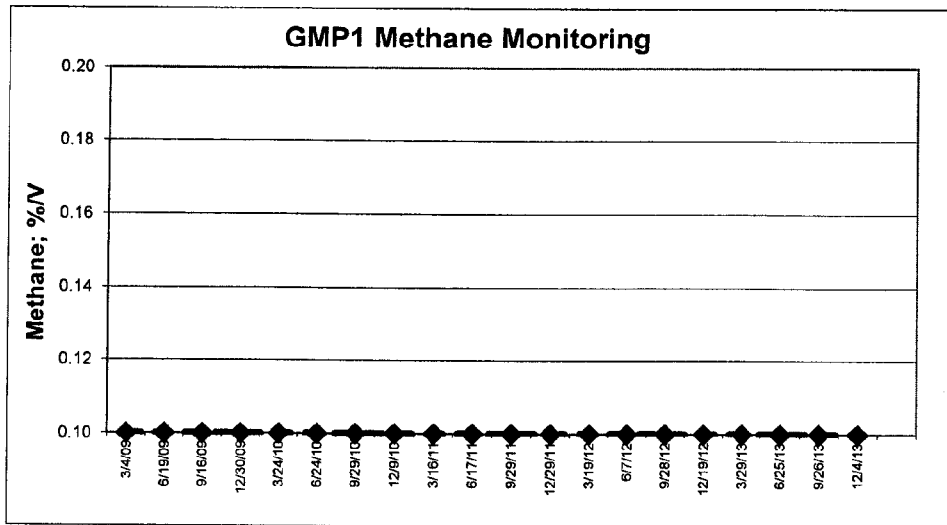
Brooks K. Norris
Senior Manager; Technical Services

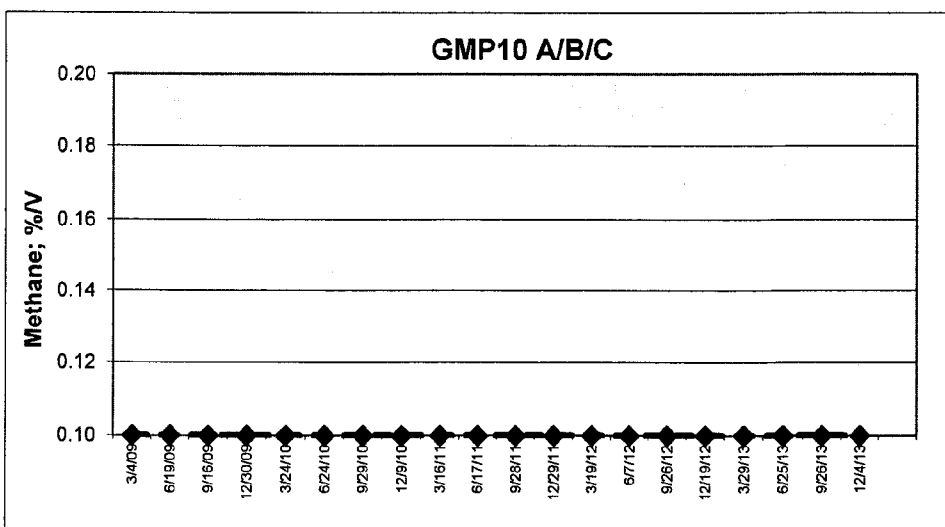
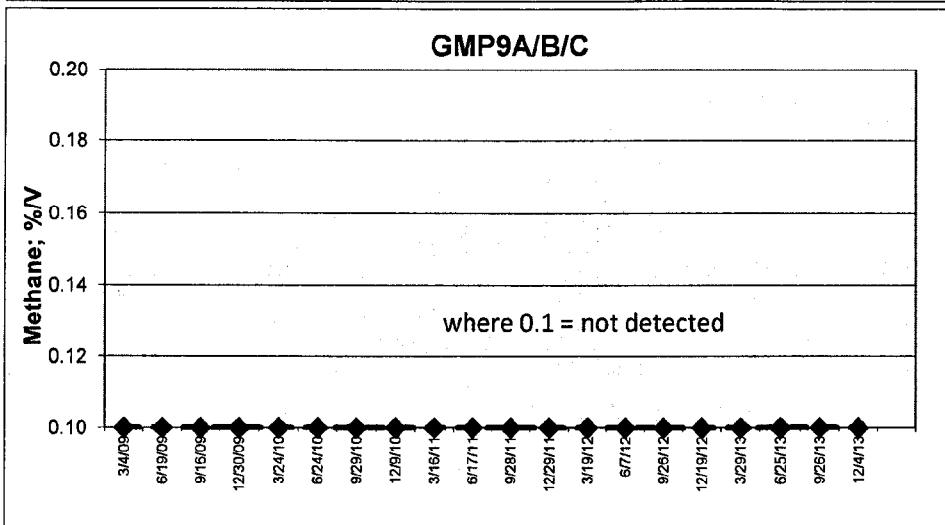
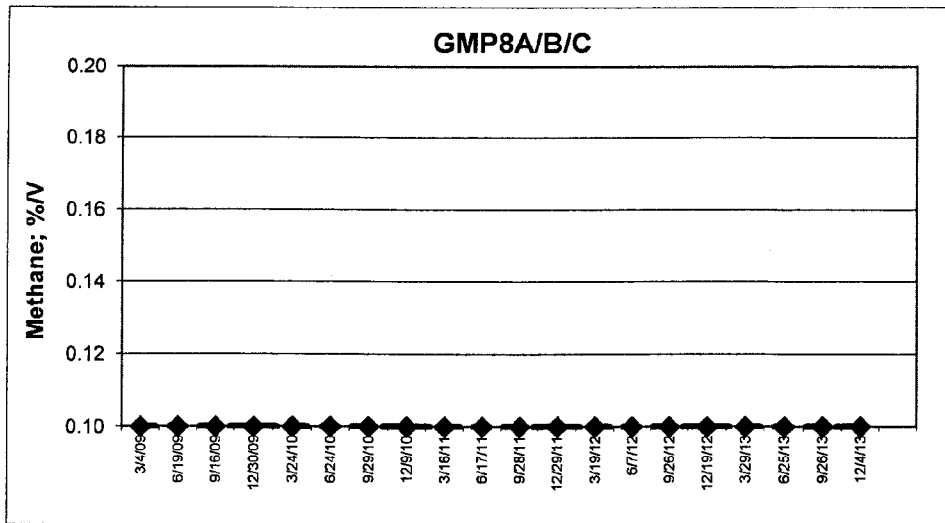
Enclosures

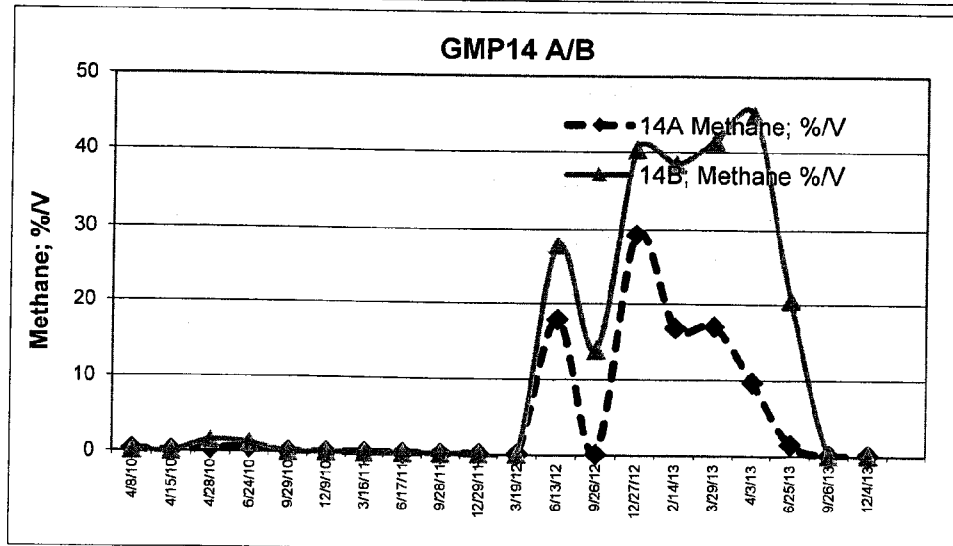
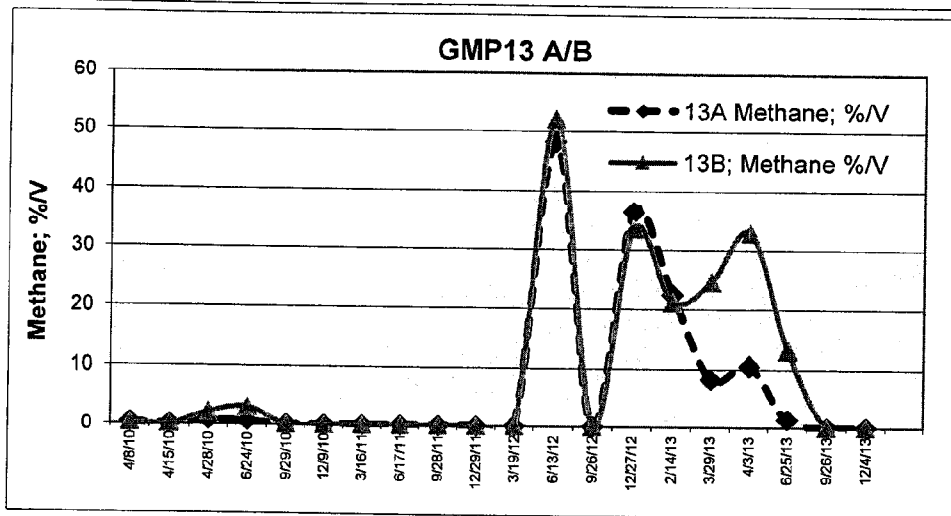
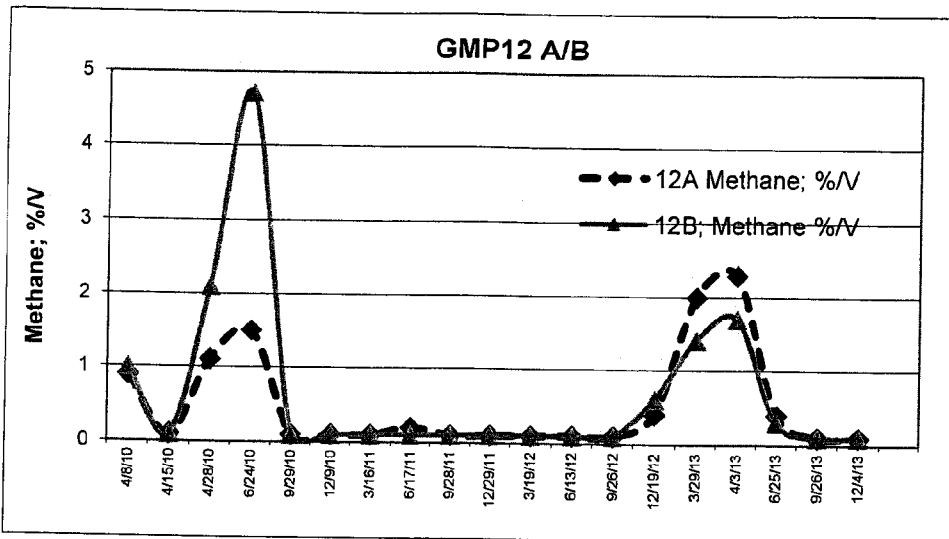
cc: Bob Zorbaugh
Emily West (w/enc.)
Bob Eshbach (w/enc.)
Jeff Musser (w/enc.)
Randy Weiss (PaDEP-Lanc.)
Lori Wise (PaDEP-Lanc.; w/enc.)

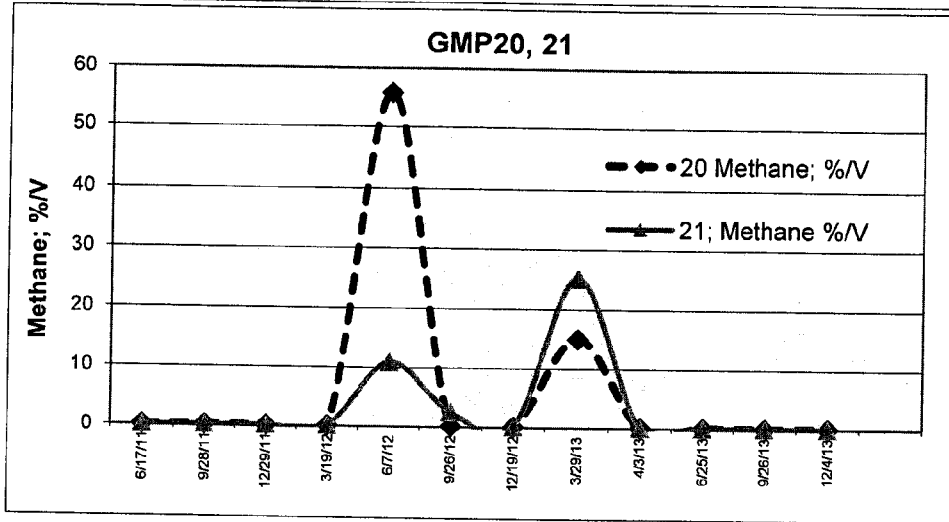
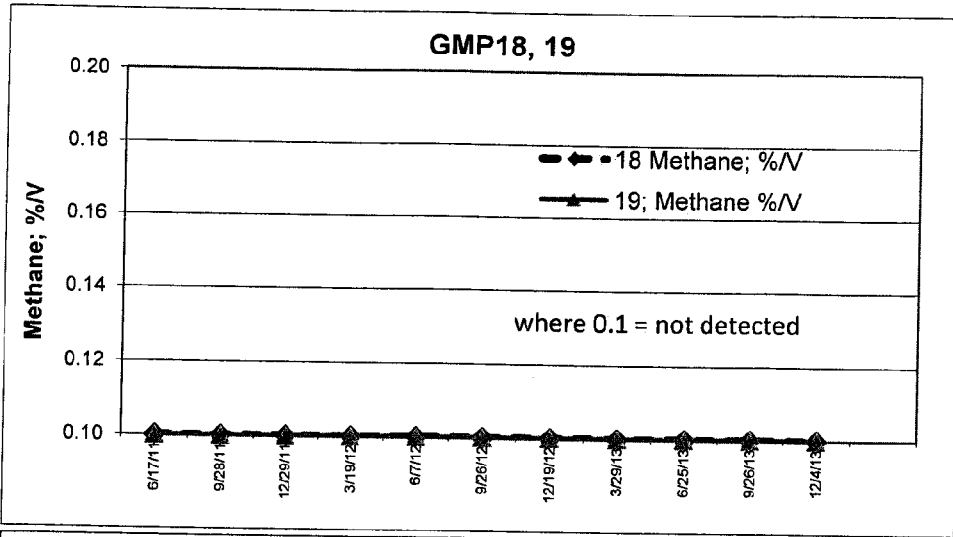
ATTACHMENT A

Graphs; Historic Results
Peripheral LFG Monitoring Probes









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 3/13/13	DATE 6/24/13	DATE 9/26/13	DATE 12/5/13
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	1	1	1
22	LTS AERATION PIT AT WEATHER STATION #2	0	5	2	2
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	305	85	210	100
29	MH #2	25	7	27	42
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)	29.33"	29.55"	30.00"	29.41"
	Air Temperature (Deg. C)	6.9 °C	28.1 °C	22.8 °C	22.8 °C

Revision Date: June 2011

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

CRESWELL METHANE MONITORING PROGRAM
SAMPLE POINT INSPECTION FORM

SAMPLE POINT NUMBER	DESCRIPTION	METHANE LEVEL (as % LEL)			
		DATE 3/13/13	DATE 6/24/13	DATE 9/26/13	DATE 12/5/13
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	11	34	5	2
54	OLD SCALE HOUSE PIT	no longer monitored			
55	NEW SCALE HOUSE PIT	0	0	0	0
56	LAGOON LINER BALLOON	208	>100	>100	38
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	40	8	0	0
76	CWGMP12B; Gas Monitoring Probe	28	6	0	0
77	CWGMP13A; Gas Monitoring Probe	166	30	0	0
78	CWGMP13B; Gas Monitoring Probe	492	264	0	0
79	CWGMP14A; Gas Monitoring Probe	340	30	0	0
80	CWGMP14B; Gas Monitoring Probe	828	412	0	0
81	CWGMP018; Gas Monitoring Probe	0	0	0	0
82	CWGMP019; Gas Monitoring Probe	0	0	0	0
83	CWGMP020; Gas Monitoring Probe	302	0	0	0
84	CWGMP021; Gas Monitoring Probe	504	0	0	0
85	CWGMP022; Gas Monitoring Probe	0	0	0	0
86	CWGMP023; Gas Monitoring Probe	0	0	0	0

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