



Draper Aden Associates

Engineering • Surveying • Environmental Services

2206 South Main Street
Blacksburg, Virginia 24060
(540) 552-0444 • Fax: (540) 552-0291
www.daa.com

July 28, 2010

Mr. J. V. Potter
Watauga County Solid Waste Director
336 Landfill Road
Boone, NC 28607

RE: Watauga County Landfill
Third Quarter Gas Monitoring Results, July 22, 2010
DAA JN: 6520-27

Dear Mr. Potter:

Draper Aden Associates performed the third quarter gas monitoring event on July 22, 2010. We monitored for methane in all on site buildings, two probes, and four adjacent residential properties. We found no methane in Probe 1, the onsite buildings, or the residential properties. However, Probe 2 was out of compliance, but continues to show significant improvement in comparison to the last three months sampling results. The new blower continues to reduce the amount of gas migration.

The positive pressure system at the new maintenance building is operating properly. We found no methane or carbon dioxide at the sample locations within the building or at the discharge of the passive vent system. We only detected ambient air.

We recorded the following methane levels from Probe 2. Tube 2R (0 to 5 feet) read 0% methane by volume; tube 2Y (5 to 10 feet) read 0% methane by volume; tube 2B (10 to 20 feet) read 0% methane by volume; and tube 2G (20 to 40 feet) read 7.8% methane by volume. Probes exceed the regulatory limit when they exceed 5% methane by volume. Probe 2, tube G, is the only tube out of compliance.

We monitored four out of six residential locations to which the County mailed notification letters last week. We also sampled late on Thursday evening with hopes of finding more home owners on site. We were only able to gain access to four locations; 491 Green Briar Road; 425 Green Briar Rd; 535 Green Briar Rd; 149 Wild Rose Ln. We sampled their locations and detected no methane during our test. Access to 513 Green Briar Rd was not conducive to the owner's schedule and no one answered at 483 Green Briar Rd.

Mr. J. V. Potter
July 28, 2010
Page 2 of 2

Attached is the following information summarizing our data:

1. Table 1 – Quarterly Gas Monitoring Results.
2. Table 2 - Historical table presenting the steady state methane concentrations for the gas probes and the buildings.

Please contact either Don Marickovich or myself with any questions concerning the gas monitoring event.

Sincerely,
DRAPER ADEN ASSOCIATES



Chris Branscome
Senior Technician

CJB/cjb

cc: Mr. Don Marickovich, Project Engineer, DAA

Table 1

WATAUGA COUNTY LANDFILL

GAS MONITORING RESULTS

Third Quarter Event, July 22, 2010

Probe	Depth (ft.)	Methane (% vol.)	Carbon Dioxide (% vol.)	Oxygen (% vol.)	Static Pressure (in. of Water)	Comments
1R	0 - 5	0.0	2.4	20.0	0.00	
1Y	5 - 10	0.0	2.4	20.1	0.08	
1B	10 - 20	0.0	2.2	19.8	0.01	
1G	20 - 40	0.0	3.1	18.2	0.00	
2R	0 - 5	0.0	4.9	2.3	0.65	
2Y	5 - 10	0.0	8.4	0.0	0.04	
2B	10 - 20	0.0	15.6	0.0	0.00	
2G	20 - 40	7.8	18.1	0.0	0.00	Peak methane @ 300 sec = 7.8%
483 Green Briar Rd		NR	No Answer			Takako Ohashi
Transfer Station		0.0	0.0	20.8		
New Scale House		0.0	0.0	20.8		
Old Maintenance Building		0.0	0.0	20.8		
New Maint. Bldg Office Outlet		0.0	0.0	20.8		
New Maint Bldg Caulked Crnr		0.0	0.0	20.8		
New Maintenance Building Rmdr		0.0	0.0	20.8		
Animal Shelter		0.0	0.0	20.8		
Swap Shop		0.0	0.0	20.8		
Forest Service Building		0.0	0.0	20.8		
Bailing Facility		0.0	0.0	20.8		
425 Green Briar Rd		0.0	0.0	20.8		Paul Suddreth
491 Green Briar Rd		0.0	0.0	20.8		Archie Carroll
513 Green Briar Rd		NR	No Available			Nancy Perry
535 Green Briar Rd		0.0	0.0	20.8		Timothy Laraway (Rental - Appalachian Mngmt)
149 Wild Rose Lane		0.0	0.0	20.8		Norman Horton
Maint Bldg Foundation Vent		0.0	0.0	20.8		

Methane Levels Above the 5% by Volume Limit are Bold and Shaded.

R = Red

Y = Yellow

B = Blue

G = Green

NR - Not recorded or sampled.

Barometric Pres.

Air Temperature

Meter

30.22 in. of Hg

84 °F

Landtec Gem 2000 Plus

Table 2
WATAUGA COUNTY LANDFILL
Steady State Methane Concentrations (%vol)

Probe	Depth (ft.)	Methane Concentrations (in % by Volume)																	
		1/3/2007	5/14/2007	7/12/2007	11/20/2007	2/1/2008	5/1/2008	7/16/2008	10/27/2008	1/29/2009	4/14/2009	7/7/2009	10/8/2009	1/28/2010	3/17/2010	4/16/2010	5/14/2010	6/15/2010	7/22/2010
1R	0 - 5	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR	0
1Y	5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR	0
1B	10 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR	0
1G	20 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR	0
2R	0 - 5	0	0	0	0	0	0	0	0	0	0	0	0	15.2	0	0	0	0	0
2Y	5 - 10	4.4	0	0	0	0	8.8	0	0	1.4	0	0	0	31.9	3.8	11.5	8.1	0	0
2B	10 - 20	10.5	0	0	0	0	24.8	2.9	0	10.6	0	0	0	46.6	12.9	41.3	38.5	6.7	0
2G	20 - 40	22	3.6	0	0	0	39.6	15.5	0.2	22.1	0.9	0	1.7	50.7	31.0	52.9	43.6	25.6	7.8
New Maint Bldg Office Outlet		1.8 to 2.4	0.1	7.9 to 8.4	2.4	0.3 to 2.5	0.2 to 0.8	0	2.9	0.1	1.1	1.0	0	0	NR	0	NR	0	0

Note - Methane was not detected in the outlet until January 3, 2007
NR = Not recorded or sampled.