



Draper Aden Associates

Engineering • Surveying • Environmental Services

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

June 18, 2010

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

RE: Watauga County Landfill
June Monthly Gas Monitoring Results, June 15, 2010
DAA JN: 6520-27

Dear Mr. Potter:

Draper Aden Associates performed the monthly gas monitoring event on June 15, 2010. We monitored for methane in Probe 2 and one out of six residences that adjoin the property boundary, between Probe 1 and Probe 2. We found two out of four tubes in Probe 2 out of compliance, but the probe improved significantly since the flare station began operating again. As you mentioned in our discussion the flare station returned to operation on May 4, 2010, after being offline for several weeks.

The positive pressure system at the New Maintenance Building is operating properly. We found no methane or carbon dioxide coming from the foundation's ventilation system.

As the flare station is again operational, we continue to recommend that you maintain an increased vacuum and flow from the gas wells located nearest Probe 2 as the methane levels at Probe 2 exceeded the 5% by volume limit.

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 6.7% methane by volume; and tube 2G (20 to 40 feet) read 25.6% methane by volume. Probes exceed the regulatory limit when they exceed 5% methane by volume.

We attempted to monitor six residential locations, to which the County mailed letters last week. We also sampled late in the afternoon with the hopes of finding more home owners on site. We were only able to gain access to one location; Mrs. Archie Carroll, 491 Green Briar Road. We detected no methane at Mrs. Carroll's residence. Mrs. Perry, 513 Green Briar Road, was home, but our timing was inconvenient. I informed Mrs. Perry our next visit will occur in July. No one answered their doors at the other residences.

Mr. J. V. Potter
June 18, 2010
Page 2 of 2

Attached is the following information summarizing our data:

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

Please contact either Don Marickovich or myself with any questions concerning this 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

June Monthly Event, June 15, 2010

Probe	Depth (ft.)	Methane (% vol.)	Carbon Dioxide (% vol.)	Oxygen (% vol.)	Static Pressure (in. of Water)	Comments
1R	0 - 5	NR				
1Y	5 - 10	NR				
1B	10 - 20	NR				
1G	20 - 40	NR				
2R	0 - 5	0.0	8.7	13.2	0.03	
2Y	5 - 10	0.0	15.3	6.1	-0.43	
2B	10 - 20	6.7	18.9	0.0	0.00	Peak methane @ 40 sec = 8.6%
2G	20 - 40	25.6	20.0	0.0	0.00	Peak methane @ 140 sec = 26.3%
Transfer Station		NR				
New Scale House		NR				
Old Maintenance Building		NR				
New Maint. Bldg Office Outlet		0.0	0.0	20.8		
New Maint Bldg Caulked Crnr		NR				
New Maintenance Building Rmdr		NR				
Animal Shelter		NR				
Swap Shop		NR				
Forest Service Building		NR				
Bailing Facility		NR				
425 Green Briar Rd		NR	No Answer			Paul Suddreth
483 Green Briar Rd		NR	No Answer			Takako Ohashi
491 Green Briar Rd		0.0	0.0	20.8		Archie Carroll - Sampled 4 crawl space locations
513 Green Briar Rd		NR	Answered, but not a good time, please check next month.			Nancy Perry
535 Green Briar Rd		NR	No Answer			Timothy Laraway (Rental - Appalachian Mngmt)
149 Wild Rose Lane		NR	No Answer			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.

30.19 in. of Hg

Air Temperature

84 °F

Meter

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
1R	0 - 5	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR
1Y	5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR
1B	10 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR
1G	20 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR
2R	0 - 5	0	0	0	0	0	0	0	0	0	0	0	0	15.2	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
2B	10 - 20	10.5	0	0	0	0	24.9	2.9	0	10.6	0	0	0	46.6	12.9	41.3	38.5	6.7
2G	20 - 40	22	3.6	0	0	0	39.6	16.5	0.2	22.1	0.0	0	1.7	50.7	31.0	52.9	43.6	25.6
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	

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