



Draper Aden Associates

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April 22, 2010

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

RE: Watauga County Landfill
Second Quarter Gas Monitoring Results, April 16, 2010
DAA JN: 6520-27

Dear Mr. Potter:

Draper Aden Associates performed the second quarter gas monitoring event on April 16, 2010. We monitored for methane in all on site buildings and in two probes. We found Probe 1 and the buildings within the regulatory compliance. However, Probe 2 was out of compliance due to the flare station being inoperable twice since the beginning of the year. In addition to the routine quarterly monitoring and as a preventative measure, we attempted to monitor five residencies on the south side of the landfill.

The positive pressure system at the New Maintenance Building is operating properly. During our last quarterly visit, we temporarily loaned a blower to the County for testing a temporary positive pressure system connected to the New Maintenance Building's passive vent system. 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. In previous quarters our records show carbon dioxide and/or methane occasionally detected.

The flare station's centrifugal blower seized approximately six weeks ago. The blower manufacturer is currently rebuilding the landfill's blower and the landfill is expecting its return any day. Once the blower is installed, we recommend that you immediately increase the 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 11.5% methane by volume; tube 2B (10 to 20 feet) read 41.3% methane by volume; and tube 2G (20 to 40 feet) read 52.9% methane by volume. Probes exceed the regulatory limit when they exceed 5% methane by volume.

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We attempted to monitor five residential locations to which the County mailed letters several weeks in advance. We also sampled late on Friday evening with 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, Boone, NC. We sampled her crawl space in four locations and detected no methane during our test.

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



for Chris Branscome
Senior Technician

CJB/cjb

cc: Mr. Don Marickovich, Project Engineer, DAA

Table 1

WATAUGA COUNTY LANDFILL

GAS MONITORING RESULTS

Second Quarter Event, April 16, 2010

Probe	Depth (ft.)	Methane (% vol.)	Carbon Dioxide (% vol.)	Oxygen (% vol.)	Static Pressure (in. of Water)	Comments
1R	0 - 5	0.0	1.7	19.6	0.00	
1Y	5 - 10	0.0	1.8	19.5	-0.01	
1B	10 - 20	0.0	1.9	19.3	0.01	
1G	20 - 40	0.0	3.4	17.6	0.00	
2R	0 - 5	0.0	11.9	2.3	0.03	Peak methane @ 25 sec = 0.3%
2Y	5 - 10	11.5	14.0	0.0	0.04	Peak methane @ 60 sec = 11.5%
2B	10 - 20	41.3	18.2	0.0	0.09	Peak methane @ 100 sec = 41.3%
2G	20 - 40	52.9	22.0	0.0	0.17	Peak methane @ 110 sec = 53.4%
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		NR	No Answer			Paul Suddreth
491 Green Briar Rd		0.0	0.0	20.8		Archie Carroll - Sampled 4 locations in crawl space
513 Green Briar Rd		NR	No Answer			Nancy Perry
535 Green Briar Rd		NR	No Answer			Timothy Laraway (Rental - Appalachain 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.

Air Temperature

Meter

30.11 in. of Hg

75 °F

Landtec Gem 2000 Plus

