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August 22, 2011

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 5, 2011
DAA JN: 6520-27

Dear Mr. Potter:

Draper Aden Associates performed the third quarter gas monitoring event on July 5, 2011. During the event, we found the gas probes and on site buildings within regulatory compliance.

As you are aware, Probe 2 was out of compliance in April due to equipment issues at the blower flare station. Since the flare station's repair, we sampled Probe 2 in May, June, and July and found Probe 2 in compliance during the last three months. It is our recommendation, with DENR's permission, to terminate the monthly monitoring of Probe 2 and revert to the customary quarterly monitoring program. Probe 2 has maintained compliance for three consecutive months, in May, June, and July of 2011. Please let us know if DENR requests additional monthly monitoring and we will sample again in August. Otherwise our next monitoring event will occur during the fourth quarter of 2011.

Attached is the following information summarizing our data:

1. Table 1 – Historical table presenting the steady state methane concentrations for the gas probes and the maintenance building's office outlet.
2. Table 2 - Third Quarter Gas Monitoring Results.

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

Sincerely,
DRAPER ADEN ASSOCIATES

Chris Branscome

Chris Branscome
Senior Technician

Attachments

CJB/cjb

cc: Mr. Don Marickovich, Project Engineer, DAA

Table 1
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	10/6/2009	1/28/2010	3/17/2010	4/16/2010	5/14/2010	6/15/2010	7/22/2010	8/4/2010	9/14/2010	10/1/2010	11/10/2010
1R	0 - 5	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR	0	NR	NR	0	NR
1Y	5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR	0	NR	NR	0	NR
1B	10 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR	0	NR	NR	0	NR
1G	20 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	0	NR	NR	0	NR	NR	0	NR
2R	0 - 5	0	0	0	0	0	0	0	0	0	0	0	0	15.2	0	0	0	0	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	0	0	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	36.5	6.7	0	0	0	0	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	5.1	0	0	0
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	NR	0	1.0	0***

Table 1
WATAUGA COUNTY LANDFILL
Steady State Methane Concentrations (%vol)

Probe	Depth (ft.)	Methane Concentrations (in % by Volume)																					
		1/17/2011	4/5/2011	5/5/2011	6/7/2011	7/5/2011																	
1R	0 - 5	0	0	NR	NR	0																	
1Y	5 - 10	0	0	NR	NR	0																	
1B	10 - 20	0	0	NR	NR	0																	
1G	20 - 40	0	0	NR	NR	0																	
2R	0 - 5	0	0	0	0	0																	
2Y	5 - 10	0	0	0	0	0																	
2B	10 - 20	0	0	0	0	0																	
2G	20 - 40	0	6.5	0	0	0																	
New Maint Bldg Office Outlet		0	0	NR	NR	0																	

Note - Methane was not detected in the outlet until January 3, 2007
NR = Not recorded or sampled.
***Note - The County connected their new blower to the foundations ventilation system, prior to sampling this month.

Table 2

WATAUGA COUNTY LANDFILL

GAS MONITORING RESULTS

Third Quarter Event, July 5, 2011

Probe	Depth (ft.)	Methane (% vol.)	Carbon Dioxide (% vol.)	Oxygen (% vol.)	Static Pressure (in. of Water)	Comments
1R	**0 - 5**	0.0	1.1	20.4	0.00	
1Y	**5 - 10**	0.0	1.4	20.4	0.00	
1B	**10 - 20**	0.0	1.9	20.4	0.00	
1G	**20 - 40**	0.0	2.0	20.0	0.27	
2R	**0 - 5**	0.0	1.1	18.1	0.00	
2Y	**5 - 10**	0.0	3.8	13.7	0.32	
2B	**10 - 20**	0.0	6.9	15.4	-0.17	
2G	**20 - 40**	0.0	6.6	14.9	-0.01	
Transfer Station		0.0	0.0	20.8		
Scale House		0.0	0.0	20.8		
Old Maintenance Building		0.0	0.0	20.7		
New Maint. Bldg Office Outlet		0.0	0.0	20.8		
Maintenance Building		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	20.7		

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.	30.13 in. of Hg
Air Temperature	73 °F
Meter	Landtec Gem 2000 Plus