WATAUGA COUNTY DEPARTMENT OF SANITATION
336 Landfill Road
Boone, North Carolina 28607
(T) 828-264-5305
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December 16, 2010

Ms. Elizabeth Werner
NCDENR Winston-Salem
Regional Office
Solid Waste Section
Winston-Salem, NC 27107

Re: Monthly Gas Monitoring

Dear Ms. Werner,

Draper Aden has completed the November monthly gas monitoring and the probes are in compliance and no methane was detected in the residential houses sampled. Since the monthly testing began, we have repaired our old backup blower for the flare system and have purchased and installed a new blower at the maintenance facility to deter the gas migration.

Upon recommendation from Draper Aden, we are requesting permission to cease monthly monitoring and return to our quarterly monitoring program.

Sincerely,

Donna Watson

Donna Watson
Watauga County

Cc: JV Potter, OSD
John Patrone

Draper Aden Associates
Engineering • Surveying • Environmental Services

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December 13, 2010

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

RE: Watauga County Landfill
November Monthly Gas Monitoring Results, November 10, 2010
DAA JN: 6520-27

Dear Mr. Potter:

Draper Aden Associates performed the monthly gas monitoring event on November 10, 2010. During the event, we found Probe 2 in compliance. We attempted to sample six residential homes adjacent to Probe 2's boundary, but during the visit we were unable to gain access to all of the residential properties. We detected no methane in the residence sampled.

All tubes in Probe 2 showed a steady state reading of 0% methane by volume, during the sampling event.

The Maintenance Building's office outlet read 0% methane, by volume, in November. The installation of the Counties dedicated blower demonstrated an improvement over October's reading of 1.0% methane, by volume. We removed the blower Draper Aden Associates loaned the county in September and the County installed their own blower after the October event and about two weeks before the November event. The blower directly injects ambient air into the building's foundation ventilation system, creating a positive pressure under the concrete pad and thus deterring gas migration under the building.

We attempted to monitor six residential locations adjacent to the landfill in November. We were only able to gain access to one location; 491 Green Briar Road. We detected no methane at the residence.

Attached is the following information summarizing our data:

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

It is our recommendation that Watauga County request permission from DENR to cease monthly monitoring and return to quarterly monitoring program. The landfill gas monitoring program has been in compliance for three consecutive months. If DENR accepts the request, the next quarterly sampling event will occur during the first quarter of 2011.

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

GAS MONITORING RESULTS

November Monthly Event, November 10, 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	2.8	18.5	0.00	
2Y	5 - 10	0.0	4.6	17.5	0.00	
2B	10 - 20	0.0	8.8	15.1	0.06	
2G	20 - 40	0.0	14.6	11.2	0.00	
Transfer Station		NR				
New Scale House		NR				
Old Maintenance Building		NR				
New Maint. Bldg Office Outlet		0.0	0.0	20.6		
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	Not Available			Paul Suddreth
491 Green Briar Rd		0.0	0.0	20.8		Archie Carroll
513 Green Briar Rd		NR	Not Available			Nancy Perry
535 Green Briar Rd		NR	Not Available			Timothy Laraway (Rental - Appalachain Mngmt)
149 Wild Rose Lane		NR	Not Available			Norman Horton
483 Green Briar Rd		NR	Not Available			Takako Ohashi

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.	30.14 in. of Hg
Air Temperature	66 °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	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	38.5	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***

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.