



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

November 23, 2011

Ms. Linda Johnson  
Trustee of Bolick Estate  
156 Sunslope Lane  
Boone, North Carolina 28607



**Re: Private Well Sampling  
Closed Watauga County Landfill  
Draper Aden Associates Job No. 6520-39**

Dear Ms. Johnson:

Thank you for participating in the private well sampling event completed in September 2011 as part of the closed Watauga County Landfill's groundwater monitoring program. Please find enclosed the analytical results obtained from the water sample Draper Aden Associates collected from the residential well located at 2239 Hwy 421S on September 7th, 2011.

The sample was analyzed for 59 volatile organic constituents via the Environmental Protection Agency (EPA) Drinking Water Analytical Method 524.2. None of the 59 chemical constituents were detected.

Draper Aden Associates and Watauga County appreciate your cooperation. Watauga County will continue sampling your well on a semiannual basis as part of the overall landfill monitoring program. Please feel free to contact us if you have any questions regarding these results.

Sincerely,  
**DRAPER ADEN ASSOCIATES**

Karen Weber, P.G.  
Project Geologist

Enclosure: Analytical Results

cc: Ms. Elizabeth Werner, NCDENR (w/ enclosure)  
Mr. Lawrence Caviness, NCADHD (w/ enclosure)  
Mr. Deron Geouque, Watauga County Manager (w/ enclosure)  
Mr. Srikanth Nathella, P.E., Draper Aden Associates

Sample Description: RES-1 Grab Water Sample

 September 2011 Semiannual Assess. Monitoring Event  
 Watauga County, NC

LLI Sample # PW 6401144

LLI Group # 1265637

Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 13:35 by DS

Draper Aden Associates, Inc.

2206 South Main Street

Blacksburg VA 24060

Submitted: 09/09/2011 09:40

Reported: 09/21/2011 15:42

R1WAT SDG#: WAT14-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	Benzene	71-43-2	N.D.	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
03648	Bromoform	75-25-2	N.D.	0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.	0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.	0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
03648	Chloroethane	75-00-3	N.D.	0.2	0.5	1
03648	Chloroform	67-66-3	N.D.	0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.	0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.	0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.	0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.	0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.	0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.	0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.	0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
03648	Styrene	100-42-5	N.D.	0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
03648	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
03648	Toluene	108-88-3	N.D.	0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1

\*This limit was used in the evaluation of the final result



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: RES-1 Grab Water Sample  
 September 2011 Semiannual Assess. Monitoring Event  
 Watauga County, NC

LLI Sample # PW 6401144  
 LLI Group # 1265637  
 Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 13:35 by DS

Draper Aden Associates, Inc.  
 2206 South Main Street  
 Blacksburg VA 24060

Submitted: 09/09/2011 09:40

Reported: 09/21/2011 15:42

R1WAT SDG#: WAT14-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.2	0.5	1

### General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S112632AA	09/20/2011 11:40	Lauren C Temple	1

\*=This limit was used in the evaluation of the final result



2206 South Main Street  
Blacksburg, Virginia 24060  
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November 23, 2011

Mr. Frank Bolick  
180 Ridge Point Dr.  
Boone, North Carolina 28607

**Re: Private Well Sampling  
Closed Watauga County Landfill  
Draper Aden Associates Job No. 6520-39**

Dear Mr. Bolick:

Thank you for participating in the private well sampling event completed in September 2011 as part of the closed Watauga County Landfill's groundwater monitoring program. Please find enclosed the analytical results obtained from the water sample Draper Aden Associates collected from the private well located behind the rental residence at 2347 Hwy 421 South on September 7th, 2011. The sample was analyzed for 59 volatile organic constituents via the EPA Drinking Water Analytical Method 524.2.

Three constituents were detected in the sample collected at the residential well including chloroethane, 1,1-dichloroethane, and cis-1,2-dichloroethene. Four additional constituents were detected at very low concentrations (estimated results) including 1,4-dichlorobenzene, dichlorodifluoromethane, 1,1-dichloroethene, and trichloroethene. All constituents detected have either a published Environmental Protection Agency (EPA) maximum contaminant limit (MCL) drinking water standard or North Carolina Groundwater Quality Standard (GQS), or both. With the exception of 1,1-dichloroethane, all concentrations of constituents detected in the well sample were below the EPA MCL and/or respective North Carolina GQS. Since the residence has been connected to the public water system, no immediate action is planned at this time as a result of these results.

Draper Aden Associates and Watauga County appreciate your cooperation. Watauga County will continue sampling your well on a semiannual basis as part of the overall landfill monitoring program.

Mr. Frank Bolick  
November 23, 2011  
Page 2 of 2

Please feel free to contact us if you have any questions regarding these results.

Sincerely,  
**DRAPER ADEN ASSOCIATES**



Karen Weber, P.G.  
Project Geologist

Enclosure: Analytical Results

cc: Ms. Elizabeth Werner, NCDENR (w/ enclosure)  
Mr. Lawrence Caviness, NCADHD (w/ enclosure)  
Mr. Deron Geouque, Watauga County Manager (w/ enclosure)  
Mr. Srikanth Nathella, P.E., Draper Aden Associates



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# Analysis Report

Sample Description: RES-2 Grab Water Sample  
 September 2011 Semiannual Assess. Monitoring Event  
 Watauga County, NC

LLI Sample # PW 6401149  
 LLI Group # 1265637  
 Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 13:20 by DS

Draper Aden Associates, Inc.

Submitted: 09/09/2011 09:40

2206 South Main Street

Reported: 09/21/2011 15:42

Blacksburg VA 24060

R2WAT SDG#: WAT14-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	Benzene	71-43-2	N.D.	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
03648	Bromoform	75-25-2	N.D.	0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.	0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.	0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
03648	Chloroethane	75-00-3	0.6	0.2	0.5	1
03648	Chloroform	67-66-3	N.D.	0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.	0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.	0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	0.2	J 0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	0.3	J 0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	9.3	0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	0.2	J 0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	1.1	0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.	0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.	0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.	0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.	0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
03648	Styrene	100-42-5	N.D.	0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
03648	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
03648	Toluene	108-88-3	N.D.	0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1

\*-This limit was used in the evaluation of the final result



# Analysis Report

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Page 2 of 2

Sample Description: RES-2 Grab Water Sample  
 September 2011 Semiannual Assess. Monitoring Event  
 Watauga County, NC

LLI Sample # PW 6401149  
 LLI Group # 1265637  
 Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 13:20 by DS

Draper Aden Associates, Inc.

2206 South Main Street

Submitted: 09/09/2011 09:40

Blacksburg VA 24060

Reported: 09/21/2011 15:42

R2WAT SDG#: WAT14-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	0.2 J	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.2	0.5	1

### General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S112632AA	09/20/2011 13:51	Lauren C Temple	1

\*=This limit was used in the evaluation of the final result

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

November 23, 2011

Jerry and Pamela Williamson  
375 Old Hwy 421 South  
Boone, NC 28607

**Re: Private Well Sampling  
Closed Watauga County Landfill  
Draper Aden Associates Job No. 6520-39**

Dear Mr. and Mrs. Williamson:

Thank you for participating in the private well sampling event completed in September 2011 as part of the closed Watauga County Landfill's groundwater monitoring program. Please find enclosed with this letter the analytical results obtained from the water sample Draper Aden Associates collected from your non-potable use well on September 7th, 2011. The water sample was analyzed for 59 volatile organic constituents via the EPA Drinking Water Analytical Method 524.2.

Two constituents (cis-1,2-dichloroethene and tetrachloroethene) were detected at very low concentrations, estimated at 0.2 µg/l and 0.2 µg/l, respectively. These concentrations are less than the Environmental Protection Agency (EPA) Maximum Contaminant Limit (MCL) drinking water standards for cis-1,2-dichloroethene and tetrachloroethene of 70 µg/l and 5.0 µg/l, respectively, and the NC groundwater standards of 70 µg/l and 0.7 µg/l, respectively.

Draper Aden Associates and Watauga County appreciate your cooperation. Watauga County will continue sampling your well on a semiannual basis as part of the overall landfill monitoring program. Please feel free to contact us if you have any questions regarding these results.

Sincerely,  
**DRAPER ADEN ASSOCIATES**



Karen Weber, P.G.  
Project Geologist

Enclosure: Analytical Results

cc: Ms. Elizabeth Werner, NCDENR (w/ enclosure)  
Mr. Lawrence Caviness, NC Appalachian District HD (w/ enclosure)  
Mr. Deron Geouque, Watauga County Manager (w/ enclosure)  
Mr. Srikanth Nathella, P.E., Draper Aden Associates



# Analysis Report

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Page 1 of 2

Sample Description: RES-16 Grab Water Sample  
September 2011 Semiannual Assess. Monitoring Event  
Watauga County, NC

LLI Sample # PW 6401147  
LLI Group # 1265637  
Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 10:45 by DS

Draper Aden Associates, Inc.  
2206 South Main Street  
Blacksburg VA 24060

Submitted: 09/09/2011 09:40

Reported: 09/21/2011 15:42

16WAT SDG#: WAT14-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	Benzene	71-43-2	N.D.	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
03648	Bromoform	75-25-2	N.D.	0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.	0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.	0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
03648	Chloroethane	75-00-3	N.D.	0.2	0.5	1
03648	Chloroform	67-66-3	N.D.	0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.	0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.	0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.	0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	0.2 J	0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.	0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.	0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.	0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.	0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
03648	Styrene	100-42-5	N.D.	0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
03648	Tetrachloroethene	127-18-4	0.2 J	0.1	0.5	1
03648	Toluene	108-88-3	N.D.	0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1

\*=This limit was used in the evaluation of the final result



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 2 of 2

Sample Description: RES-16 Grab Water Sample  
September 2011 Semiannual Assess. Monitoring Event  
Watauga County, NC

LLI Sample # PW 6401147  
LLI Group # 1265637  
Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 10:45 by DS

Draper Aden Associates, Inc.

2206 South Main Street

Submitted: 09/09/2011 09:40

Blacksburg VA 24060

Reported: 09/21/2011 15:42

16WAT SDG#: WAT14-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.2	0.5	1

### General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S112632AA	09/20/2011 12:59	Lauren C Temple	1

\*=This limit was used in the evaluation of the final result



# Draper Aden Associates

Engineering • Surveying • Environmental Services

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

November 23, 2011

Mr. Keith Honeycutt  
Hollar and Greene Produce  
230 Cabbage Row  
Boone, North Carolina 28607

**Re: Private Well Sampling  
Closed Watauga County Landfill  
Draper Aden Associates Job No. 6520-39**

Dear Mr. Honeycutt:

We wish to thank Hollar and Greene Produce for participating in the potable well sampling event completed in September 2011 as part of the closed Watauga County Landfill's groundwater monitoring program. Please find enclosed the analytical results obtained from the water sample Draper Aden Associates collected from the Hollar and Greene Produce well on September 7th, 2011.

The sample was analyzed for 59 volatile organic constituents via the Environmental Protection Agency (EPA) Drinking Water Analytical Method 524.2. One constituent (tetrachloroethene) was detected at a very low concentration, estimated at 0.1 µg/l. This concentration is below the NC groundwater standards of 0.7 µg/l and the published U.S. Environmental Protection Agency (EPA) maximum contaminant limit (MCL) drinking water standard of 5 µg/l.

Draper Aden Associates and Watauga County appreciate your cooperation. Watauga County will continue sampling your well on a semiannual basis as part of the overall landfill monitoring program. Please feel free to contact us if you have any questions regarding these results.

Sincerely,  
DRAPER ADEN ASSOCIATES

Karen Weber, P.G.  
Project Geologist

Enclosure: Analytical Results

cc: Ms. Elizabeth Werner, NCDENR (w/ enclosure)  
Mr. Lawrence Caviness, NC Appalachian District HD (w/ enclosure)  
Mr. Deron Geouque, Watauga County Manager (w/ enclosure)  
Mr. Srikanth Nathella, P.E., Draper Aden Associates



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: H&G Produce Grab Water Sample  
September 2011 Semiannual Assess. Monitoring Event  
Watauga County, NC

LLI Sample # PW 6401145  
LLI Group # 1265637  
Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 by DS

Draper Aden Associates, Inc.  
2206 South Main Street  
Blacksburg VA 24060

Submitted: 09/09/2011 09:40

Reported: 09/21/2011 15:42

HGWAT SDG#: WAT14-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	Benzene	71-43-2	N.D.	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
03648	Bromoform	75-25-2	N.D.	0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.	0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.	0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
03648	Chloroethane	75-00-3	N.D.	0.2	0.5	1
03648	Chloroform	67-66-3	N.D.	0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.	0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.	0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.	0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.	0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.	0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.	0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.	0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
03648	Styrene	100-42-5	N.D.	0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
03648	Tetrachloroethene	127-18-4	0.1 J	0.1	0.5	1
03648	Toluene	108-88-3	N.D.	0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1

\*=This limit was used in the evaluation of the final result



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: H&G Produce Grab Water Sample  
September 2011 Semiannual Assess. Monitoring Event  
Watauga County, NC

LLI Sample # PW 6401145  
LLI Group # 1265637  
Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 by DS

Draper Aden Associates, Inc.

2206 South Main Street

Submitted: 09/09/2011 09:40

Blacksburg VA 24060

Reported: 09/21/2011 15:42

HGWAT SDG#: WAT14-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.2	0.5	1

### General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S112632AA	09/20/2011 12:06	Lauren C Temple	1

\*=This limit was used in the evaluation of the final result



# Draper Aden Associates

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Blacksburg, Virginia 24060  
(540) 552-0444 • Fax (540) 552-0291  
www.daa.com

November 23, 2011

Mr. David Greer  
347 Old Hwy 421 South  
Boone, North Carolina 28607

**Re: Private Well Sampling  
Closed Watauga County Landfill  
Draper Aden Associates Job No. 6520-39**

Dear Mr. Greer:

Thank you for participating in the potable well sampling event completed in September 2011 as part of the closed Watauga County Landfill's groundwater monitoring program. Please find enclosed the analytical results obtained from the water sample Draper Aden Associates collected from your well on September 7th, 2011. The water sample was analyzed for 59 volatile organic constituents via the EPA Drinking Water Analytical Method 524.2.

Two constituents (cis-1,2-dichloroethene and tetrachloroethene) were detected at a very low concentrations, estimated at 0.1 µg/l and 0.3 µg/l, respectively. These concentrations are less than the Environmental Protection Agency (EPA) Maximum Contaminant Limit (MCL) drinking water standards for cis-1,2-dichloroethene and tetrachloroethene of 70 µg/l and 5.0 µg/l, respectively, and the NC groundwater standards of 70 µg/l and 0.7 µg/l, respectively.

Draper Aden Associates and Watauga County appreciate your cooperation. Watauga County will continue sampling your well on a semiannual basis as part of the overall landfill monitoring program. Please feel free to contact us if you have any questions regarding these results.

Sincerely,

**DRAPER ADEN ASSOCIATES**

Karen Weber, P.G.  
Project Geologist

Enclosure: Analytical Results

cc: Ms. Elizabeth Werner, NCDENR (w/ enclosure)  
Mr. Lawrence Caviness, NC Appalachian District HD (w/ enclosure)  
Mr. Deron Geouque, Watauga County Manager (w/ enclosure)  
Mr. Srikanth Nathella, P.E., Draper Aden Associates



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Sample Description: RES-15 Grab Water Sample  
 September 2011 Semiannual Assess. Monitoring Event  
 Watauga County, NC

LLI Sample # PW 6401146  
 LLI Group # 1265637  
 Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 10:55 by DS

Draper Aden Associates, Inc.

2206 South Main Street

Blacksburg VA 24060

Submitted: 09/09/2011 09:40

Reported: 09/21/2011 15:42

15WAT SDG#: WAT14-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	Benzene	71-43-2	N.D.	0.1	0.5	1
03648	Bromobenzene	108-86-1	N.D.	0.1	0.5	1
03648	Bromochloromethane	74-97-5	N.D.	0.1	0.5	1
03648	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
03648	Bromoform	75-25-2	N.D.	0.2	0.5	1
03648	Bromomethane	74-83-9	N.D.	0.1	0.5	1
03648	n-Butylbenzene	104-51-8	N.D.	0.2	0.5	1
03648	sec-Butylbenzene	135-98-8	N.D.	0.1	0.5	1
03648	tert-Butylbenzene	98-06-6	N.D.	0.1	0.5	1
03648	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
03648	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
03648	Chloroethane	75-00-3	N.D.	0.2	0.5	1
03648	Chloroform	67-66-3	N.D.	0.1	0.5	1
03648	Chloromethane	74-87-3	N.D.	0.2	0.5	1
03648	2-Chlorotoluene	95-49-8	N.D.	0.1	0.5	1
03648	4-Chlorotoluene	106-43-4	N.D.	0.2	0.5	1
03648	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.4	0.5	1
03648	Dibromochloromethane	124-48-1	N.D.	0.1	0.5	1
03648	1,2-Dibromoethane	106-93-4	N.D.	0.1	0.5	1
03648	Dibromomethane	74-95-3	N.D.	0.1	0.5	1
03648	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
03648	1,3-Dichlorobenzene	541-73-1	N.D.	0.1	0.5	1
03648	1,4-Dichlorobenzene	106-46-7	N.D.	0.1	0.5	1
03648	Dichlorodifluoromethane	75-71-8	N.D.	0.2	0.5	1
03648	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
03648	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
03648	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
03648	cis-1,2-Dichloroethene	156-59-2	0.1 J	0.1	0.5	1
03648	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
03648	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
03648	1,3-Dichloropropane	142-28-9	N.D.	0.1	0.5	1
03648	2,2-Dichloropropane	594-20-7	N.D.	0.2	0.5	1
03648	1,1-Dichloropropene	563-58-6	N.D.	0.1	0.5	1
03648	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	0.5	1
03648	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	0.5	1
03648	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
03648	Hexachlorobutadiene	87-68-3	N.D.	0.2	0.5	1
03648	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
03648	p-Isopropyltoluene	99-87-6	N.D.	0.1	0.5	1
03648	Methylene Chloride	75-09-2	N.D.	0.3	0.5	1
03648	Naphthalene	91-20-3	N.D.	0.2	0.5	1
03648	n-Propylbenzene	103-65-1	N.D.	0.1	0.5	1
03648	Styrene	100-42-5	N.D.	0.1	0.5	1
03648	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.1	0.5	1
03648	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
03648	Tetrachloroethene	127-18-4	0.3 J	0.1	0.5	1
03648	Toluene	108-88-3	N.D.	0.1	0.5	1
03648	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.2	0.5	1
03648	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	0.5	1
03648	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1

\*=This limit was used in the evaluation of the final result



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 2 of 2

Sample Description: RES-15 Grab Water Sample  
 September 2011 Semiannual Assess. Monitoring Event  
 Watauga County, NC

LLI Sample # PW 6401146  
 LLI Group # 1265637  
 Account # 11200

Project Name: Watauga County, NC

Collected: 09/07/2011 10:55 by DS

Draper Aden Associates, Inc.  
 2206 South Main Street  
 Blacksburg VA 24060

Submitted: 09/09/2011 09:40

Reported: 09/21/2011 15:42

15WAT SDG#: WAT14-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS	Volatiles	EPA 524.2	ug/l	ug/l	ug/l	
03648	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
03648	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
03648	Trichlorofluoromethane	75-69-4	N.D.	0.2	0.5	1
03648	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	0.5	1
03648	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
03648	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
03648	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
03648	m+p-Xylene	179601-23-1	N.D.	0.2	0.5	1
03648	o-Xylene	95-47-6	N.D.	0.1	0.5	1
03648	Xylene (Total)	1330-20-7	N.D.	0.2	0.5	1

### General Sample Comments

The laboratory is NC DHHS certified for all SDWA regulated compounds reported (Lab ID 42705). North Carolina Department of Health and Human Services does not offer certification for unregulated compounds.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	EPA 524.2 Master	EPA 524.2	1	S112632AA	09/20/2011 12:32	Lauren C Temple	1

\*=This limit was used in the evaluation of the final result