



**STONY HOLLOW LANDFILL, INC.**  
2460 S. Gettysburg Ave.  
Dayton, OH 45418  
(937) 268-1133  
(937) 267-5110 Fax

November 7, 2016

Ms. Eileen Moran  
Unit Supervisor  
Regional Air Pollution Control Agency  
117 South Main Street  
Dayton, OH 45422

**Re: Ambient Air Sampling Results – Second sampling event  
Stony Hollow Landfill  
Facility ID No. 08-57-04-3008**

Dear Ms. Moran:

Stony Hollow Landfill, Inc. (Stony Hollow) contracted with SCS Engineers (SCS) to collect ambient air samples during the installation of landfill gas collection system Phase 1 vertical wells. Four (4) downwind ambient air samples and two (2) upwind ambient air samples were collected between October 25-26, 2016 by SCS field personnel during gas construction activities.

Please find attached to this submittal letter the SCS ambient air sampling report, which includes the analytical results prepared by ALS Environmental. Per the SCS review of the analytical results, the measured concentrations within the air samples do not indicate a public health hazard is present.

If you have any questions, please contact the undersigned at (937) 356-6204.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Peter C. Lucas'.

Peter Lucas, P.E.  
District Engineer

cc: Russell Brown, Michelle Ackenhausen - Ohio EPA  
Stony Hollow files

## SCS ENGINEERS

October 31<sup>st</sup>, 2016

Mr. Peter Lucas, P.E.  
Waste Management  
2460 S. Gettysburg Ave.  
Dayton, OH 45417

Subject: Air Sampling Results - October 25<sup>th</sup> and 26<sup>th</sup>, 2016 Sampling

Dear Mr. Lucas:

The following pages provide the sampling parameters and results from the sampling events on October 25<sup>th</sup> and October 26<sup>th</sup>, 2016. One upwind and two downwind samples were collected on each day using “certified clean” SUMMA canisters with flow control orifices. The following table provides the respective sampling parameters:

Date	Sample ID	Upwind/Downwind	Canister ID	Start Time	Stop Time
10/25/2016	VOC-5	Downwind	798	08:25	14:55
10/25/2016	VOC-6	Downwind	842	08:30	15:00
10/25/2016	VOC-7	Upwind	302	08:35	15:05
10/26/2016	VOC-8	Downwind	137	07:00	13:00
10/26/2016	VOC-9	Downwind	222	07:05	13:05
10/26/2016	VOC-10	Upwind	129	07:10	13:10

- *The following page provides the approximate sample locations for the samples referenced above.*

Upon completion of sampling, the canisters were shipped to ALS Environmental for analysis according to EPA Method TO-15. The samples were shipped overnight with chain of custody documentation instructing the lab to perform the analysis on a 2-working day turnaround time. Samples were received by ALS on 10/26/2016 and 10/27/2016. Analytical results were provided to SCS on 10/28/2016 and 10/31/16 according to the required schedule.

None of the samples collected had measured concentrations of specific compounds that exceeded or even approached the NIOSH REL (8 hr) or OSHA PEL (8-10 hr) relative to that compound. A comparison of the results to established benchmarks is provided on Pages 3 and 4. The measured concentrations of BTEX (Benzene, Toluene, Ethyl Benzene and Xylenes) compounds indicate the possibility the samples were influenced by vehicle exhaust to some degree. This is very possible due to the proximity of the nearby road to the sampling locations. The measured concentrations do not indicate a public health hazard is present. Downwind concentrations of some compounds were elevated relative to the coincidental upwind concentrations. However, it's not clear if these elevated concentrations are due to site operations or other sources.

The pages following this summary provide supplemental documentation including the sampling log from the site, the sample work order (chain of custody), and finally the analytical report from the lab. Please let me know if you have any questions or concerns.





The red arrows in the figure above indicate the relative predominant wind direction during the periods samples were collected according to the facilities on-site weather station. Wind was generally from the NNE during the sampled period on 10/25 and from the ENE during the sampled period on 10/26.

Regards,

Paul W. Schafer  
Vice President/Project Director  
**SCS ENGINEERS**

## VOC Sampling Results: EPA Method TO-15

Volatile Organic Compounds, TO-15 Sampling Results							
All Results in Parts Per Billion (ppb)							NIOSH REL
Analyte	Downwind		Upwind	Downwind		Upwind	
	TO15-5	TO15-6	TO15-7	TO15-8	TO15-9	TO15-10	(ppb)
Dichlorodifluoromethane	0.65	0.68	0.61	0.51	0.52	0.49	1000000
Chloromethane	ND	0.79	0.75	0.52	1.1	0.56	100000
Freon 114	ND	ND	ND	ND	ND	ND	NA
Vinyl chloride	ND	ND	ND	ND	ND	ND	1000
1,3-Butadiene	ND	ND	ND	ND	ND	ND	1000
Bromomethane	ND	ND	ND	ND	ND	ND	20000
Chloroethane	ND	ND	ND	ND	ND	ND	1000000
Ethanol	8.9	8.9	3.7	3.1	3.6	2.4	1000000
Isopropyl Alcohol	ND	ND	ND	ND	ND	ND	400000
Freon 11	0.36	0.47	0.32	0.25	0.26	0.22	1000000
Freon 113	ND	ND	ND	ND	ND	ND	1000000
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	200000
Acetone	10	6.9	2.7	3.9	4.3	1.4	250000
Carbon disulfide	ND	ND	ND	ND	ND	ND	1000
Methylene Chloride	0.15	0.16	ND	ND	0.15	ND	25000
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	200000
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	2000
Vinyl acetate	ND	ND	ND	ND	ND	ND	4000
2-Butanone (MEK)	2.4	0.65	0.25	0.65	1.1	0.27	200
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	200000
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	NA
Ethyl acetate	ND	ND	ND	0.39	0.23	ND	400000
Hexane	0.18	0.2	ND	ND	ND	ND	50000
Chloroform	ND	ND	ND	ND	ND	ND	2000
Tetrahydrofuran	4.8	1.1	ND	0.82	2.1	ND	200000
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	1000
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	350000
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	2000
Benzene	3.9	1.1	0.18	0.99	2.1	ND	100

Analyte	All Results in Parts Per Billion (ppb)						NIOSH REL
	Downwind		Upwind	Downwind		Upwind	
	TO15-5	TO15-6	TO15-7	TO15-8	TO15-9	TO15-10	(ppb)
Cyclohexane	ND	ND	ND	ND	ND	ND	300000
Trichloroethene	ND	ND	ND	ND	ND	ND	100000
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	75000
Bromodichloromethane	ND	ND	ND	ND	ND	ND	NA
Heptane	ND	ND	ND	ND	ND	ND	85000
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	1000
4-Methyl-2-pentanone	ND	ND	ND	ND	ND	ND	50000
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	1000
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	10000
Toluene	1.0	0.54	0.25	0.47	1.3	0.15	100000
2-Hexanone	ND	ND	ND	ND	ND	ND	1000
Tetrachloroethene	ND	ND	ND	ND	ND	ND	100000
Dibromochloromethane	ND	ND	ND	ND	ND	ND	NA
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	45
Chlorobenzene	ND	ND	ND	ND	ND	ND	75000
Ethyl benzene	0.38	ND	ND	ND	0.27	ND	100000
m,p-Xylene	0.82	0.33	ND	0.39	0.73	ND	100000
o-Xylene	0.25	ND	ND	ND	0.2	ND	100000
Styrene	ND	ND	ND	ND	ND	ND	50000
Bromoform	ND	ND	ND	ND	ND	ND	500
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	1000
4-Ethyl toluene	ND	ND	ND	ND	ND	ND	NA
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	25000
1,2,4-Trimethylbenzene	0.17		ND	ND	ND	ND	25000
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	50000
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	50000
Benzyl chloride	ND	ND	ND	ND	ND	ND	1000
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	50000
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	5000
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	20

\*The stricter (i.e. lower concentration) is listed whenever both the NIOSH REL or OSHA PEL are published for each pollutant.

# SCS Engineers

## VOC Sampling Log - TO-15

Sampling Date  Site Name  Operator

Sample Type	<input type="text" value="VOC"/>	Sample ID	<input type="text" value="VOC-5"/>
Cannister #	<input type="text" value="798"/>		
Start Time	<input type="text" value="8:25 AM"/>	Stop Time	<input type="text" value="2:55 AM"/>
Start Po	<input type="text" value="30 Hg"/>	Stop Pf	<input type="text" value="5 Hg"/>

Comments:

Comments: \_\_\_\_\_

GPS : Latitude:

GPS Longitude:

Sample Type	<input type="text" value="VOC"/>	Sample ID	<input type="text" value="VOC-6"/>
Cannister #	<input type="text" value="842"/>		
Start Time	<input type="text" value="8:30 AM"/>	Stop Time	<input type="text" value="3:00 AM"/>
Start Po	<input type="text" value="30 Hg"/>	Stop Pf	<input type="text" value="6 Hg"/>

Comments:

Comments: \_\_\_\_\_

GPS : Latitude:

GPS Longitude:

Sample Type	<input type="text" value="VOC"/>	Sample ID	<input type="text" value="VOC-7"/>
Cannister #	<input type="text" value="302"/>		
Start Time	<input type="text" value="8:35 AM"/>	Stop Time	<input type="text" value="3:05 AM"/>
Start Po	<input type="text" value="30 Hg"/>	Stop Pf	<input type="text" value="10 Hg"/>

Comments:

Comments: \_\_\_\_\_

GPS : Latitude:

GPS Longitude:

Sample Type	<input type="text" value="VOC"/>	Sample ID	<input type="text" value="VOC-"/>
Cannister #	<input type="text"/>		
Start Time	<input type="text"/>	Stop Time	<input type="text"/>
Start Po	<input type="text"/>	Stop Pf	<input type="text"/>

Comments: \_\_\_\_\_

Comments: \_\_\_\_\_

GPS : Latitude: \_\_\_\_\_

GPS Longitude: \_\_\_\_\_







# SCS Engineers

## VOC Sampling Log - TO-15

Sampling Date  Site Name  Operator

Sample Type	<input type="text" value="VOC"/>	Sample ID	<input type="text" value="VOC-8"/>
Cannister #	<input type="text" value="137"/>		
Start Time	<input type="text" value="7:00 AM"/>	Stop Time	<input type="text" value="1:00 PM"/>
Start Po	<input type="text" value="30 Hg"/>	Stop Pf	<input type="text" value="6 Hg"/>

Comments:

Comments:

GPS : Latitude:

GPS Longitude:

Sample Type	<input type="text" value="VOC"/>	Sample ID	<input type="text" value="VOC-9"/>
Cannister #	<input type="text" value="222"/>		
Start Time	<input type="text" value="7:05 AM"/>	Stop Time	<input type="text" value="1:05 PM"/>
Start Po	<input type="text" value="29 Hg"/>	Stop Pf	<input type="text" value="6 Hg"/>

Comments:

Comments:

GPS : Latitude:

GPS Longitude:

Sample Type	<input type="text" value="VOC"/>	Sample ID	<input type="text" value="VOC-10"/>
Cannister #	<input type="text" value="129"/>		
Start Time	<input type="text" value="7:10 AM"/>	Stop Time	<input type="text" value="1:10 PM"/>
Start Po	<input type="text" value="30 Hg"/>	Stop Pf	<input type="text" value="12 Hg"/>

Comments:

Comments:

GPS : Latitude:

GPS Longitude:

Sample Type	<input type="text" value="VOC"/>	Sample ID	<input type="text" value="VOC-"/>
Cannister #	<input type="text"/>		
Start Time	<input type="text"/>	Stop Time	<input type="text"/>
Start Po	<input type="text"/>	Stop Pf	<input type="text"/>

Comments:

Comments:

GPS : Latitude:

GPS Longitude:





# ANALYTICAL REPORT

Report Date: October 28, 2016

Paul Schafer  
SCS Environmental  
970 Los Vallecitos Blvd.  
Suite 100  
San Marcos, CA 92069

Phone: 760-744-9611  
Fax: 760-744-8616  
E-mail: pschafer@scsengineers.com

Workorder: **34-1630069**

Project ID: 24216188.00/Stoney Hollow Land  
Purchase Order: 24216188.00  
Project Manager Stella Hanis

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
302	1630069001	10/25/16	10/26/16	Stoney Hollow Land
798	1630069002	10/25/16	10/26/16	Stoney Hollow Land
842	1630069003	10/25/16	10/26/16	Stoney Hollow Land

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, 84123 USA | PHONE +1 801 266 7700 | FAX +1 801 268 9992

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Environmental

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# ANALYTICAL REPORT

Workorder: **34-1630069**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

## Analytical Results

Sample ID: <b>302</b>	Sampling Site: Stoney Hollow Land	Collected: 10/25/2016
Lab ID: 1630069001	Media: Summa 6 Liter Canister	Received: 10/26/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air	Instrument ID: 5975-L
	Batch: IVOA/3398 (HBN: 179318)	Percent Solid: NA
	Analyzed: 10/27/2016 03:43	Report Basis: Wet

Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
Dichlorodifluoromethane	0.61	3.0	0.15	0.50	1	
Chloromethane	0.75	1.6	0.15	0.50	1	
Freon 114	ND	<1.0	0.15	0.50	1	U
Vinyl chloride	ND	<0.38	0.15	0.50	1	U
1,3-Butadiene	ND	<0.33	0.15	0.50	1	U
Bromomethane	ND	<0.58	0.15	0.50	1	U
Chloroethane	ND	<0.40	0.15	0.50	1	U
Freon 11	0.32	1.8	0.15	0.50	1	J
Freon 113	ND	<1.1	0.15	0.50	1	U
1,1-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Acetone	2.7	6.5	0.30	1.0	1	
Carbon disulfide	ND	<0.47	0.15	0.50	1	U
Methylene chloride	ND	<0.52	0.15	0.50	1	U
trans-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Methyl t-butyl ether	ND	<0.54	0.15	0.50	1	U
Vinyl acetate	ND	<0.53	0.15	0.50	1	U
2-Butanone	0.25	0.74	0.15	0.50	1	J
cis-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
1,1-Dichloroethane	ND	<0.61	0.15	0.50	1	U
Ethyl acetate	ND	<0.54	0.15	1.0	1	U
Hexane	ND	<0.53	0.15	0.50	1	U
Chloroform	ND	<0.73	0.15	0.50	1	U
Tetrahydrofuran	ND	<0.44	0.15	0.50	1	U
1,2-Dichloroethane	ND	<0.61	0.15	0.50	1	U
1,1,1-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Carbon tetrachloride	ND	<0.94	0.15	0.50	1	U
Benzene	0.18	0.56	0.15	0.50	1	J
Cyclohexane	ND	<0.52	0.15	0.50	1	U
Trichloroethene	ND	<0.81	0.15	0.50	1	U
1,2-Dichloropropane	ND	<0.73	0.15	0.50	1	U
Bromodichloromethane	ND	<1.0	0.15	0.50	1	U
Heptane	ND	<0.61	0.15	0.50	1	U
cis-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U
4-Methyl-2-pentanone	ND	<0.61	0.15	0.50	1	U
trans-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U

Results Continued on Next Page



# ANALYTICAL REPORT

**Workorder:** 34-1630069

**Client:** SCS Tracer Environmental

**Project Manager:** Stella Hanis

## Analytical Results

Sample ID: <b>302</b>	Sampling Site: Stoney Hollow Land	Collected: 10/25/2016
Lab ID: 1630069001	Media: Summa 6 Liter Canister	Received: 10/26/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3398 (HBN: 179318) Analyzed: 10/27/2016 03:43	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
1,1,2-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Toluene	0.25	0.94	0.15	0.50	1	J
2-Hexanone	ND	<1.2	0.30	1.0	1	U
Tetrachloroethene	ND	<1.0	0.15	0.50	1	U
Dibromochloromethane	ND	<1.3	0.15	0.50	1	U
1,2-Dibromoethane	ND	<1.2	0.15	0.50	1	U
Chlorobenzene	ND	<0.69	0.15	0.50	1	U
Ethyl benzene	ND	<0.65	0.15	0.50	1	U
m,p-Xylene	ND	<0.65	0.15	0.50	1	U
o-Xylene	ND	<0.65	0.15	0.50	1	U
Styrene	ND	<0.64	0.15	0.50	1	U
Bromoform	ND	<1.6	0.15	0.50	1	U
1,1,2,2-Tetrachloroethane	ND	<1.0	0.15	0.50	1	U
4-Ethyl toluene	ND	<0.74	0.15	1.0	1	U
1,3,5-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,2,4-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,3-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
1,4-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
Benzyl chloride	ND	<1.6	0.30	1.0	1	U
1,2-Dichlorobenzene	ND	<1.8	0.30	1.0	1	U
1,2,4-Trichlorobenzene	ND	<2.2	0.30	1.0	1	U
Hexachlorobutadiene	ND	<3.2	0.30	1.0	1	U
Total Volatile Organics	14	56	NA	NA	1	J

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3398 (HBN: 179318) Analyzed: 10/27/2016 03:43	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	Result (ppb)	Retention Time	Dilution	Qual
Ethanol	3.7	5.22	1	J



# ANALYTICAL REPORT

Workorder: **34-1630069**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

## Analytical Results

Sample ID: <b>798</b>	Sampling Site: Stoney Hollow Land	Collected: 10/25/2016
Lab ID: 1630069002	Media: Summa 6 Liter Canister	Received: 10/26/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air	Instrument ID: 5975-L
	Batch: IVOA/3398 (HBN: 179318)	Percent Solid: NA
	Analyzed: 10/27/2016 04:33	Report Basis: Wet

Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
Dichlorodifluoromethane	0.65	3.2	0.15	0.50	1	
Chloromethane	ND	<0.31	0.15	0.50	1	U
Freon 114	ND	<1.0	0.15	0.50	1	U
Vinyl chloride	ND	<0.38	0.15	0.50	1	U
1,3-Butadiene	ND	<0.33	0.15	0.50	1	U
Bromomethane	ND	<0.58	0.15	0.50	1	U
Chloroethane	ND	<0.40	0.15	0.50	1	U
Freon 11	0.36	2.0	0.15	0.50	1	J
Freon 113	ND	<1.1	0.15	0.50	1	U
1,1-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Acetone	10	24	0.30	1.0	1	
Carbon disulfide	ND	<0.47	0.15	0.50	1	U
Methylene chloride	0.15	0.52	0.15	0.50	1	J
trans-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Methyl t-butyl ether	ND	<0.54	0.15	0.50	1	U
Vinyl acetate	ND	<0.53	0.15	0.50	1	U
2-Butanone	2.4	7.1	0.15	0.50	1	
cis-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
1,1-Dichloroethane	ND	<0.61	0.15	0.50	1	U
Ethyl acetate	ND	<0.54	0.15	1.0	1	U
Hexane	0.18	0.62	0.15	0.50	1	J
Chloroform	ND	<0.73	0.15	0.50	1	U
Tetrahydrofuran	4.8	14	0.15	0.50	1	
1,2-Dichloroethane	ND	<0.61	0.15	0.50	1	U
1,1,1-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Carbon tetrachloride	ND	<0.94	0.15	0.50	1	U
Benzene	3.9	13	0.15	0.50	1	
Cyclohexane	ND	<0.52	0.15	0.50	1	U
Trichloroethene	ND	<0.81	0.15	0.50	1	U
1,2-Dichloropropane	ND	<0.73	0.15	0.50	1	U
Bromodichloromethane	ND	<1.0	0.15	0.50	1	U
Heptane	ND	<0.61	0.15	0.50	1	U
cis-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U
4-Methyl-2-pentanone	ND	<0.61	0.15	0.50	1	U
trans-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U

Results Continued on Next Page



# ANALYTICAL REPORT

**Workorder:** 34-1630069

**Client:** SCS Tracer Environmental

**Project Manager:** Stella Hanis

## Analytical Results

Sample ID: <b>798</b>	Sampling Site: Stoney Hollow Land	Collected: 10/25/2016
Lab ID: 1630069002	Media: Summa 6 Liter Canister	Received: 10/26/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3398 (HBN: 179318) Analyzed: 10/27/2016 04:33	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
1,1,2-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Toluene	<b>1.0</b>	<b>3.8</b>	0.15	0.50	1	
2-Hexanone	ND	<1.2	0.30	1.0	1	U
Tetrachloroethene	ND	<1.0	0.15	0.50	1	U
Dibromochloromethane	ND	<1.3	0.15	0.50	1	U
1,2-Dibromoethane	ND	<1.2	0.15	0.50	1	U
Chlorobenzene	ND	<0.69	0.15	0.50	1	U
Ethyl benzene	0.38	1.6	0.15	0.50	1	J
m,p-Xylene	<b>0.82</b>	<b>3.6</b>	0.15	0.50	1	
o-Xylene	0.25	1.1	0.15	0.50	1	J
Styrene	ND	<0.64	0.15	0.50	1	U
Bromoform	ND	<1.6	0.15	0.50	1	U
1,1,2,2-Tetrachloroethane	ND	<1.0	0.15	0.50	1	U
4-Ethyl toluene	ND	<0.74	0.15	1.0	1	U
1,3,5-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,2,4-Trimethylbenzene	0.17	0.85	0.15	0.50	1	J
1,3-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
1,4-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
Benzyl chloride	ND	<1.6	0.30	1.0	1	U
1,2-Dichlorobenzene	ND	<1.8	0.30	1.0	1	U
1,2,4-Trichlorobenzene	ND	<2.2	0.30	1.0	1	U
Hexachlorobutadiene	ND	<3.2	0.30	1.0	1	U
Total Volatile Organics	32	130	NA	NA	1	J

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3398 (HBN: 179318) Analyzed: 10/27/2016 04:33	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	Result (ppb)	Retention Time	Dilution	Qual
Ethanol	8.9	5.16	1	J
Isopropyl Alcohol	2.0	5.85	1	J



# ANALYTICAL REPORT

Workorder: **34-1630069**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

## Analytical Results

Sample ID: <b>842</b>	Sampling Site: Stoney Hollow Land	Collected: 10/25/2016
Lab ID: 1630069003	Media: Summa 6 Liter Canister	Received: 10/26/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air	Instrument ID: 5975-L
	Batch: IVOA/3398 (HBN: 179318)	Percent Solid: NA
	Analyzed: 10/27/2016 05:22	Report Basis: Wet

Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
Dichlorodifluoromethane	0.68	3.4	0.15	0.50	1	
Chloromethane	0.79	1.6	0.15	0.50	1	
Freon 114	ND	<1.0	0.15	0.50	1	U
Vinyl chloride	ND	<0.38	0.15	0.50	1	U
1,3-Butadiene	ND	<0.33	0.15	0.50	1	U
Bromomethane	ND	<0.58	0.15	0.50	1	U
Chloroethane	ND	<0.40	0.15	0.50	1	U
Freon 11	0.47	2.7	0.15	0.50	1	J
Freon 113	ND	<1.1	0.15	0.50	1	U
1,1-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Acetone	6.9	16	0.30	1.0	1	
Carbon disulfide	ND	<0.47	0.15	0.50	1	U
Methylene chloride	0.16	0.54	0.15	0.50	1	J
trans-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Methyl t-butyl ether	ND	<0.54	0.15	0.50	1	U
Vinyl acetate	ND	<0.53	0.15	0.50	1	U
2-Butanone	0.65	1.9	0.15	0.50	1	
cis-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
1,1-Dichloroethane	ND	<0.61	0.15	0.50	1	U
Ethyl acetate	ND	<0.54	0.15	1.0	1	U
Hexane	0.2	0.70	0.15	0.50	1	J
Chloroform	ND	<0.73	0.15	0.50	1	U
Tetrahydrofuran	1.1	3.2	0.15	0.50	1	
1,2-Dichloroethane	ND	<0.61	0.15	0.50	1	U
1,1,1-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Carbon tetrachloride	ND	<0.94	0.15	0.50	1	U
Benzene	1.1	3.6	0.15	0.50	1	
Cyclohexane	ND	<0.52	0.15	0.50	1	U
Trichloroethene	ND	<0.81	0.15	0.50	1	U
1,2-Dichloropropane	ND	<0.73	0.15	0.50	1	U
Bromodichloromethane	ND	<1.0	0.15	0.50	1	U
Heptane	ND	<0.61	0.15	0.50	1	U
cis-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U
4-Methyl-2-pentanone	ND	<0.61	0.15	0.50	1	U
trans-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U

Results Continued on Next Page





# ANALYTICAL REPORT

Workorder: **34-1630069**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

## Analytical Results

Sample ID: <b>842</b>	Sampling Site: Stoney Hollow Land	Collected: 10/25/2016
Lab ID: 1630069003	Media: Summa 6 Liter Canister	Received: 10/26/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3398 (HBN: 179318) Analyzed: 10/27/2016 05:22	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
1,1,2-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Toluene	<b>0.54</b>	<b>2.1</b>	0.15	0.50	1	
2-Hexanone	ND	<1.2	0.30	1.0	1	U
Tetrachloroethene	ND	<1.0	0.15	0.50	1	U
Dibromochloromethane	ND	<1.3	0.15	0.50	1	U
1,2-Dibromoethane	ND	<1.2	0.15	0.50	1	U
Chlorobenzene	ND	<0.69	0.15	0.50	1	U
Ethyl benzene	ND	<0.65	0.15	0.50	1	U
m,p-Xylene	0.33	1.4	0.15	0.50	1	J
o-Xylene	ND	<0.65	0.15	0.50	1	U
Styrene	ND	<0.64	0.15	0.50	1	U
Bromoform	ND	<1.6	0.15	0.50	1	U
1,1,2,2-Tetrachloroethane	ND	<1.0	0.15	0.50	1	U
4-Ethyl toluene	ND	<0.74	0.15	1.0	1	U
1,3,5-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,2,4-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,3-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
1,4-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
Benzyl chloride	ND	<1.6	0.30	1.0	1	U
1,2-Dichlorobenzene	ND	<1.8	0.30	1.0	1	U
1,2,4-Trichlorobenzene	ND	<2.2	0.30	1.0	1	U
Hexachlorobutadiene	ND	<3.2	0.30	1.0	1	U
Total Volatile Organics	40	160	NA	NA	1	J

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3398 (HBN: 179318) Analyzed: 10/27/2016 05:22	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	Result (ppb)	Retention Time	Dilution	Qual
Ethanol	8.9	5.18	1	J

## Comments

### Quality Control: EPA TO-15 - (HBN: 179318)

The following compounds in the CCV were outside of +/-30%: Acetone, 2-Hexanone and Benzyl Chloride



# ANALYTICAL REPORT

Workorder: **34-1630069**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
EPA TO-15	/S/ Lisa M. Reid 10/27/2016 11:59	/S/ Jordan Baum 10/28/2016 11:54

## Laboratory Contact Information

ALS Environmental  
960 W Levoy Drive  
Salt Lake City, Utah 84123

Phone: (801) 266-7700  
Email: als@alstlab.com  
Web: www.alssl.com

## General Lab Comments

The results provided in this report relate only to the items tested.  
Samples were received in acceptable condition unless otherwise noted.  
Samples have not been blank corrected unless otherwise noted.  
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	<a href="http://www.anab.org/accredited-organizations/">http://www.anab.org/accredited-organizations/</a>
	Utah (NELAC)	DATA1	<a href="http://health.utah.gov/lab/labimp/">http://health.utah.gov/lab/labimp/</a>
	Nevada	UT00009	<a href="http://ndep.nv.gov/bsdwlabservice.htm">http://ndep.nv.gov/bsdwlabservice.htm</a>
	Oklahoma	UT00009	<a href="http://www.deq.state.ok.us/CSDnew/">http://www.deq.state.ok.us/CSDnew/</a>
	Iowa	IA# 376	<a href="http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx">http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx</a>
	Texas (TNI)	T104704456-11-1	<a href="http://www.tceq.texas.gov/field/qa/lab_accred_certif.html">http://www.tceq.texas.gov/field/qa/lab_accred_certif.html</a>
	Washington	C596-16	<a href="http://www.ecy.wa.gov/programs/eap/labs/index.html">http://www.ecy.wa.gov/programs/eap/labs/index.html</a>
Industrial Hygiene	Kansas	E-10416	<a href="http://www.kdheks.gov/lipo/index.html">http://www.kdheks.gov/lipo/index.html</a>
	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Washington		C596-16	<a href="http://www.ecy.wa.gov/programs/eap/labs/index.html">http://www.ecy.wa.gov/programs/eap/labs/index.html</a>
	Lead Testing:		
CPSC	ANAB (ISO 17025, CPSC)	ADE-1420	<a href="http://www.anab.org/accredited-organizations/">http://www.anab.org/accredited-organizations/</a>
Soil, Dust, Paint ,Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	<a href="http://www.aiclasscorp.com">http://www.aiclasscorp.com</a>



## ANALYTICAL REPORT

Workorder: **34-1630069**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

### Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.

RL = Reporting Limit, a verified value of method/media/instrument sensitivity.

CRDL = Contract Required Detection Limit

Reg. Limit = Regulatory Limit.

ND = Not Detected, testing result not detected above the MDL or RL.

< This testing result is less than the numerical value.

\*\* No result could be reported, see sample comments for details.

### Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.

J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.

B = Qualifier indicates that the analyte was detected in the blank.

E = Qualifier indicates that the analyte result exceeds calibration range.

P = Qualifier indicates that the RPD between the two columns is greater than 40%.



# ANALYTICAL REPORT

Report Date: October 31, 2016

Paul Schafer  
SCS Environmental  
970 Los Vallecitos Blvd.  
Suite 100  
San Marcos, CA 92069

Phone: 760-744-9611  
Fax: 760-744-8616  
E-mail: pschafer@scsengineers.com

Workorder: **34-1630154**

Project ID: 24216188.00/Stoney Hollow Land  
Purchase Order: 24216188.00  
Project Manager Stella Hanis

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
137	1630154001	10/26/16	10/27/16	Stoney Hollow Landfi
222	1630154002	10/26/16	10/27/16	Stoney Hollow Landfi
129	1630154003	10/26/16	10/27/16	Stoney Hollow Landfi

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, 84123 USA | PHONE +1 801 266 7700 | FAX +1 801 268 9992

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# ANALYTICAL REPORT

Workorder: **34-1630154**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

## Analytical Results

Sample ID: <b>137</b>	Sampling Site: Stoney Hollow Landfi	Collected: 10/26/2016
Lab ID: 1630154001	Media: Summa 6 Liter Canister	Received: 10/27/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air	Instrument ID: 5975-L
	Batch: IVOA/3401 (HBN: 179535)	Percent Solid: NA
	Analyzed: 10/27/2016 22:34	Report Basis: Wet

Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
Dichlorodifluoromethane	0.51	2.5	0.15	0.50	1	
Chloromethane	0.52	1.1	0.15	0.50	1	
Freon 114	ND	<1.0	0.15	0.50	1	U
Vinyl chloride	ND	<0.38	0.15	0.50	1	U
1,3-Butadiene	ND	<0.33	0.15	0.50	1	U
Bromomethane	ND	<0.58	0.15	0.50	1	U
Chloroethane	ND	<0.40	0.15	0.50	1	U
Freon 11	0.25	1.4	0.15	0.50	1	J
Freon 113	ND	<1.1	0.15	0.50	1	U
1,1-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Acetone	3.9	9.2	0.30	1.0	1	
Carbon disulfide	ND	<0.47	0.15	0.50	1	U
Methylene chloride	ND	<0.52	0.15	0.50	1	U
trans-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Methyl t-butyl ether	ND	<0.54	0.15	0.50	1	U
Vinyl acetate	ND	<0.53	0.15	0.50	1	U
2-Butanone	0.65	1.9	0.15	0.50	1	
cis-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
1,1-Dichloroethane	ND	<0.61	0.15	0.50	1	U
Ethyl acetate	0.39	1.4	0.15	1.0	1	J
Hexane	ND	<0.53	0.15	0.50	1	U
Chloroform	ND	<0.73	0.15	0.50	1	U
Tetrahydrofuran	0.82	2.4	0.15	0.50	1	
1,2-Dichloroethane	ND	<0.61	0.15	0.50	1	U
1,1,1-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Carbon tetrachloride	ND	<0.94	0.15	0.50	1	U
Benzene	0.99	3.1	0.15	0.50	1	
Cyclohexane	ND	<0.52	0.15	0.50	1	U
Trichloroethene	ND	<0.81	0.15	0.50	1	U
1,2-Dichloropropane	ND	<0.73	0.15	0.50	1	U
Bromodichloromethane	ND	<1.0	0.15	0.50	1	U
Heptane	ND	<0.61	0.15	0.50	1	U
cis-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U
4-Methyl-2-pentanone	ND	<0.61	0.15	0.50	1	U
trans-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U

Results Continued on Next Page



# ANALYTICAL REPORT

**Workorder:** 34-1630154

**Client:** SCS Tracer Environmental

**Project Manager:** Stella Hanis

## Analytical Results

Sample ID: <b>137</b>	Sampling Site: Stoney Hollow Landfi	Collected: 10/26/2016
Lab ID: 1630154001	Media: Summa 6 Liter Canister	Received: 10/27/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3401 (HBN: 179535) Analyzed: 10/27/2016 22:34	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
1,1,2-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Toluene	0.47	1.8	0.15	0.50	1	J
2-Hexanone	ND	<1.2	0.30	1.0	1	U
Tetrachloroethene	ND	<1.0	0.15	0.50	1	U
Dibromochloromethane	ND	<1.3	0.15	0.50	1	U
1,2-Dibromoethane	ND	<1.2	0.15	0.50	1	U
Chlorobenzene	ND	<0.69	0.15	0.50	1	U
Ethyl benzene	ND	<0.65	0.15	0.50	1	U
m,p-Xylene	0.39	1.7	0.15	0.50	1	J
o-Xylene	ND	<0.65	0.15	0.50	1	U
Styrene	ND	<0.64	0.15	0.50	1	U
Bromoform	ND	<1.6	0.15	0.50	1	U
1,1,2,2-Tetrachloroethane	ND	<1.0	0.15	0.50	1	U
4-Ethyl toluene	ND	<0.74	0.15	1.0	1	U
1,3,5-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,2,4-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,3-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
1,4-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
Benzyl chloride	ND	<1.6	0.30	1.0	1	U
1,2-Dichlorobenzene	ND	<1.8	0.30	1.0	1	U
1,2,4-Trichlorobenzene	ND	<2.2	0.30	1.0	1	U
Hexachlorobutadiene	ND	<3.2	0.30	1.0	1	U
Total Volatile Organics	25	100	NA	NA	1	J

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3401 (HBN: 179535) Analyzed: 10/27/2016 22:34	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	Result (ppb)	Retention Time	Dilution	Qual
Ethanol	3.1	5.19	1	J
Nonanal	5.5	19.54	1	J



# ANALYTICAL REPORT

Workorder: **34-1630154**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

## Analytical Results

Sample ID: <b>222</b>	Sampling Site: Stoney Hollow Landfi	Collected: 10/26/2016
Lab ID: 1630154002	Media: Summa 6 Liter Canister	Received: 10/27/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air	Instrument ID: 5975-L
	Batch: IVOA/3401 (HBN: 179535)	Percent Solid: NA
	Analyzed: 10/27/2016 23:25	Report Basis: Wet

Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
Dichlorodifluoromethane	0.52	2.6	0.15	0.50	1	
Chloromethane	1.1	2.3	0.15	0.50	1	
Freon 114	ND	<1.0	0.15	0.50	1	U
Vinyl chloride	ND	<0.38	0.15	0.50	1	U
1,3-Butadiene	ND	<0.33	0.15	0.50	1	U
Bromomethane	ND	<0.58	0.15	0.50	1	U
Chloroethane	ND	<0.40	0.15	0.50	1	U
Freon 11	0.26	1.5	0.15	0.50	1	J
Freon 113	ND	<1.1	0.15	0.50	1	U
1,1-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Acetone	4.3	10	0.30	1.0	1	
Carbon disulfide	ND	<0.47	0.15	0.50	1	U
Methylene chloride	0.15	0.54	0.15	0.50	1	J
trans-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Methyl t-butyl ether	ND	<0.54	0.15	0.50	1	U
Vinyl acetate	ND	<0.53	0.15	0.50	1	U
2-Butanone	1.1	3.3	0.15	0.50	1	
cis-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
1,1-Dichloroethane	ND	<0.61	0.15	0.50	1	U
Ethyl acetate	0.23	0.84	0.15	1.0	1	J
Hexane	ND	<0.53	0.15	0.50	1	U
Chloroform	ND	<0.73	0.15	0.50	1	U
Tetrahydrofuran	2.1	6.1	0.15	0.50	1	
1,2-Dichloroethane	ND	<0.61	0.15	0.50	1	U
1,1,1-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Carbon tetrachloride	ND	<0.94	0.15	0.50	1	U
Benzene	2.1	6.8	0.15	0.50	1	
Cyclohexane	ND	<0.52	0.15	0.50	1	U
Trichloroethene	ND	<0.81	0.15	0.50	1	U
1,2-Dichloropropane	ND	<0.73	0.15	0.50	1	U
Bromodichloromethane	ND	<1.0	0.15	0.50	1	U
Heptane	ND	<0.61	0.15	0.50	1	U
cis-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U
4-Methyl-2-pentanone	ND	<0.61	0.15	0.50	1	U
trans-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U

Results Continued on Next Page



# ANALYTICAL REPORT

**Workorder:** 34-1630154

**Client:** SCS Tracer Environmental

**Project Manager:** Stella Hanis

## Analytical Results

Sample ID: <b>222</b>	Sampling Site: Stoney Hollow Landfi	Collected: 10/26/2016
Lab ID: 1630154002	Media: Summa 6 Liter Canister	Received: 10/27/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3401 (HBN: 179535) Analyzed: 10/27/2016 23:25	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
1,1,2-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Toluene	<b>1.3</b>	<b>5.0</b>	0.15	0.50	1	
2-Hexanone	ND	<1.2	0.30	1.0	1	U
Tetrachloroethene	ND	<1.0	0.15	0.50	1	U
Dibromochloromethane	ND	<1.3	0.15	0.50	1	U
1,2-Dibromoethane	ND	<1.2	0.15	0.50	1	U
Chlorobenzene	ND	<0.69	0.15	0.50	1	U
Ethyl benzene	0.27	1.2	0.15	0.50	1	J
m,p-Xylene	<b>0.73</b>	<b>3.2</b>	0.15	0.50	1	
o-Xylene	0.2	0.88	0.15	0.50	1	J
Styrene	ND	<0.64	0.15	0.50	1	U
Bromoform	ND	<1.6	0.15	0.50	1	U
1,1,2,2-Tetrachloroethane	ND	<1.0	0.15	0.50	1	U
4-Ethyl toluene	ND	<0.74	0.15	1.0	1	U
1,3,5-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,2,4-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,3-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
1,4-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
Benzyl chloride	ND	<1.6	0.30	1.0	1	U
1,2-Dichlorobenzene	ND	<1.8	0.30	1.0	1	U
1,2,4-Trichlorobenzene	ND	<2.2	0.30	1.0	1	U
Hexachlorobutadiene	ND	<3.2	0.30	1.0	1	U
Total Volatile Organics	38	150	NA	NA	1	J

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3401 (HBN: 179535) Analyzed: 10/27/2016 23:25	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	Result (ppb)	Retention Time	Dilution	Qual
Ethanol	3.6	5.18	1	J
Isopropyl Alcohol	2.3	5.83	1	J
Butane, 2-methyl-	6.0	5.38	1	J
Nonanal	7.0	19.54	1	J





# ANALYTICAL REPORT

Workorder: **34-1630154**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

## Analytical Results

Sample ID: <b>129</b>	Sampling Site: Stoney Hollow Landfi	Collected: 10/26/2016
Lab ID: 1630154003	Media: Summa 6 Liter Canister	Received: 10/27/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air	Instrument ID: 5975-L
	Batch: IVOA/3401 (HBN: 179535)	Percent Solid: NA
	Analyzed: 10/28/2016 00:16	Report Basis: Wet

Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
Dichlorodifluoromethane	0.49	2.4	0.15	0.50	1	J
Chloromethane	<b>0.56</b>	<b>1.2</b>	0.15	0.50	1	
Freon 114	ND	<1.0	0.15	0.50	1	U
Vinyl chloride	ND	<0.38	0.15	0.50	1	U
1,3-Butadiene	ND	<0.33	0.15	0.50	1	U
Bromomethane	ND	<0.58	0.15	0.50	1	U
Chloroethane	ND	<0.40	0.15	0.50	1	U
Freon 11	0.22	1.3	0.15	0.50	1	J
Freon 113	ND	<1.1	0.15	0.50	1	U
1,1-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Acetone	<b>1.4</b>	<b>3.4</b>	0.30	1.0	1	
Carbon disulfide	ND	<0.47	0.15	0.50	1	U
Methylene chloride	ND	<0.52	0.15	0.50	1	U
trans-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
Methyl t-butyl ether	ND	<0.54	0.15	0.50	1	U
Vinyl acetate	ND	<0.53	0.15	0.50	1	U
2-Butanone	0.27	0.78	0.15	0.50	1	J
cis-1,2-Dichloroethene	ND	<0.59	0.15	0.50	1	U
1,1-Dichloroethane	ND	<0.61	0.15	0.50	1	U
Ethyl acetate	ND	<0.54	0.15	1.0	1	U
Hexane	ND	<0.53	0.15	0.50	1	U
Chloroform	ND	<0.73	0.15	0.50	1	U
Tetrahydrofuran	ND	<0.44	0.15	0.50	1	U
1,2-Dichloroethane	ND	<0.61	0.15	0.50	1	U
1,1,1-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Carbon tetrachloride	ND	<0.94	0.15	0.50	1	U
Benzene	ND	<0.48	0.15	0.50	1	U
Cyclohexane	ND	<0.52	0.15	0.50	1	U
Trichloroethene	ND	<0.81	0.15	0.50	1	U
1,2-Dichloropropane	ND	<0.73	0.15	0.50	1	U
Bromodichloromethane	ND	<1.0	0.15	0.50	1	U
Heptane	ND	<0.61	0.15	0.50	1	U
cis-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U
4-Methyl-2-pentanone	ND	<0.61	0.15	0.50	1	U
trans-1,3-Dichloropropene	ND	<0.68	0.15	0.50	1	U

Results Continued on Next Page



# ANALYTICAL REPORT

**Workorder:** 34-1630154

**Client:** SCS Tracer Environmental

**Project Manager:** Stella Hanis

## Analytical Results

Sample ID: <b>129</b>	Sampling Site: Stoney Hollow Landfi	Collected: 10/26/2016
Lab ID: 1630154003	Media: Summa 6 Liter Canister	Received: 10/27/2016
Matrix: Air	Sampling Parameter: NA	

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3401 (HBN: 179535) Analyzed: 10/28/2016 00:16	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Analyte	Result (ppb)	Result (ug/m <sup>3</sup> )	MDL (ppb)	RL (ppb)	Dilution	Qual
1,1,2-Trichloroethane	ND	<0.82	0.15	0.50	1	U
Toluene	0.15	0.58	0.15	0.50	1	J
2-Hexanone	ND	<1.2	0.30	1.0	1	U
Tetrachloroethene	ND	<1.0	0.15	0.50	1	U
Dibromochloromethane	ND	<1.3	0.15	0.50	1	U
1,2-Dibromoethane	ND	<1.2	0.15	0.50	1	U
Chlorobenzene	ND	<0.69	0.15	0.50	1	U
Ethyl benzene	ND	<0.65	0.15	0.50	1	U
m,p-Xylene	ND	<0.65	0.15	0.50	1	U
o-Xylene	ND	<0.65	0.15	0.50	1	U
Styrene	ND	<0.64	0.15	0.50	1	U
Bromoform	ND	<1.6	0.15	0.50	1	U
1,1,2,2-Tetrachloroethane	ND	<1.0	0.15	0.50	1	U
4-Ethyl toluene	ND	<0.74	0.15	1.0	1	U
1,3,5-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,2,4-Trimethylbenzene	ND	<0.74	0.15	0.50	1	U
1,3-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
1,4-Dichlorobenzene	ND	<0.90	0.15	0.50	1	U
Benzyl chloride	ND	<1.6	0.30	1.0	1	U
1,2-Dichlorobenzene	ND	<1.8	0.30	1.0	1	U
1,2,4-Trichlorobenzene	ND	<2.2	0.30	1.0	1	U
Hexachlorobutadiene	ND	<3.2	0.30	1.0	1	U
Total Volatile Organics	15	61	NA	NA	1	J

### Analysis Method - EPA TO-15

Preparation: Not Applicable	Analysis: EPA TO-15, Air Batch: IVOA/3401 (HBN: 179535) Analyzed: 10/28/2016 00:16	Instrument ID: 5975-L Percent Solid: NA Report Basis: Wet
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Tentatively Identified Compound	Result (ppb)	Retention Time	Dilution	Qual
Acetaldehyde	2.1	4.26	1	J
Ethanol	2.4	5.22	1	J

## Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
EPA TO-15	/S/ Lisa M. Reid 10/31/2016 11:30	/S/ Thomas J. Masoian 10/31/2016 12:54



# ANALYTICAL REPORT

Workorder: **34-1630154**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

## Laboratory Contact Information

ALS Environmental  
960 W Levoy Drive  
Salt Lake City, Utah 84123

Phone: (801) 266-7700  
Email: als@t.lab@ALSGlobal.com  
Web: www.alssl.com

## General Lab Comments

The results provided in this report relate only to the items tested.  
Samples were received in acceptable condition unless otherwise noted.  
Samples have not been blank corrected unless otherwise noted.  
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	<a href="http://www.anab.org/accredited-organizations/">http://www.anab.org/accredited-organizations/</a>
	Utah (NELAC)	DATA1	<a href="http://health.utah.gov/lab/labimp/">http://health.utah.gov/lab/labimp/</a>
	Nevada	UT00009	<a href="http://ndep.nv.gov/bsdwlabservice.htm">http://ndep.nv.gov/bsdwlabservice.htm</a>
	Oklahoma	UT00009	<a href="http://www.deq.state.ok.us/CSDnew/">http://www.deq.state.ok.us/CSDnew/</a>
	Iowa	IA# 376	<a href="http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx">http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx</a>
	Texas (TNI)	T104704456-11-1	<a href="http://www.tceq.texas.gov/field/qa/lab_accred_certif.html">http://www.tceq.texas.gov/field/qa/lab_accred_certif.html</a>
	Washington	C596-16	<a href="http://www.ecy.wa.gov/programs/eap/labs/index.html">http://www.ecy.wa.gov/programs/eap/labs/index.html</a>
Industrial Hygiene	Kansas	E-10416	<a href="http://www.kdheks.gov/lipo/index.html">http://www.kdheks.gov/lipo/index.html</a>
	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Washington		C596-16	<a href="http://www.ecy.wa.gov/programs/eap/labs/index.html">http://www.ecy.wa.gov/programs/eap/labs/index.html</a>
	Lead Testing:		
CPSC	ANAB (ISO 17025, CPSC)	ADE-1420	<a href="http://www.anab.org/accredited-organizations/">http://www.anab.org/accredited-organizations/</a>
Soil, Dust, Paint ,Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	<a href="http://www.aiclasscorp.com">http://www.aiclasscorp.com</a>



## ANALYTICAL REPORT

Workorder: **34-1630154**

Client: SCS Tracer Environmental

Project Manager: Stella Hanis

### Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.  
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.  
CRDL = Contract Required Detection Limit  
Reg. Limit = Regulatory Limit.  
ND = Not Detected, testing result not detected above the MDL or RL.  
< This testing result is less than the numerical value.  
\*\* No result could be reported, see sample comments for details.

### Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.  
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.  
B = Qualifier indicates that the analyte was detected in the blank.  
E = Qualifier indicates that the analyte result exceeds calibration range.  
P = Qualifier indicates that the RPD between the two columns is greater than 40%.