



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

October 3, 2017

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

**Re: DFFO Order No. 9 Ambient Air Monitoring – September 22-23, 2017**  
**Stony Hollow Landfill**  
**Facility ID No. 08-57-04-3008**

Dear Ms. Marsee:

Stony Hollow Landfill, Inc. (Stony Hollow) contracted with LJB, Inc. (LJB) to perform the ambient air monitoring as required by the Director's Final Findings and Orders, dated May 3, 2017. DFFO Order No. 9 requires air monitoring on the 1 in 6-day schedule beginning seven (7) days following the installation of LFG wells within the five (5) acre area (a.k.a. next phase of the proposed temporary cap area). LFG well installation in this area was completed on June 27, 2017 and 1 in 6-day monitoring began on July 6, 2017. The 24-hour ambient air sampling was performed between September 22-23, 2017 and ALS Environmental performed the USEPA Method TO-15, ASTM D 5504-12 and OSHA 1007.

Please find attached to this submittal letter the LJB ambient air monitoring report, which includes the available analytical results. Per a review of the analytical results, the measured concentrations within the air samples were below the laboratory reporting limits or the NIOSH RELs and ATSDR Chronic MRLs.

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



October 2, 2017

Mr. Peter Lucas  
 Waste Management – Stony Hollow Landfill  
 2460 South Gettysburg Avenue  
 Dayton, Ohio 45417

Via email: [plucas2@wm.com](mailto:plucas2@wm.com)

Re: September 22, 2017 ambient air sampling at Stony Hollow Landfill

Dear Mr. Lucas:

On September 22<sup>nd</sup> through September 23<sup>rd</sup> LJB Inc. collected two 24-hour ambient air samples at the Waste Management Stony Hollow Landfill. The samples included SHAA-N-31, collected from inside the northeast fence line of the landfill, and SHAA-S-31, collected from inside the southeast fence line of the landfill. One Summa canister and one UMEx 100 Passive Sampler were collected at each location. Attached is a map of the sample locations designated by Waste Management in accordance with the May 3, 2017 Ohio EPA Director’s Final Findings and Orders for Stony Hollow Landfill and the Air Monitor Siting Study prepared by SCS Engineers for Stony Hollow Landfill. Table 1 contains sample equipment and interval details.

TABLE 1

SAMPLE NO.	START DATE/TIME	END DATE/TIME	START PRESSURE	END PRESSURE	CANISTER NO.	CONTROLLER NO.	UMEX 100 SAMPLER NO.
SHAA-N-31	9/22/2017 09:11am	9/23/2017 09:18am	-30” Hg	-11” Hg	AS00676	SFC00050	A249347
SHAA-S-31	9/22/2017 09:37am	9/23/2017 09:37am	-29” Hg	-13”Hg	AS01182	SFC00073	A246028

Weather conditions reported for the sample period by the weather station located at Stony Hollow Landfill are shown in the attached graphs.

The completed UMEx 100 samplers were transported by courier from the LJB office to ALS Environmental’s Cincinnati, Ohio laboratory on September 26, 2017 and were analyzed by OSHA Method 1007 on September 27, 2017 per the three-day turnaround time previously arranged. The Summa canisters were transported by Federal Express second-day delivery, arriving at ALS Environmental’s Simi Valley, California laboratory on September 25, 2017, and were analyzed by EPA Method TO-15 and ASTM Standard Test Method D5504-12 on September 26, 2017. Table 2 provides the summarized sample results.

The EPA Method TO-15 found that 1,2,4- trimethylbenzene, 1,3,5-trimethylbenzene, 1,4-dichlorobenzene, 2-butanone, 2-propanol, acetone, benzene, benzyl chloride, carbon disulfide, carbon tetrachloride, cis-1,3-dichloropropene, dichlorodifluoromethane, ethyl acetate, ethylbenzene, Freon 113,

heptane, hexane, m,p-xylene, methylene chloride, o-xylene, tetrahydrofuran, toluene, and trichlorofluoromethane were detected above laboratory reporting limits; concentrations of all were well below the NIOSH RELs and ATSDR chronic MRLs for these compounds. Propene was also detected above laboratory reporting limits; however, no NIOSH REL or ATSDR chronic MRL has been established for the inhalation route (gaseous air) of this compound.

The ASTM Standard Test Method D5504-12 and the OSHA Method 1007 did not detect any compounds above the laboratory reporting limits.

The OSHA Method 1007 detected formaldehyde above laboratory reporting limits; concentrations of this compound were well below the NIOSH REL and ATSDR chronic MRL.

TABLE 2

ANALYTE	SHAA-N-31 <sup>1</sup> , ppbv	SHAA-S-31 <sup>1</sup> , ppbv	NIOSH REL <sup>2</sup> , ppbv	ATSDR Chronic MRL <sup>3</sup> , ppbv
EPA TO-15 (Summa canister)				
1,1,1-Trichloroethane	<0.20	<0.20	350,000	700
1,1,2,2-Tetrachloroethane	<0.16	<0.16	1,000	NA
1,1,2-Trichloroethane	<0.20	<0.21	10,000	NA
1,1-Dichloroethane	<0.27	<0.27	100,000	NA
1,1-Dichloroethene	<0.27	<0.28	200,000	20
1,2,4-Trichlorobenzene	<0.14	<0.15	5,000	NA
1,2,4-Trimethylbenzene	<b>0.13(J)</b>	<b>0.24</b>	25,000	NA
1,2-Dibromoethane	<0.14	<0.14	45	NA
1,2-Dichlorobenzene	<0.18	<0.18	50,000	NA
1,2-Dichloroethane	<0.27	<0.27	1,000	600
1,2-Dichloropropane	<0.23	<0.24	75,000	7
1,3,5-Trimethylbenzene	<0.22	<b>0.077(J)</b>	25,000	NA
1,3-Butadiene	<0.49	<0.50	1,000	NA
1,3-Dichlorobenzene	<0.18	<0.18	50,000	NA
1,4-Dichlorobenzene	<0.18	<b>0.059(J)</b>	50,000	10
1,4-Dioxane	<0.30	<0.31	NA	30
2-Butanone	<b>0.58(J)</b>	<b>1.2(J)</b>	200	NA
2-Hexanone	<0.26	<0.27	1,000	NA
2-Propanol	<b>0.60(J)</b>	<b>0.77(J)</b>	400,000	NA
4-Ethyltoluene	<0.22	<0.23	NA	NA
4-Methyl-2-pentanone	<0.26	<0.27	50,000	NA
Acetone	<b>4.9</b>	<b>6.2</b>	250,000	13,000
Benzene	<b>0.39</b>	<b>1.4</b>	100	3
Benzyl chloride	<0.42(L)	<0.43(L)	1,000	NA
Bromodichloromethane	<0.16	<0.17	NA	NA

ANALYTE	SHAA-N-31 <sup>1</sup> , ppbv	SHAA-S-31 <sup>1</sup> , ppbv	NIOSH REL <sup>2</sup> , ppbv	ATSDR Chronic MRL <sup>3</sup> , ppbv
Bromoform	<0.10	<0.11	500	NA
Bromomethane	<0.29	<0.13	20,000	5
Carbon disulfide	<b>0.12(J)</b>	<b>0.21(J)</b>	1,000	300
Carbon tetrachloride	<b>0.062(J)</b>	<b>0.070(J)</b>	2,000	30
Chlorobenzene	<0.23	<0.24	75,000	NA
Chloroethane	<0.41	<0.42	1,000,000	15,000
Chloroform	<0.22	<0.23	2,000	20
Chloromethane	<0.52	<b>0.17(J)</b>	100,000	50
cis-1,2-Dichloroethene	<0.27	<0.28	200,000	NA
cis-1,3-Dichloropropene	<0.24	<0.24	1,000	7
Cumene	<0.22	<0.23	50,000	NA
Cyclohexane	<0.62	<0.65	300,000	NA
Dibromochloromethane	<0.13	<0.13	NA	NA
Dichlorodifluoromethane	<b>0.49</b>	<b>0.53</b>	1,000,000	NA
Ethyl acetate	<b>0.51(J)</b>	<b>0.46(J)</b>	400,000	NA
Ethylbenzene	<b>0.17(J)</b>	<b>0.35</b>	100,000	60
Freon 113 (Trichlorotrifluoroethane)	<b>0.059(J)</b>	<b>0.063(J)</b>	1,000,000	NA
Freon 114 (1,2-Dichloro-1,1,2,2-tetrafluoroethane)	<0.15	<0.16	1,000,000	NA
Heptane (n-Heptane)	<b>0.19(J)</b>	<b>0.26(J)</b>	85,000	NA
Hexachlorobutadiene	<0.10	<0.10	20	NA
Hexane (n-Hexane)	<b>0.34</b>	<b>0.39</b>	50,000	600
m,p-Xylene	<b>0.48(J)</b>	<b>0.87</b>	100,000	50
Methylene chloride	<b>0.28(J)</b>	<b>0.063(J)</b>	25,000	300
MTBE (Methyl tert-butyl ether)	<0.30	<0.31	2,000	NA
Naphthalene	<0.21	<b>0.087(J)</b>	10,000	1
o-Xylene	<b>0.18(J)</b>	<b>0.32</b>	100,000	NA
Propene	<b>0.82</b>	<b>1.5</b>	NA	NA
Styrene	<0.25	<0.26	50,000	200
Tetrachloroethene	<0.16	<b>0.052(J)</b>	100,000	NA
Tetrahydrofuran	<b>0.25(J)</b>	<b>2.1</b>	200,000	NA
Toluene	<b>1.0</b>	<b>1.6</b>	100,000	1,000
trans-1,2-Dichloroethene	<0.27	<0.28	200,000	200
trans-1,3-Dichloropropene	<0.24(L)	<0.24(L)	1,000	7
Trichloroethene	<0.20	<0.21	100,000	NA
Trichlorofluoromethane	<b>0.37</b>	<b>0.51</b>	1,000,000	NA
Vinyl acetate	<3.1	<3.2	4,000	10

ANALYTE	SHAA-N-31 <sup>1</sup> , ppbv	SHAA-S-31 <sup>1</sup> , ppbv	NIOSH REL <sup>2</sup> , ppbv	ATSDR Chronic MRL <sup>3</sup> , ppbv
Vinyl chloride	<0.42	<0.43	1,000	30
ASTM D5504-12 (Summa canister)				
2,5-Dimethylthiophene	<11	<11	NA	NA
2-Ethylthiophene	<11	<11	NA	NA
3-Methylthiophene	<11	<11	NA	NA
Carbon disulfide	<5.4	<5.6	1,000	300
Carbonyl sulfide	<11	<11	NA	NA
Diethyl disulfide	<5.4	<5.6	NA	NA
Diethyl sulfide	<11	<11	NA	NA
Dimethyl disulfide	<5.4	<5.6	NA	NA
Dimethyl sulfide	<11	<11	NA	NA
Ethyl mercaptan	<11	<11	NA	NA
Ethyl methyl sulfide	<11	<11	NA	NA
Hydrogen sulfide	<11	<11	NA	2
Isobutyl mercaptan	<11	<11	NA	NA
Isopropyl mercaptan	<11	<11	NA	NA
Methyl mercaptan	<11	<11	NA	NA
n-Butyl mercaptan	<11	<11	NA	NA
n-Propyl mercaptan	<11	<11	NA	NA
tert-Butyl mercaptan	<11	<11	NA	NA
Tetrahydrothiophene	<11	<11	NA	NA
Thiophene	<11	<11	NA	NA
OSHA 1007 (UMEx 100 sampler)				
Acetaldehyde	<4.1	<3.3	NA	NA
Benzaldehyde	<2.3	<2.3	NA	NA
Butyraldehyde	<2.9	<2.9	NA	NA
Crotonaldehyde	<5.0	<5.0	2,000	NA
Formaldehyde <sup>(4)</sup>	<b>4.3</b>	<4.0	16	8
Hexanaldehyde	<3.5	<3.5	NA	NA
Propionaldehyde	<4.2	<4.2	NA	NA

(1) Air sample duration is over a 24 hour period

(2) NIOSH REL is based on the time-weighted average concentration for an 8-10 hour workday during a 40 hour work week

(3) ATSDR MRLs are derived for three time periods: acute (1-14 days), intermediate (14-364 days) and chronic (>365 days); the chronic ATSDR MRLs are provided within this Table

(4) ATSDR MRL for formaldehyde is 40 ppb for acute, 30 ppb for intermediate and 8 ppb for chronic

J = The result is an estimated concentration that is less than the method reporting limit but greater than the method detection limit

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

NA = Limit not established for inhalation route (gaseous air samples)

Mr. Peter Lucas: September 22, 2017 ambient air sampling  
October 2, 2017  
Page 5

All ALS Environmental laboratory reports and chain of custody forms are attached. Please let me know if you have any questions.

Sincerely,

LJB Inc.

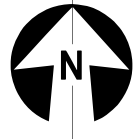
A handwritten signature in blue ink that reads "Anna Kamnyev". The signature is written in a cursive style with a large initial 'A'.

Anna Kamnyev  
Environmental Scientist



🟡 Air sample locations (revised by OEPA DFFO)

🔴 Stony Hollow Landfill



0 200 400 800 Feet

# > Waste Management Stony Hollow Landfill

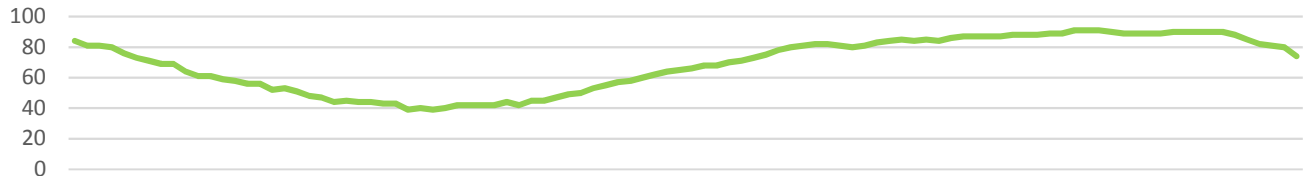
## Ambient Air Sample Locations



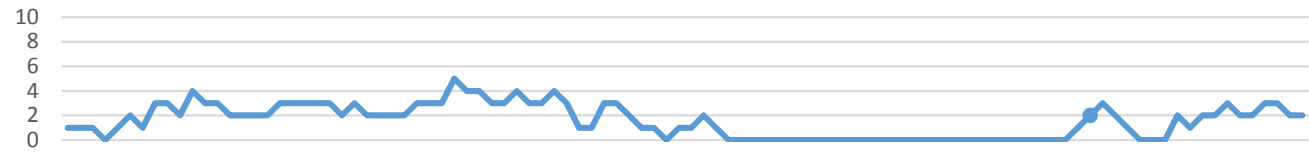
Temperature, °F



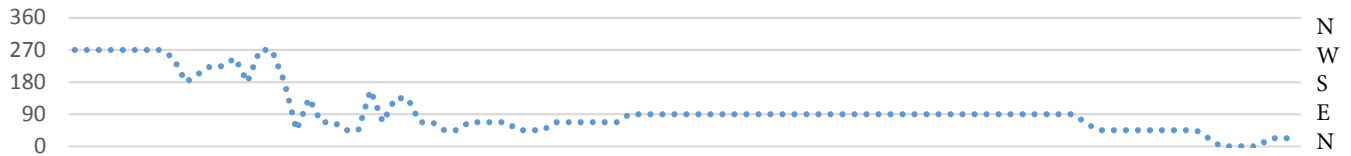
Relative Humidity, %



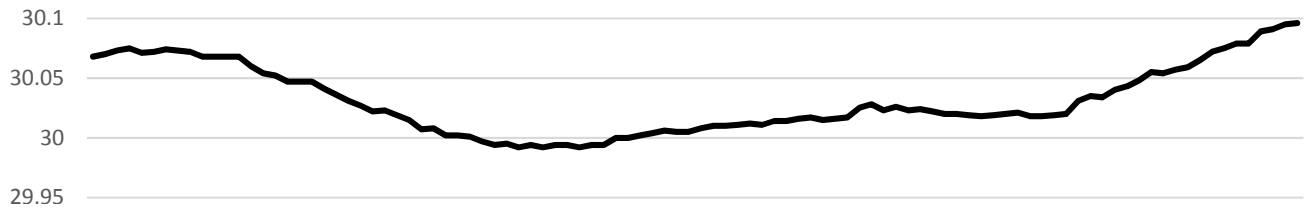
Wind Speed, mph



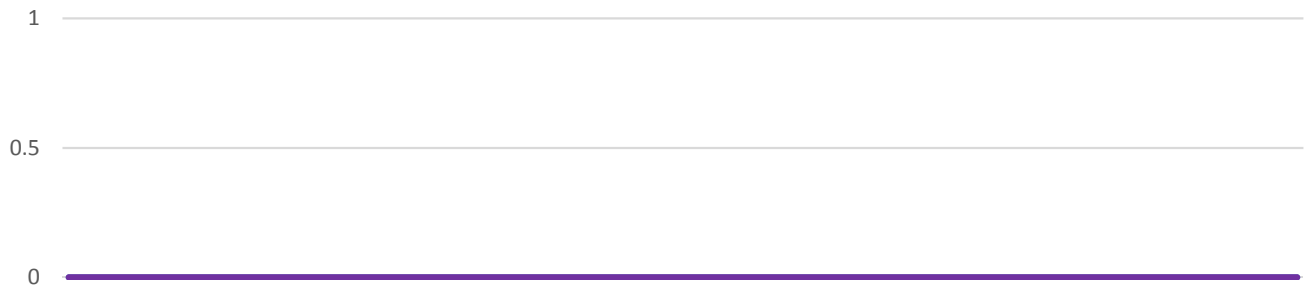
Wind Direction



Barometric Pressure, Inches Hg



Rain and Cumulative Rain, Inches



9/22/17 9:00 AM 9:45 AM 10:30 AM 11:15 AM 12:00 PM 12:45 PM 1:30 PM 2:15 PM 3:00 PM 3:45 PM 4:30 PM 5:15 PM 6:00 PM 6:45 PM 7:30 PM 8:15 PM 9:00 PM 9:45 PM 10:30 PM 11:15 PM 12:00 AM 12:45 AM 1:30 AM 2:15 AM 3:00 AM 3:45 AM 4:30 AM 5:15 AM 6:00 AM 6:45 AM 7:30 AM 8:15 AM 9:00 AM 9:45 AM





28-Sep-2017

Alex Zelles  
Waste Management  
2460 S. Gettysburg Rd  
Dayton, OH 45417

Tel: (937) 356-6204  
Fax:

Re: Stony Hollow Landfill

Work Order: **1709854**

Dear Alex,

ALS Environmental received 2 samples on 26-Sep-2017 01:18 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 7.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

**Rob Nieman**

Electronically approved by: Rob Nieman

Rob Nieman  
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, Ohio 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Environmental

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**Client:** Waste Management  
**Project:** Stony Hollow Landfill  
**Work Order:** 1709854

**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1709854-01	SHAA-N-31	Air		9/23/2017	9/26/2017 13:18	<input type="checkbox"/>
1709854-02	SHAA-S-31	Air		9/23/2017	9/26/2017 13:18	<input type="checkbox"/>

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**Client:** Waste Management  
**Project:** Stony Hollow Landfill  
**Work Order:** 1709854

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**Case Narrative**

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

**Client:** Waste Management  
**Project:** Stony Hollow Landfill

**Work Order:** 1709854

**Analytical Results**

**Lab ID:** 1709854-01A  
**Client Sample ID:** SHAA-N-31

**Collection Date:** 9/23/2017  
**Matrix:** AIR

**Analyses**

<b>ALDEHYDE(S) BY OSHA 1007 MOD.</b>		Method: <b>O1007</b>	Time (Min): <b>1440</b>	Analyst: <b>JMB</b>
Date Analyzed: 9/27/2017 12:00		Reporting Limit		
	µg/sample	µg/sample	ppm	
<b>Acetaldehyde</b>	<b>0.25</b>	<b>0.20</b>	<b>0.0041</b>	
Benzaldehyde	ND	0.20	<0.0023	
Butyraldehyde	ND	0.20	<0.0029	
Crotonaldehyde	ND	0.20	<0.0050	
<b>Formaldehyde</b>	<b>0.22</b>	<b>0.20</b>	<b>0.0043</b>	
Hexanaldehyde	ND	0.20	<0.0035	
Propionaldehyde	ND	0.20	<0.0042	

**Lab ID:** 1709854-02A  
**Client Sample ID:** SHAA-S-31

**Collection Date:** 9/23/2017  
**Matrix:** AIR

**Analyses**

<b>ALDEHYDE(S) BY OSHA 1007 MOD.</b>		Method: <b>O1007</b>	Time (Min): <b>1440</b>	Analyst: <b>JMB</b>
Date Analyzed: 9/27/2017 12:00		Reporting Limit		
	µg/sample	µg/sample	ppm	
Acetaldehyde	ND	0.20	<0.0033	
Benzaldehyde	ND	0.20	<0.0023	
Butyraldehyde	ND	0.20	<0.0029	
Crotonaldehyde	ND	0.20	<0.0050	
Formaldehyde	ND	0.20	<0.0040	
Hexanaldehyde	ND	0.20	<0.0035	
Propionaldehyde	ND	0.20	<0.0042	

**Note:**

**Client:** Waste Management  
**Work Order:** 1709854  
**Project:** Stony Hollow Landfill

**QC BATCH REPORT**

Batch ID: **45800** Instrument ID: **HPLC2** Method: **O1007**

<b>MBLK</b>	Sample ID: <b>MBLK-45800-45800</b>			Units: <b>µg/sample</b>			Analysis Date: <b>9/27/2017 12:00 PM</b>			
Client ID:	Run ID: <b>HPLC2_170927A</b>			SeqNo: <b>1602715</b>			Prep Date: <b>9/26/2017</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Acetaldehyde	ND	0.20								
Benzaldehyde	ND	0.20								
Butyraldehyde	ND	0.20								
Crotonaldehyde	ND	0.20								
Formaldehyde	ND	0.20								
Hexanaldehyde	ND	0.20								
Propionaldehyde	ND	0.20								

<b>LCS</b>	Sample ID: <b>LCS-45800-45800</b>			Units: <b>µg/sample</b>			Analysis Date: <b>9/27/2017 12:00 PM</b>			
Client ID:	Run ID: <b>HPLC2_170927A</b>			SeqNo: <b>1602716</b>			Prep Date: <b>9/26/2017</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Acetaldehyde	0.7514	0.20	0.75	0	100	70-130	0			
Benzaldehyde	0.7561	0.20	0.75	0	101	70-130	0			
Butyraldehyde	0.7524	0.20	0.75	0	100	70-130	0			
Crotonaldehyde	0.7548	0.20	0.75	0	101	70-130	0			
Formaldehyde	0.7578	0.20	0.75	0	101	70-130	0			
Hexanaldehyde	0.7487	0.20	0.75	0	99.8	70-130	0			
Propionaldehyde	0.7549	0.20	0.75	0	101	70-130	0			

<b>LCSD</b>	Sample ID: <b>LCSD-45800-45800</b>			Units: <b>µg/sample</b>			Analysis Date: <b>9/27/2017 12:00 PM</b>			
Client ID:	Run ID: <b>HPLC2_170927A</b>			SeqNo: <b>1602721</b>			Prep Date: <b>9/26/2017</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Acetaldehyde	0.7707	0.20	0.75	0	103	70-130	0.7514	2.54	20	
Benzaldehyde	0.7704	0.20	0.75	0	103	70-130	0.7561	1.87	20	
Butyraldehyde	0.7715	0.20	0.75	0	103	70-130	0.7524	2.51	20	
Crotonaldehyde	0.7753	0.20	0.75	0	103	70-130	0.7548	2.68	20	
Formaldehyde	0.7751	0.20	0.75	0	103	70-130	0.7578	2.26	20	
Hexanaldehyde	0.7695	0.20	0.75	0	103	70-130	0.7487	2.74	20	
Propionaldehyde	0.7737	0.20	0.75	0	103	70-130	0.7549	2.46	20	

The following samples were analyzed in this batch: 1709854-01A 1709854-02A

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** Waste Management  
**Project:** Stony Hollow Landfill  
**WorkOrder:** 1709854

**QUALIFIERS,  
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: STONYHOLLOWLANDFILL-DAY

Date/Time Received: 26-Sep-17 13:18

Work Order: 1709854

Received by: JNW

Checklist completed by: Stephanie Harrington 26-Sep-17  
eSignature Date

Reviewed by: Rob Nieman 27-Sep-17  
eSignature Date

Matrices:

Carrier name: Courier

Shipping container/cooler in good condition? Yes  No  Not Present

Custody seals intact on shipping container/cooler? Yes  No  Not Present

Custody seals intact on sample bottles? Yes  No  Not Present

Chain of custody present? Yes  No

Chain of custody signed when relinquished and received? Yes  No

Chain of custody agrees with sample labels? Yes  No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

All samples received within holding time? Yes  No

Container/Temp Blank temperature in compliance? Yes  No

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted

Water - pH acceptable upon receipt? Yes  No  N/A

pH adjusted? Yes  No  N/A

pH adjusted by:

Login Notes:

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Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



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2655 Park Center Dr., Suite A  
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[www.alsglobal.com](http://www.alsglobal.com)

## LABORATORY REPORT

September 28, 2017

Peter Lucas  
Waste Management-Stony Hollow Landfill  
2460 S Gettysburg Ave.  
Dayton, OH 45417

**RE: Stony Hollow Landfill**

Dear Peter:

Enclosed are the results of the samples submitted to our laboratory on September 25, 2017. For your reference, these analyses have been assigned our service request number P1704686.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at [www.alsglobal.com](http://www.alsglobal.com). Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**ALS | Environmental**

By Kate Kaneko at 4:43 pm, 09/28/17

Kate Kaneko  
Project Manager



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[www.alsglobal.com](http://www.alsglobal.com)

Client: Waste Management-Stony Hollow Landfill  
Project: Stony Hollow Landfill

Service Request No: P1704686

---

## CASE NARRATIVE

The samples were received intact under chain of custody on September 25, 2017 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

### Sulfur Analysis

The samples were analyzed for twenty sulfur compounds per ASTM D 5504-12 using a gas chromatograph equipped with a sulfur chemiluminescence detector (SCD). All compounds with the exception of hydrogen sulfide and carbonyl sulfide are quantitated against the initial calibration curve for methyl mercaptan. This method is included on the laboratory's NELAP scope of accreditation, however it is not part of the DoD-ELAP accreditation.

### Volatile Organic Compound Analysis

The samples were also analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The upper control criterion was exceeded for benzyl chloride in the Continuing Calibration Verification (CCV) analyzed on September 27, 2017. Since the apparent problem equates to a potential high bias and the field samples analyzed in this sequence did not contain the analyte in question, the data quality has not been affected. No corrective action was required.

The spike recoveries of trichlorofluoromethane and carbon disulfide for the Laboratory Control Sample (LCS) analyzed on September 27, 2017 were outside the laboratory generated control criteria. The recovery errors equate to a potential high bias. However, the spike recoveries of the analytes in question were within the method criteria; therefore, the data quality has not been significantly affected. No corrective action was taken.

The upper control criteria were exceeded for trans-1,3-dichloropropene and benzyl chloride in the Laboratory Control Sample (LCS) analyzed on September 27, 2017. The analytes in question were not detected in the associated field samples. Since the error associated with the elevated recovery equates to a high bias, the sample data has not been significantly affected. The data has been flagged accordingly. No corrective action was required.



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Client: Waste Management-Stony Hollow Landfill  
Project: Stony Hollow Landfill

Service Request No: P1704686

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### CASE NARRATIVE

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.*

*Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*





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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	<a href="http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home">http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home</a>	AZ0694
Florida DOH (NELAP)	<a href="http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm">http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm</a>	E871020
Louisiana DEQ (NELAP)	<a href="http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx">http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx</a>	05071
Maine DHHS	<a href="http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm">http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm</a>	2016036
Minnesota DOH (NELAP)	<a href="http://www.health.state.mn.us/accreditation">http://www.health.state.mn.us/accreditation</a>	1177034
New Jersey DEP (NELAP)	<a href="http://www.nj.gov/dep/oqa/">http://www.nj.gov/dep/oqa/</a>	CA009
New York DOH (NELAP)	<a href="http://www.wadsworth.org/labcert/elap/elap.html">http://www.wadsworth.org/labcert/elap/elap.html</a>	11221
Oregon PHD (NELAP)	<a href="http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx">http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx</a>	4068-004
Pennsylvania DEP	<a href="http://www.depweb.state.pa.us/labs">http://www.depweb.state.pa.us/labs</a>	68-03307 (Registration)
PJLA (DoD ELAP)	<a href="http://www.pjlabs.com/search-accredited-labs">http://www.pjlabs.com/search-accredited-labs</a>	65818 (Testing)
Texas CEQ (NELAP)	<a href="http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html">http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html</a>	T104704413-17-8
Utah DOH (NELAP)	<a href="http://health.utah.gov/lab/environmental-lab-certification/">http://health.utah.gov/lab/environmental-lab-certification/</a>	CA01627201 7-8
Washington DOE	<a href="http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html">http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html</a>	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at [www.alsglobal.com](http://www.alsglobal.com), or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

# ALS ENVIRONMENTAL

## DETAIL SUMMARY REPORT

Client: Waste Management-Stony Hollow Landfill  
 Project ID: Stony Hollow Landfill

Service Request: P1704686

Date Received: 9/25/2017  
 Time Received: 09:30

ASTM D 5504-12 - Sulfur Can
TO-15 - VOC Cans

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	ASTM D 5504-12 - Sulfur Can	TO-15 - VOC Cans
SHAA-N-31	P1704686-001	Air	9/23/2017	09:18	AS00676	-6.13	3.76	X	X
SHAA-S-31	P1704686-002	Air	9/23/2017	09:37	AS01182	-6.42	3.65	X	X





# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Waste Management-Stony Hollow Landfill  
**Client Sample ID:** SHAA-N-31  
**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686  
 ALS Sample ID: P1704686-001

Test Code: ASTM D 5504-12  
 Instrument ID: Agilent 7890A/GC22/SCD  
 Analyst: Mike Conejo  
 Sample Type: 6.0 L Silonite Canister  
 Test Notes:  
 Container ID: AS00676

Date Collected: 9/23/17  
 Time Collected: 09:18  
 Date Received: 9/25/17  
 Date Analyzed: 9/26/17  
 Time Analyzed: 15:04  
 Volume(s) Analyzed: 1.0 ml(s)

Initial Pressure (psig): -6.13      Final Pressure (psig): 3.76

Container Dilution Factor: 2.15

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	15	ND	11	
463-58-1	Carbonyl Sulfide	ND	26	ND	11	
74-93-1	Methyl Mercaptan	ND	21	ND	11	
75-08-1	Ethyl Mercaptan	ND	27	ND	11	
75-18-3	Dimethyl Sulfide	ND	27	ND	11	
75-15-0	Carbon Disulfide	ND	17	ND	5.4	
75-33-2	Isopropyl Mercaptan	ND	33	ND	11	
75-66-1	tert-Butyl Mercaptan	ND	40	ND	11	
107-03-9	n-Propyl Mercaptan	ND	33	ND	11	
624-89-5	Ethyl Methyl Sulfide	ND	33	ND	11	
110-02-1	Thiophene	ND	37	ND	11	
513-44-0	Isobutyl Mercaptan	ND	40	ND	11	
352-93-2	Diethyl Sulfide	ND	40	ND	11	
109-79-5	n-Butyl Mercaptan	ND	40	ND	11	
624-92-0	Dimethyl Disulfide	ND	21	ND	5.4	
616-44-4	3-Methylthiophene	ND	43	ND	11	
110-01-0	Tetrahydrothiophene	ND	39	ND	11	
638-02-8	2,5-Dimethylthiophene	ND	49	ND	11	
872-55-9	2-Ethylthiophene	ND	49	ND	11	
110-81-6	Diethyl Disulfide	ND	27	ND	5.4	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.



# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Waste Management-Stony Hollow Landfill  
**Client Sample ID:** SHAA-S-31  
**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686  
 ALS Sample ID: P1704686-002

Test Code: ASTM D 5504-12  
 Instrument ID: Agilent 7890A/GC22/SCD  
 Analyst: Mike Conejo  
 Sample Type: 6.0 L Silonite Canister  
 Test Notes:  
 Container ID: AS01182

Date Collected: 9/23/17  
 Time Collected: 09:37  
 Date Received: 9/25/17  
 Date Analyzed: 9/26/17  
 Time Analyzed: 15:17  
 Volume(s) Analyzed: 1.0 ml(s)

Initial Pressure (psig): -6.42      Final Pressure (psig): 3.65

Container Dilution Factor: 2.22

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	15	ND	11	
463-58-1	Carbonyl Sulfide	ND	27	ND	11	
74-93-1	Methyl Mercaptan	ND	22	ND	11	
75-08-1	Ethyl Mercaptan	ND	28	ND	11	
75-18-3	Dimethyl Sulfide	ND	28	ND	11	
75-15-0	Carbon Disulfide	ND	17	ND	5.6	
75-33-2	Isopropyl Mercaptan	ND	35	ND	11	
75-66-1	tert-Butyl Mercaptan	ND	41	ND	11	
107-03-9	n-Propyl Mercaptan	ND	35	ND	11	
624-89-5	Ethyl Methyl Sulfide	ND	35	ND	11	
110-02-1	Thiophene	ND	38	ND	11	
513-44-0	Isobutyl Mercaptan	ND	41	ND	11	
352-93-2	Diethyl Sulfide	ND	41	ND	11	
109-79-5	n-Butyl Mercaptan	ND	41	ND	11	
624-92-0	Dimethyl Disulfide	ND	21	ND	5.6	
616-44-4	3-Methylthiophene	ND	45	ND	11	
110-01-0	Tetrahydrothiophene	ND	40	ND	11	
638-02-8	2,5-Dimethylthiophene	ND	51	ND	11	
872-55-9	2-Ethylthiophene	ND	51	ND	11	
110-81-6	Diethyl Disulfide	ND	28	ND	5.6	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Waste Management-Stony Hollow Landfill  
**Client Sample ID:** Method Blank  
**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686  
 ALS Sample ID: P170926-MB

Test Code: ASTM D 5504-12  
 Instrument ID: Agilent 7890A/GC22/SCD  
 Analyst: Mike Conejo  
 Sample Type: 6.0 L Silonite Canister  
 Test Notes:

Date Collected: NA  
 Time Collected: NA  
 Date Received: NA  
 Date Analyzed: 9/26/17  
 Time Analyzed: 07:32  
 Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

**ALS ENVIRONMENTAL**

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

**Client:** Waste Management-Stony Hollow Landfill  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686  
 ALS Sample ID: P170926-LCS

Test Code: ASTM D 5504-12  
 Instrument ID: Agilent 7890A/GC22/SCD  
 Analyst: Mike Conejo  
 Sample Type: 6.0 L Silonite Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 9/26/17  
 Volume(s) Analyzed: NA ml(s)

CAS #	Compound	Spike Amount ppbV	Result ppbV	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
7783-06-4	Hydrogen Sulfide	1,000	<b>1,030</b>	<b>103</b>	81-141	
463-58-1	Carbonyl Sulfide	1,000	<b>1,130</b>	<b>113</b>	81-147	
74-93-1	Methyl Mercaptan	1,000	<b>1,110</b>	<b>111</b>	80-144	

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 3

**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** SHAA-N-31

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P1704686-001

Test Code: EPA TO-15

Date Collected: 9/23/17

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Date Received: 9/25/17

Analyst: Lusine Hakobyan

Date Analyzed: 9/27/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS00676

Initial Pressure (psig): -6.13      Final Pressure (psig): 3.76

Container Dilution Factor: 2.15

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
115-07-1	Propene	1.4	1.1	0.30	0.82	0.62	0.17	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	1.1	0.37	0.49	0.22	0.074	
74-87-3	Chloromethane	ND	1.1	0.32	ND	0.52	0.16	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.1	0.41	ND	0.15	0.058	
75-01-4	Vinyl Chloride	ND	1.1	0.37	ND	0.42	0.14	
106-99-0	1,3-Butadiene	ND	1.1	0.47	ND	0.49	0.21	
74-83-9	Bromomethane	ND	1.1	0.41	ND	0.28	0.11	
75-00-3	Chloroethane	ND	1.1	0.37	ND	0.41	0.14	
67-64-1	Acetone	12	11	1.7	4.9	4.5	0.70	
75-69-4	Trichlorofluoromethane (CFC 11)	2.1	1.1	0.37	0.37	0.19	0.065	
67-63-0	2-Propanol (Isopropyl Alcohol)	1.5	11	0.90	0.60	4.4	0.37	J
75-35-4	1,1-Dichloroethene	ND	1.1	0.37	ND	0.27	0.092	
75-09-2	Methylene Chloride	0.96	1.1	0.37	0.28	0.31	0.11	J
76-13-1	Trichlorotrifluoroethane (CFC 113)	0.45	1.1	0.37	0.059	0.14	0.048	J
75-15-0	Carbon Disulfide	0.38	11	0.32	0.12	3.5	0.10	J
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.41	ND	0.27	0.10	
75-34-3	1,1-Dichloroethane	ND	1.1	0.34	ND	0.27	0.085	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.37	ND	0.30	0.10	
108-05-4	Vinyl Acetate	ND	11	1.4	ND	3.1	0.40	
78-93-3	2-Butanone (MEK)	1.7	11	0.45	0.58	3.6	0.15	J
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.34	ND	0.27	0.087	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 2 of 3

**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** SHAA-N-31

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P1704686-001

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Analyst: Lusine Hakobyan

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS00676

Date Collected: 9/23/17

Date Received: 9/25/17

Date Analyzed: 9/27/17

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -6.13      Final Pressure (psig): 3.76

Container Dilution Factor: 2.15

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	1.8	2.2	0.75	0.51	0.60	0.21	J
110-54-3	n-Hexane	1.2	1.1	0.32	0.34	0.31	0.092	
67-66-3	Chloroform	ND	1.1	0.37	ND	0.22	0.075	
109-99-9	Tetrahydrofuran (THF)	0.73	1.1	0.43	0.25	0.36	0.15	J
107-06-2	1,2-Dichloroethane	ND	1.1	0.34	ND	0.27	0.085	
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.37	ND	0.20	0.067	
71-43-2	Benzene	1.2	1.1	0.34	0.39	0.34	0.11	
56-23-5	Carbon Tetrachloride	0.39	1.1	0.32	0.062	0.17	0.051	J
110-82-7	Cyclohexane	ND	2.2	0.62	ND	0.62	0.18	
78-87-5	1,2-Dichloropropane	ND	1.1	0.34	ND	0.23	0.074	
75-27-4	Bromodichloromethane	ND	1.1	0.32	ND	0.16	0.048	
79-01-6	Trichloroethene	ND	1.1	0.30	ND	0.20	0.056	
123-91-1	1,4-Dioxane	ND	1.1	0.34	ND	0.30	0.095	
142-82-5	n-Heptane	0.80	1.1	0.37	0.19	0.26	0.089	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	0.30	ND	0.24	0.066	
108-10-1	4-Methyl-2-pentanone	ND	1.1	0.34	ND	0.26	0.084	
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	0.34	ND	0.24	0.076	L
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.34	ND	0.20	0.063	
108-88-3	Toluene	3.8	1.1	0.37	1.0	0.29	0.097	
591-78-6	2-Hexanone	ND	1.1	0.34	ND	0.26	0.084	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

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**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** SHAA-N-31

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P1704686-001

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Analyst: Lusine Hakobyan

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS00676

Date Collected: 9/23/17

Date Received: 9/25/17

Date Analyzed: 9/27/17

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -6.13      Final Pressure (psig): 3.76

Container Dilution Factor: 2.15

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	1.1	0.34	ND	0.13	0.040	
106-93-4	1,2-Dibromoethane	ND	1.1	0.34	ND	0.14	0.045	
127-18-4	Tetrachloroethene	ND	1.1	0.30	ND	0.16	0.044	
108-90-7	Chlorobenzene	ND	1.1	0.34	ND	0.23	0.075	
100-41-4	Ethylbenzene	<b>0.76</b>	1.1	0.34	<b>0.17</b>	0.25	0.079	<b>J</b>
179601-23-1	m,p-Xylenes	<b>2.1</b>	2.2	0.65	<b>0.48</b>	0.50	0.15	<b>J</b>
75-25-2	Bromoform	ND	1.1	0.32	ND	0.10	0.031	
100-42-5	Styrene	ND	1.1	0.32	ND	0.25	0.076	
95-47-6	o-Xylene	<b>0.77</b>	1.1	0.32	<b>0.18</b>	0.25	0.074	<b>J</b>
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.32	ND	0.16	0.047	
98-82-8	Cumene	ND	1.1	0.32	ND	0.22	0.066	
622-96-8	4-Ethyltoluene	ND	1.1	0.34	ND	0.22	0.070	
108-67-8	1,3,5-Trimethylbenzene	ND	1.1	0.34	ND	0.22	0.070	
95-63-6	1,2,4-Trimethylbenzene	<b>0.66</b>	1.1	0.32	<b>0.13</b>	0.22	0.066	<b>J</b>
100-44-7	Benzyl Chloride	ND	2.2	0.24	ND	0.42	0.046	<b>L</b>
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.32	ND	0.18	0.054	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.30	ND	0.18	0.050	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.32	ND	0.18	0.054	
120-82-1	1,2,4-Trichlorobenzene	ND	1.1	0.34	ND	0.14	0.046	
91-20-3	Naphthalene	ND	1.1	0.39	ND	0.21	0.074	
87-68-3	Hexachlorobutadiene	ND	1.1	0.30	ND	0.10	0.028	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

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**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** SHAA-S-31

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P1704686-002

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Analyst: Lusine Hakobyan

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS01182

Date Collected: 9/23/17

Date Received: 9/25/17

Date Analyzed: 9/27/17

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -6.42      Final Pressure (psig): 3.65

Container Dilution Factor: 2.22

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
115-07-1	Propene	2.5	1.1	0.31	1.5	0.65	0.18	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.6	1.1	0.38	0.53	0.22	0.076	
74-87-3	Chloromethane	0.35	1.1	0.33	0.17	0.54	0.16	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.1	0.42	ND	0.16	0.060	
75-01-4	Vinyl Chloride	ND	1.1	0.38	ND	0.43	0.15	
106-99-0	1,3-Butadiene	ND	1.1	0.49	ND	0.50	0.22	
74-83-9	Bromomethane	ND	1.1	0.42	ND	0.29	0.11	
75-00-3	Chloroethane	ND	1.1	0.38	ND	0.42	0.14	
67-64-1	Acetone	15	11	1.7	6.2	4.7	0.72	
75-69-4	Trichlorofluoromethane (CFC 11)	2.9	1.1	0.38	0.51	0.20	0.067	
67-63-0	2-Propanol (Isopropyl Alcohol)	1.9	11	0.93	0.77	4.5	0.38	J
75-35-4	1,1-Dichloroethene	ND	1.1	0.38	ND	0.28	0.095	
75-09-2	Methylene Chloride	1.0	1.1	0.38	0.29	0.32	0.11	J
76-13-1	Trichlorotrifluoroethane (CFC 113)	0.48	1.1	0.38	0.063	0.14	0.049	J
75-15-0	Carbon Disulfide	0.66	11	0.33	0.21	3.6	0.11	J
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.42	ND	0.28	0.11	
75-34-3	1,1-Dichloroethane	ND	1.1	0.36	ND	0.27	0.088	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.38	ND	0.31	0.10	
108-05-4	Vinyl Acetate	ND	11	1.4	ND	3.2	0.41	
78-93-3	2-Butanone (MEK)	3.5	11	0.47	1.2	3.8	0.16	J
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.36	ND	0.28	0.090	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

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**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** SHAA-S-31

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P1704686-002

Test Code: EPA TO-15

Date Collected: 9/23/17

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Date Received: 9/25/17

Analyst: Lusine Hakobyan

Date Analyzed: 9/27/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01182

Initial Pressure (psig): -6.42      Final Pressure (psig): 3.65

Container Dilution Factor: 2.22

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	1.6	2.2	0.78	0.46	0.62	0.22	J
110-54-3	n-Hexane	1.4	1.1	0.33	0.39	0.32	0.095	
67-66-3	Chloroform	ND	1.1	0.38	ND	0.23	0.077	
109-99-9	Tetrahydrofuran (THF)	6.1	1.1	0.44	2.1	0.38	0.15	
107-06-2	1,2-Dichloroethane	ND	1.1	0.36	ND	0.27	0.088	
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.38	ND	0.20	0.069	
71-43-2	Benzene	4.4	1.1	0.36	1.4	0.35	0.11	
56-23-5	Carbon Tetrachloride	0.44	1.1	0.33	0.070	0.18	0.053	J
110-82-7	Cyclohexane	ND	2.2	0.64	ND	0.65	0.19	
78-87-5	1,2-Dichloropropane	ND	1.1	0.36	ND	0.24	0.077	
75-27-4	Bromodichloromethane	ND	1.1	0.33	ND	0.17	0.050	
79-01-6	Trichloroethene	ND	1.1	0.31	ND	0.21	0.058	
123-91-1	1,4-Dioxane	ND	1.1	0.36	ND	0.31	0.099	
142-82-5	n-Heptane	1.1	1.1	0.38	0.26	0.27	0.092	J
10061-01-5	cis-1,3-Dichloropropene	ND	1.1	0.31	ND	0.24	0.068	
108-10-1	4-Methyl-2-pentanone	ND	1.1	0.36	ND	0.27	0.087	
10061-02-6	trans-1,3-Dichloropropene	ND	1.1	0.36	ND	0.24	0.078	L
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.36	ND	0.20	0.065	
108-88-3	Toluene	5.9	1.1	0.38	1.6	0.29	0.10	
591-78-6	2-Hexanone	ND	1.1	0.36	ND	0.27	0.087	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.



# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

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**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** SHAA-S-31

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P1704686-002

Test Code: EPA TO-15

Date Collected: 9/23/17

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Date Received: 9/25/17

Analyst: Lusine Hakobyan

Date Analyzed: 9/27/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01182

Initial Pressure (psig): -6.42      Final Pressure (psig): 3.65

Container Dilution Factor: 2.22

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	1.1	0.36	ND	0.13	0.042	
106-93-4	1,2-Dibromoethane	ND	1.1	0.36	ND	0.14	0.046	
127-18-4	Tetrachloroethene	<b>0.35</b>	1.1	0.31	<b>0.052</b>	0.16	0.046	<b>J</b>
108-90-7	Chlorobenzene	ND	1.1	0.36	ND	0.24	0.077	
100-41-4	Ethylbenzene	<b>1.5</b>	1.1	0.36	<b>0.35</b>	0.26	0.082	
179601-23-1	m,p-Xylenes	<b>3.8</b>	2.2	0.67	<b>0.87</b>	0.51	0.15	
75-25-2	Bromoform	ND	1.1	0.33	ND	0.11	0.032	
100-42-5	Styrene	ND	1.1	0.33	ND	0.26	0.078	
95-47-6	o-Xylene	<b>1.4</b>	1.1	0.33	<b>0.32</b>	0.26	0.077	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.33	ND	0.16	0.049	
98-82-8	Cumene	ND	1.1	0.33	ND	0.23	0.068	
622-96-8	4-Ethyltoluene	ND	1.1	0.36	ND	0.23	0.072	
108-67-8	1,3,5-Trimethylbenzene	<b>0.38</b>	1.1	0.36	<b>0.077</b>	0.23	0.072	<b>J</b>
95-63-6	1,2,4-Trimethylbenzene	<b>1.2</b>	1.1	0.33	<b>0.24</b>	0.23	0.068	
100-44-7	Benzyl Chloride	ND	2.2	0.24	ND	0.43	0.047	<b>L</b>
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.33	ND	0.18	0.055	
106-46-7	1,4-Dichlorobenzene	<b>0.35</b>	1.1	0.31	<b>0.059</b>	0.18	0.052	<b>J</b>
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.33	ND	0.18	0.055	
120-82-1	1,2,4-Trichlorobenzene	ND	1.1	0.36	ND	0.15	0.048	
91-20-3	Naphthalene	<b>0.46</b>	1.1	0.40	<b>0.087</b>	0.21	0.076	<b>J</b>
87-68-3	Hexachlorobutadiene	ND	1.1	0.31	ND	0.10	0.029	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

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**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** Method Blank

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P170927-MB

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Analyst: Lusine Hakobyan

Sample Type: 6.0 L Silonite Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 9/27/17

Volume(s) Analyzed: 1.00 Liter(s)

Container Dilution Factor: 1.00

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
67-64-1	Acetone	ND	5.0	0.77	ND	2.1	0.32	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

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**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** Method Blank

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P170927-MB

Test Code: EPA TO-15

Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Date Received: NA

Analyst: Lusine Hakobyan

Date Analyzed: 9/27/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	L
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

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**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** Method Blank

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P170927-MB

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Analyst: Lusine Hakobyan

Sample Type: 6.0 L Silonite Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 9/27/17

Volume(s) Analyzed: 1.00 Liter(s)

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	1.0	0.11	ND	0.19	0.021	<b>L</b>
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

**ALS ENVIRONMENTAL**

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

**Client:** Waste Management-Stony Hollow Landfill  
**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Lusine Hakobyan  
 Sample Type: 6.0 L Silonite Canister(s)  
 Test Notes:

Date(s) Collected: 9/23/17  
 Date(s) Received: 9/25/17  
 Date(s) Analyzed: 9/27/17

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		Percent Recovered	Percent Recovered	Percent Recovered		
Method Blank	P170927-MB	<b>111</b>	<b>99</b>	<b>91</b>	70-130	
Lab Control Sample	P170927-LCS	<b>107</b>	<b>97</b>	<b>94</b>	70-130	
SHAA-N-31	P1704686-001	<b>109</b>	<b>99</b>	<b>93</b>	70-130	
SHAA-S-31	P1704686-002	<b>109</b>	<b>98</b>	<b>93</b>	70-130	
SHAA-S-31	P1704686-002DUP	<b>108</b>	<b>98</b>	<b>94</b>	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

# ALS ENVIRONMENTAL

## LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** Lab Control Sample

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P170927-LCS

Test Code: EPA TO-15

Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Date Received: NA

Analyst: Lusine Hakobyan

Date Analyzed: 9/27/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 0.125 Liter(s)

Test Notes:

CAS #	Compound	Spike Amount µg/m <sup>3</sup>	Result µg/m <sup>3</sup>	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
115-07-1	Propene	210	202	96	52-127	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	218	102	68-109	
74-87-3	Chloromethane	210	231	110	51-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	207	98	66-114	
75-01-4	Vinyl Chloride	211	228	108	61-125	
106-99-0	1,3-Butadiene	210	241	115	62-144	
74-83-9	Bromomethane	210	216	103	73-123	
75-00-3	Chloroethane	210	226	108	69-122	
67-64-1	Acetone	1,050	1080	103	57-117	
75-69-4	Trichlorofluoromethane (CFC 11)	208	219	105	63-98	L
67-63-0	2-Propanol (Isopropyl Alcohol)	422	486	115	66-121	
75-35-4	1,1-Dichloroethene	213	220	103	76-118	
75-09-2	Methylene Chloride	213	231	108	60-118	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	204	95	73-114	
75-15-0	Carbon Disulfide	214	248	116	57-102	L
156-60-5	trans-1,2-Dichloroethene	214	243	114	74-123	
75-34-3	1,1-Dichloroethane	212	226	107	69-111	
1634-04-4	Methyl tert-Butyl Ether	213	224	105	69-113	
108-05-4	Vinyl Acetate	1,060	901	85	76-128	
78-93-3	2-Butanone (MEK)	212	230	108	63-127	
156-59-2	cis-1,2-Dichloroethene	212	234	110	72-117	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

L = Laboratory control sample recovery outside the specified limits, results may be biased high.

**ALS ENVIRONMENTAL**

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** Lab Control Sample

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P170927-LCS

Test Code: EPA TO-15

Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Date Received: NA

Analyst: Lusine Hakobyan

Date Analyzed: 9/27/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 0.125 Liter(s)

Test Notes:

CAS #	Compound	Spike Amount µg/m <sup>3</sup>	Result µg/m <sup>3</sup>	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
141-78-6	Ethyl Acetate	426	<b>491</b>	<b>115</b>	68-127	
110-54-3	n-Hexane	213	<b>226</b>	<b>106</b>	55-116	
67-66-3	Chloroform	212	<b>221</b>	<b>104</b>	70-109	
109-99-9	Tetrahydrofuran (THF)	212	<b>235</b>	<b>111</b>	72-113	
107-06-2	1,2-Dichloroethane	212	<b>231</b>	<b>109</b>	69-113	
71-55-6	1,1,1-Trichloroethane	212	<b>229</b>	<b>108</b>	72-115	
71-43-2	Benzene	213	<b>200</b>	<b>94</b>	65-107	
56-23-5	Carbon Tetrachloride	214	<b>236</b>	<b>110</b>	71-113	
110-82-7	Cyclohexane	425	<b>444</b>	<b>104</b>	71-115	
78-87-5	1,2-Dichloropropane	212	<b>229</b>	<b>108</b>	71-115	
75-27-4	Bromodichloromethane	214	<b>241</b>	<b>113</b>	75-118	
79-01-6	Trichloroethene	212	<b>223</b>	<b>105</b>	68-114	
123-91-1	1,4-Dioxane	213	<b>233</b>	<b>109</b>	81-131	
142-82-5	n-Heptane	213	<b>226</b>	<b>106</b>	68-116	
10061-01-5	cis-1,3-Dichloropropene	208	<b>251</b>	<b>121</b>	77-126	
108-10-1	4-Methyl-2-pentanone	213	<b>248</b>	<b>116</b>	69-126	
10061-02-6	trans-1,3-Dichloropropene	213	<b>285</b>	<b>134</b>	79-125	<b>L</b>
79-00-5	1,1,2-Trichloroethane	212	<b>223</b>	<b>105</b>	75-119	
108-88-3	Toluene	211	<b>221</b>	<b>105</b>	59-118	
591-78-6	2-Hexanone	211	<b>240</b>	<b>114</b>	69-129	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result. Reported results are shown in concentration units and as a result of the calculation, may vary slightly. L = Laboratory control sample recovery outside the specified limits, results may be biased high.

# ALS ENVIRONMENTAL

## LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** Lab Control Sample

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P170927-LCS

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Analyst: Lusine Hakobyan

Sample Type: 6.0 L Silonite Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 9/27/17

Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m <sup>3</sup>	Result µg/m <sup>3</sup>	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
124-48-1	Dibromochloromethane	212	228	108	74-136	
106-93-4	1,2-Dibromoethane	211	220	104	73-131	
127-18-4	Tetrachloroethene	212	203	96	65-130	
108-90-7	Chlorobenzene	212	203	96	68-120	
100-41-4	Ethylbenzene	212	212	100	68-122	
179601-23-1	m,p-Xylenes	424	426	100	68-123	
75-25-2	Bromoform	212	230	108	69-130	
100-42-5	Styrene	211	220	104	71-133	
95-47-6	o-Xylene	211	212	100	68-122	
79-34-5	1,1,2,2-Tetrachloroethane	212	210	99	69-130	
98-82-8	Cumene	212	210	99	70-123	
622-96-8	4-Ethyltoluene	211	218	103	67-130	
108-67-8	1,3,5-Trimethylbenzene	212	209	99	67-124	
95-63-6	1,2,4-Trimethylbenzene	212	216	102	67-129	
100-44-7	Benzyl Chloride	212	294	139	79-138	L
541-73-1	1,3-Dichlorobenzene	212	210	99	65-136	
106-46-7	1,4-Dichlorobenzene	214	206	96	66-141	
95-50-1	1,2-Dichlorobenzene	214	213	100	67-136	
120-82-1	1,2,4-Trichlorobenzene	218	232	106	64-134	
91-20-3	Naphthalene	209	217	104	62-136	
87-68-3	Hexachlorobutadiene	212	211	100	60-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

L = Laboratory control sample recovery outside the specified limits, results may be biased high.



# ALS ENVIRONMENTAL

## LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 3

**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** SHAA-S-31

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P1704686-002DUP

Test Code: EPA TO-15

Date Collected: 9/23/17

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Date Received: 9/25/17

Analyst: Lusine Hakobyan

Date Analyzed: 9/27/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01182

Initial Pressure (psig): -6.42

Final Pressure (psig): 3.65

Container Dilution Factor: 2.22

Compound	Sample Result		Duplicate Sample Result		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
Propene	2.51	1.46	2.51	1.46	2.51	0	25	
Dichlorodifluoromethane (CFC 12)	2.62	0.529	2.60	0.525	2.61	0.8	25	
Chloromethane	0.346	0.168	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Acetone	14.8	6.24	14.4	6.08	14.6	3	25	
Trichlorofluoromethane	2.87	0.511	2.87	0.511	2.87	0	25	
2-Propanol (Isopropyl Alcohol)	1.89	0.769	1.81	0.736	1.85	4	25	J
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
Methylene Chloride	1.01	0.290	1.01	0.290	1.01	0	25	J
Trichlorotrifluoroethane	0.484	0.0632	0.475	0.0620	0.4795	2	25	J
Carbon Disulfide	0.659	0.212	0.575	0.185	0.617	14	25	J
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	3.55	1.20	3.47	1.18	3.51	2	25	J
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

**ALS ENVIRONMENTAL**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 3

**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** SHAA-S-31

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P1704686-002DUP

Test Code: EPA TO-15

Date Collected: 9/23/17

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Date Received: 9/25/17

Analyst: Lusine Hakobyan

Date Analyzed: 9/27/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01182

Initial Pressure (psig): -6.42

Final Pressure (psig): 3.65

Container Dilution Factor: 2.22

Compound	Sample Result		Duplicate Sample Result		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
Ethyl Acetate	1.65	0.457	1.60	0.444	1.625	<b>3</b>	25	<b>J</b>
n-Hexane	1.38	0.391	1.35	0.383	1.365	<b>2</b>	25	
Chloroform	ND	ND	ND	ND	-	-	25	
Tetrahydrofuran (THF)	6.12	2.08	6.07	2.06	6.095	<b>0.8</b>	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
Benzene	4.41	1.38	4.38	1.37	4.395	<b>0.7</b>	25	
Carbon Tetrachloride	0.437	0.0696	0.426	0.0678	0.4315	<b>3</b>	25	<b>J</b>
Cyclohexane	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Trichloroethene	ND	ND	ND	ND	-	-	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
n-Heptane	1.08	0.264	1.07	0.261	1.075	<b>0.9</b>	25	<b>J</b>
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	ND	ND	ND	ND	-	-	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	<b>L</b>
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	5.94	1.58	5.85	1.55	5.895	<b>2</b>	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

# ALS ENVIRONMENTAL

## LABORATORY DUPLICATE SUMMARY RESULTS

Page 3 of 3

**Client:** Waste Management-Stony Hollow Landfill

**Client Sample ID:** SHAA-S-31

**Client Project ID:** Stony Hollow Landfill

ALS Project ID: P1704686

ALS Sample ID: P1704686-002DUP

Test Code: EPA TO-15

Date Collected: 9/23/17

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Date Received: 9/25/17

Analyst: Lusine Hakobyan

Date Analyzed: 9/27/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01182

Initial Pressure (psig): -6.42

Final Pressure (psig): 3.65

Container Dilution Factor: 2.22

Compound	Sample Result		Duplicate Sample Result		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
Tetrachloroethene	0.353	0.0521	0.337	0.0498	0.345	<b>5</b>	25	<b>J</b>
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Ethylbenzene	1.52	0.350	1.50	0.345	1.51	<b>1</b>	25	
m,p-Xylenes	3.76	0.866	3.67	0.845	3.715	<b>2</b>	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
o-Xylene	1.38	0.318	1.34	0.309	1.36	<b>3</b>	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	ND	ND	ND	ND	-	-	25	
1,3,5-Trimethylbenzene	0.377	0.0768	0.364	0.0741	0.3705	<b>4</b>	25	<b>J</b>
1,2,4-Trimethylbenzene	1.17	0.239	1.15	0.234	1.16	<b>2</b>	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	<b>L</b>
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	0.353	0.0587	0.337	0.0561	0.345	<b>5</b>	25	<b>J</b>
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	0.457	0.0873	0.437	0.0835	0.447	<b>4</b>	25	<b>J</b>
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

L = Laboratory control sample recovery outside the specified limits; results may be biased high.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.