



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

May 31, 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 – May 19-20, 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 on the 1 in 3-day schedule as required by the Director's Final Findings and Orders, dated May 3, 2017. The 24-hour ambient air sampling was performed between May 19-20, 2017 and ALS Environmental performed the USEPA Method TO-15, ASTM D 5504-12, and OSHA 1007 analyses.

Please find attached to this submittal letter the LJB ambient air monitoring report, which includes the 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 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



May 31, 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: May 19, 2017 ambient air sampling at Stony Hollow Landfill

Dear Mr. Lucas:

On May 19 and May 20, 2017, LJB Inc. collected two 24-hour ambient air samples at the Waste Management Stony Hollow Landfill. The samples included SHAA-N-02, collected from inside the northeast fence line of the landfill, and SHAA-S-02, collected from inside the southeast fence line of the landfill. One Summa canister and one UME<sub>x</sub> 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. Note that sample SHAA-N-02 was completed nine minutes prior and sample SHAA-S-02 was completed 24 minutes prior to the full 24-hour sample interval.

TABLE 1

SAMPLE NO.	START DATE/TIME	END DATE/TIME	START PRESSURE	END PRESSURE	CANISTER NO.	CONTROLLER NO.	UMEx 100 NO.
SHAA-N-02	05/19/2017 09:04	05/20/2017 08:55	-29.5” Hg	-10.9” Hg	AS01219	SFC00094	A240051
SHAA-S-03	05/19/2017 09:35	05/20/2017 09:11	-30” Hg (+)	-16.9” Hg	AS01146	SFC00192	A240076

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

The completed UME<sub>x</sub> 100 samplers were transported by courier from the LJB offices to ALS Environmental’s Cincinnati, Ohio laboratory on May 22, 2017 and were analyzed by OSHA Method 1007 on May 23, 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 May 23, 2017, and were analyzed by EPA Method TO-15 and ASTM Standard Test Method D5504-12 on May 24, 2017. Table 2 provides the summarized sample results.

The EPA Method TO-15 found that only 2-butanone, 2-propanol, acetone, benzene, carbon tetrachloride, dichlorodifluoromethane, ethyl acetate, Freon 113, m,p-xylene, methylene chloride, toluene and trichlorofluoromethane were detected above laboratory reporting limits; concentrations of all were well

below the NIOSH RELs and ASTDR MRLs for these compounds. Propene was also detected above laboratory reporting limits; however, no NIOSH REL or ASTDR MRL has been established for the inhalation route (gaseous air) of this compound. The ASTM Standard Test Method D5504-12 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 MRL.

TABLE 2

ANALYTE	SHAA-N-02, ppbv	SHAA-S-02, ppbv	NIOSH REL, ppbv	ATSDR MRL, ppbv
EPA TO-15 (Summa canister)				
1,1,1-Trichloroethane	<0.17	<0.22	350,000	700
1,1,2,2-Tetrachloroethane	<0.14	<0.17	1,000	NA
1,1,2-Trichloroethane	<0.17	<0.22	10,000	NA
1,1-Dichloroethane	<0.23	<0.29	100,000	NA
1,1-Dichloroethene	<0.23	<0.30	200,000	20
1,2,4-Trichlorobenzene	<0.13	<0.16	5,000	NA
1,2,4-Trimethylbenzene	<0.19	<0.24	25,000	NA
1,2-Dibromoethane	<0.12	<0.15	45	NA
1,2-Dichlorobenzene	<0.15	<0.20	50,000	NA
1,2-Dichloroethane	<0.23	<0.29	1,000	600
1,2-Dichloropropane	<0.20	<0.26	75,000	7
1,3,5-Trimethylbenzene	<0.19	<0.24	25,000	NA
1,3-Butadiene	<0.42	<0.53	1,000	NA
1,3-Dichlorobenzene	<0.15	<0.20	50,000	NA
1,4-Dichlorobenzene	<0.15	<0.20	50,000	10
1,4-Dioxane	<0.26	<0.33	NA	30
2-Butanone	<b>0.25 (J)</b>	<b>0.19 (J)</b>	200	NA
2-Hexanone	<0.23	<0.29	1,000	NA
2-Propanol	<b>0.44 (J)</b>	<b>1.1 (J)</b>	400,000	NA
4-Ethyltoluene	<0.19	<0.24	NA	NA
4-Methyl-2-pentanone	<0.23	<0.29	50,000	NA
Acetone	<b>2.1 (J)</b>	<b>2.4 (J)</b>	250,000	13,000
Benzene	<b>0.14 (J)</b>	0.37	100	3
Benzyl chloride	<0.18	<0.23	1,000	NA
Bromodichloromethane	<0.14	<0.18	NA	NA
Bromoform	<0.090	<0.11	500	NA
Bromomethane	<0.24	<0.30	20,000	5
Carbon disulfide	<3.0	<3.8	1,000	300

ANALYTE	SHAA-N-02, ppbv	SHAA-S-02, ppbv	NIOSH REL, ppbv	ATSDR MRL, ppbv
Carbon tetrachloride	<b>0.054 (J)</b>	<b>0.058 (J)</b>	2,000	30
Chlorobenzene	<0.20	<0.26	75,000	NA
Chloroethane	<0.35	<0.45	1,000,000	15,000
Chloroform	<0.19	<0.24	2,000	20
Chloromethane	<0.45	<0.57	100,000	50
cis-1,2-Dichloroethene	<0.23	<0.30	200,000	NA
cis-1,3-Dichloropropene	<0.20	<0.26	1,000	7
Cumene	<0.19	<0.24	50,000	NA
Cyclohexane	<0.54	<0.69	300,000	NA
Dibromochloromethane	<0.11	<0.14	NA	NA
Dichlorodifluoromethane	<b>0.38</b>	<b>0.39</b>	1,000,000	NA
Ethyl acetate	<b>1.7</b>	<b>1.9</b>	400,000	NA
Ethylbenzene	<0.21	<0.27	100,000	60
Freon 113 (Trichlorotrifluoroethane)	<b>0.054 (J)</b>	<b>0.053 (J)</b>	1,000,000	NA
Freon 114 (1,2-Dichloro-1,1,2,2-tetrafluoroethane)	<0.13	<0.17	1,000,000	NA
Heptane (n-Heptane)	<0.23	<0.29	85,000	NA
Hexachlorobutadiene	<0.087	<0.11	20	NA
Hexane (n-Hexane)	<0.26	<0.33	50,000	600
m,p-Xylene	<b>0.16 (J)</b>	<0.54	100,000	50
Methylene chloride	<b>0.14 (J)</b>	<b>0.13 (J)</b>	25,000	300
MTBE (Methyl tert-butyl ether)	<0.26	<0.33	2,000	NA
Naphthalene	<0.18	<0.23	10,000	1
o-Xylene	<0.21	<0.27	100,000	NA
Propene	<b>0.39 (J)</b>	<b>0.78</b>	NA	NA
Styrene	<0.22	<0.28	50,000	200
Tetrachloroethene	<0.14	<0.17	100,000	NA
Tetrahydrofuran	<0.32	<0.40	200,000	NA
Toluene	<b>0.39</b>	<b>0.28 (J)</b>	100,000	1,000
trans-1,2-Dichloroethene	<0.23	<0.30	200,000	200
trans-1,3-Dichloropropene	<0.20	<0.26	1,000	7
Trichloroethene	<0.17	<0.22	100,000	NA
Trichlorofluoromethane	<b>0.18</b>	<b>0.2 (J)</b>	1,000,000	NA
Vinyl acetate	<2.6	<3.4	4,000	10
Vinyl chloride	<0.36	<0.46	1,000	30
ASTM D5504-12 (Summa canister)				
2,5-Dimethylthiophene	<9.3	<12	NA	NA

ANALYTE	SHAA-N-02, ppbv	SHAA-S-02, ppbv	NIOSH REL, ppbv	ATSDR MRL, ppbv
2-Ethylthiophene	<9.3	<12	NA	NA
3-Methylthiophene	<9.3	<12	NA	NA
Carbon disulfide	<4.7	<5.9	1,000	300
Carbonyl sulfide	<9.3	<12	NA	NA
Diethyl disulfide	<4.7	<5.9	NA	NA
Diethyl sulfide	<9.3	<12	NA	NA
Dimethyl disulfide	<4.7	<5.9	NA	NA
Dimethyl sulfide	<9.3	<12	NA	NA
Ethyl mercaptan	<9.3	<12	NA	NA
Ethyl methyl sulfide	<9.3	<12	NA	NA
Hydrogen sulfide	<9.3	<12	NA	2
Isobutyl mercaptan	<9.3	<12	NA	NA
Isopropyl mercaptan	<9.3	<12	NA	NA
Methyl mercaptan	<9.3	<12	NA	NA
n-Butyl mercaptan	<9.3	<12	NA	NA
n-Propyl mercaptan	<9.3	<12	NA	NA
tert-Butyl mercaptan	<9.3	<12	NA	NA
Tetrahydrothiophene	<9.3	<12	NA	NA
Thiophene	<9.3	<12	NA	NA
OSHA 1007 (UMEx 100 sampler)				
Acetaldehyde	<1.5	<1.5	NA	NA
Benzaldehyde	<1.0	<1.0	NA	NA
Butyraldehyde	<1.3	<1.3	NA	NA
Crotonaldehyde	<2.3	<2.3	2,000	NA
Formaldehyde	<1.8	<b>3.3</b>	16	8
Hexanaldehyde	<3.2	<3.2	NA	NA
Propionaldehyde	<1.9	<1.9	NA	NA

J = The result is an estimated concentration that is less than the method reporting limit but greater than the method detection limit  
 NA = Limit not established for inhalation route (gaseous air samples)

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

Sincerely,


LJB Inc.



Mr. Peter Lucas: May 19, 2017 ambient air sampling  
May 31, 2017  
Page 5

Alexandra Zelles  
Environmental Scientist



 Air sample locations (revised by OEPA DFFO)

 Stony Hollow Landfill

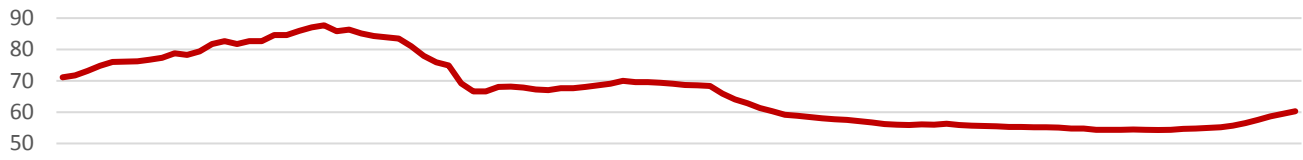


0 200 400 800  
Feet

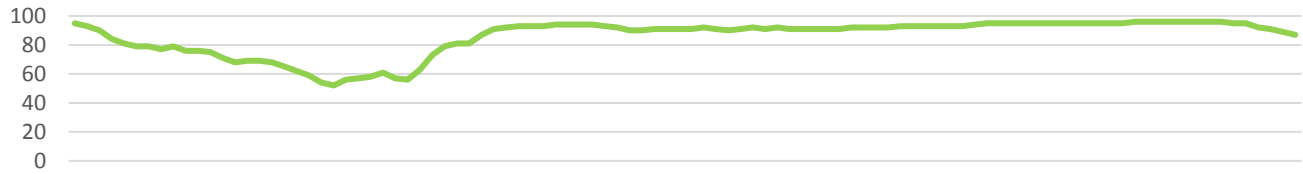
> Waste Management Stony Hollow Landfill  
Ambient Air Sample Locations



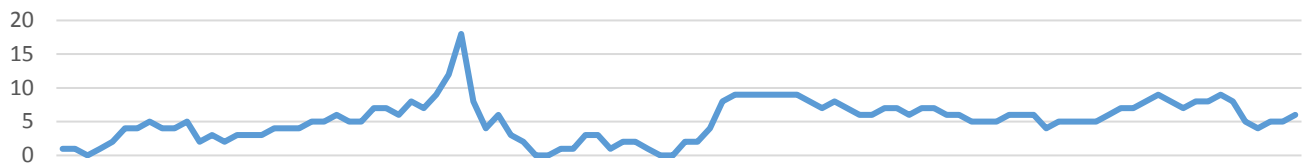
Temperature, °F



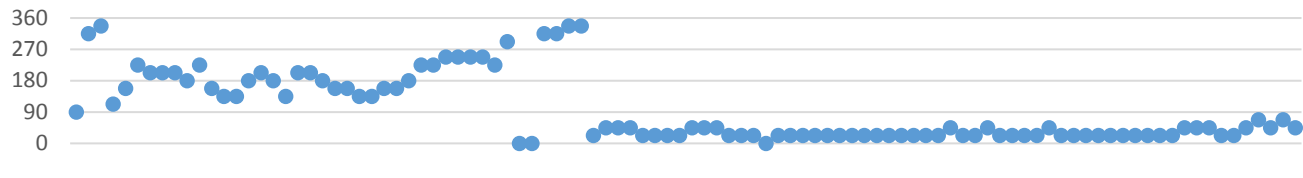
Relative Humidity, %



Wind speed, mph

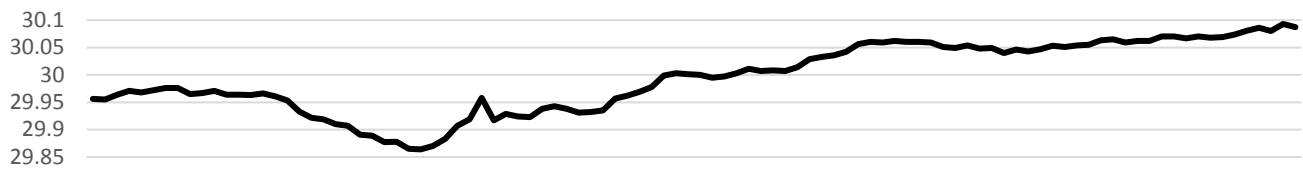


Wind Direction

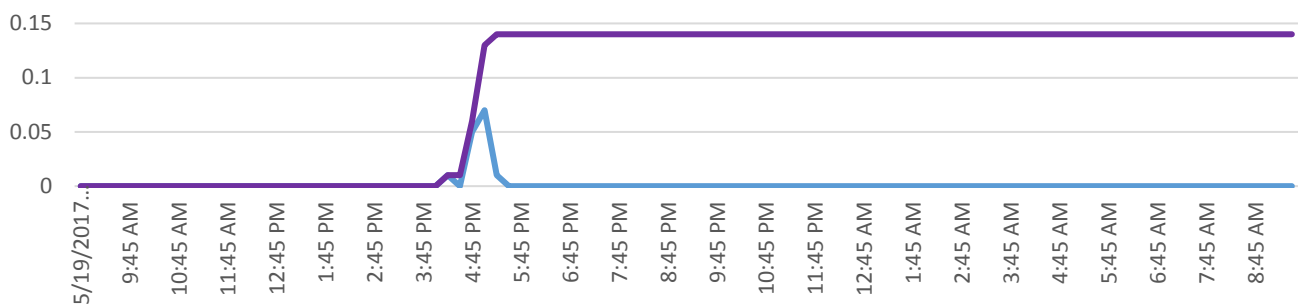


N  
W  
S  
E  
N

Barometric Pressure, Inches Hg



Rain and Cumulative Rain, Inches







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## LABORATORY REPORT

May 26, 2017

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

**RE: Stony Hollow Odor Survey**

Dear Peter:

Enclosed are the results of the samples submitted to our laboratory on May 23, 2017. For your reference, these analyses have been assigned our service request number P1702454.

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 1:19 pm, 05/26/17

Kate Kaneko  
Project Manager



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

Service Request No: P1702454

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## CASE NARRATIVE

The samples were received intact under chain of custody on May 23, 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 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>	T104704413-16-7
Utah DOH (NELAP)	<a href="http://health.utah.gov/lab/environmental-lab-certification/">http://health.utah.gov/lab/environmental-lab-certification/</a>	CA01627201 6-6
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 Odor Survey

Service Request: P1702454

Date Received: 5/23/2017  
 Time Received: 09:20

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-02	P1702454-001	Air	5/20/2017	08:55	AS01219	-4.81	3.70	X	X
SHAA-S-02	P1702454-002	Air	5/20/2017	09:11	AS01146	-7.00	3.50	X	X







# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

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

**Client Sample ID:** SHAA-N-02

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P1702454-001

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: AS01219

Date Collected: 5/20/17

Time Collected: 08:55

Date Received: 5/23/17

Date Analyzed: 5/24/17

Time Analyzed: 12:02

Volume(s) Analyzed: 1.0 ml(s)

Initial Pressure (psig): -4.81

Final Pressure (psig): 3.70

Canister Dilution Factor: 1.86

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	13	ND	9.3	
463-58-1	Carbonyl Sulfide	ND	23	ND	9.3	
74-93-1	Methyl Mercaptan	ND	18	ND	9.3	
75-08-1	Ethyl Mercaptan	ND	24	ND	9.3	
75-18-3	Dimethyl Sulfide	ND	24	ND	9.3	
75-15-0	Carbon Disulfide	ND	14	ND	4.7	
75-33-2	Isopropyl Mercaptan	ND	29	ND	9.3	
75-66-1	tert-Butyl Mercaptan	ND	34	ND	9.3	
107-03-9	n-Propyl Mercaptan	ND	29	ND	9.3	
624-89-5	Ethyl Methyl Sulfide	ND	29	ND	9.3	
110-02-1	Thiophene	ND	32	ND	9.3	
513-44-0	Isobutyl Mercaptan	ND	34	ND	9.3	
352-93-2	Diethyl Sulfide	ND	34	ND	9.3	
109-79-5	n-Butyl Mercaptan	ND	34	ND	9.3	
624-92-0	Dimethyl Disulfide	ND	18	ND	4.7	
616-44-4	3-Methylthiophene	ND	37	ND	9.3	
110-01-0	Tetrahydrothiophene	ND	34	ND	9.3	
638-02-8	2,5-Dimethylthiophene	ND	43	ND	9.3	
872-55-9	2-Ethylthiophene	ND	43	ND	9.3	
110-81-6	Diethyl Disulfide	ND	23	ND	4.7	

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-02

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P1702454-002

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: AS01146

Date Collected: 5/20/17  
 Time Collected: 09:11  
 Date Received: 5/23/17  
 Date Analyzed: 5/24/17  
 Time Analyzed: 12:15  
 Volume(s) Analyzed: 1.0 ml(s)

Initial Pressure (psig): -7.00      Final Pressure (psig): 3.50

Canister Dilution Factor: 2.36

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	16	ND	12	
463-58-1	Carbonyl Sulfide	ND	29	ND	12	
74-93-1	Methyl Mercaptan	ND	23	ND	12	
75-08-1	Ethyl Mercaptan	ND	30	ND	12	
75-18-3	Dimethyl Sulfide	ND	30	ND	12	
75-15-0	Carbon Disulfide	ND	18	ND	5.9	
75-33-2	Isopropyl Mercaptan	ND	37	ND	12	
75-66-1	tert-Butyl Mercaptan	ND	44	ND	12	
107-03-9	n-Propyl Mercaptan	ND	37	ND	12	
624-89-5	Ethyl Methyl Sulfide	ND	37	ND	12	
110-02-1	Thiophene	ND	41	ND	12	
513-44-0	Isobutyl Mercaptan	ND	44	ND	12	
352-93-2	Diethyl Sulfide	ND	44	ND	12	
109-79-5	n-Butyl Mercaptan	ND	44	ND	12	
624-92-0	Dimethyl Disulfide	ND	23	ND	5.9	
616-44-4	3-Methylthiophene	ND	47	ND	12	
110-01-0	Tetrahydrothiophene	ND	43	ND	12	
638-02-8	2,5-Dimethylthiophene	ND	54	ND	12	
872-55-9	2-Ethylthiophene	ND	54	ND	12	
110-81-6	Diethyl Disulfide	ND	29	ND	5.9	

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 Odor Survey

ALS Project ID: P1702454  
 ALS Sample ID: P170524-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: 5/24/17  
 Time Analyzed: 08:12  
 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 Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P170524-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: 5/24/17

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>1,090</b>	<b>109</b>	75-148	
463-58-1	Carbonyl Sulfide	1,000	<b>1,100</b>	<b>110</b>	70-137	
74-93-1	Methyl Mercaptan	1,000	<b>1,090</b>	<b>109</b>	72-139	

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 3

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

**Client Sample ID:** SHAA-N-02

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P1702454-001

Test Code: EPA TO-15

Date Collected: 5/20/17

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Date Received: 5/23/17

Analyst: Simon Cao

Date Analyzed: 5/24/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01219

Initial Pressure (psig): -4.81      Final Pressure (psig): 3.70

Canister Dilution Factor: 1.86

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	<b>0.68</b>	0.93	0.26	<b>0.39</b>	0.54	0.15	<b>J</b>
75-71-8	Dichlorodifluoromethane (CFC 12)	<b>1.9</b>	0.93	0.32	<b>0.38</b>	0.19	0.064	
74-87-3	Chloromethane	ND	0.93	0.28	ND	0.45	0.14	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.93	0.35	ND	0.13	0.051	
75-01-4	Vinyl Chloride	ND	0.93	0.32	ND	0.36	0.12	
106-99-0	1,3-Butadiene	ND	0.93	0.41	ND	0.42	0.19	
74-83-9	Bromomethane	ND	0.93	0.35	ND	0.24	0.091	
75-00-3	Chloroethane	ND	0.93	0.32	ND	0.35	0.12	
67-64-1	Acetone	<b>5.0</b>	9.3	1.4	<b>2.1</b>	3.9	0.60	<b>J</b>
75-69-4	Trichlorofluoromethane (CFC 11)	<b>1.0</b>	0.93	0.32	<b>0.18</b>	0.17	0.056	
67-63-0	2-Propanol (Isopropyl Alcohol)	<b>1.1</b>	9.3	0.78	<b>0.44</b>	3.8	0.32	<b>J</b>
75-35-4	1,1-Dichloroethene	ND	0.93	0.32	ND	0.23	0.080	
75-09-2	Methylene Chloride	<b>0.49</b>	0.93	0.32	<b>0.14</b>	0.27	0.091	<b>J</b>
76-13-1	Trichlorotrifluoroethane (CFC 113)	<b>0.41</b>	0.93	0.32	<b>0.054</b>	0.12	0.041	<b>J</b>
75-15-0	Carbon Disulfide	ND	9.3	0.28	ND	3.0	0.090	
156-60-5	trans-1,2-Dichloroethene	ND	0.93	0.35	ND	0.23	0.089	
75-34-3	1,1-Dichloroethane	ND	0.93	0.30	ND	0.23	0.074	
1634-04-4	Methyl tert-Butyl Ether	ND	0.93	0.32	ND	0.26	0.088	
108-05-4	Vinyl Acetate	ND	9.3	1.2	ND	2.6	0.34	
78-93-3	2-Butanone (MEK)	<b>0.73</b>	9.3	0.39	<b>0.25</b>	3.2	0.13	<b>J</b>
156-59-2	cis-1,2-Dichloroethene	ND	0.93	0.30	ND	0.23	0.075	

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-02

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P1702454-001

Test Code: EPA TO-15

Date Collected: 5/20/17

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Date Received: 5/23/17

Analyst: Simon Cao

Date Analyzed: 5/24/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01219

Initial Pressure (psig): -4.81      Final Pressure (psig): 3.70

Canister Dilution Factor: 1.86

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	<b>6.0</b>	1.9	0.65	<b>1.7</b>	0.52	0.18	
110-54-3	n-Hexane	ND	0.93	0.28	ND	0.26	0.079	
67-66-3	Chloroform	ND	0.93	0.32	ND	0.19	0.065	
109-99-9	Tetrahydrofuran (THF)	ND	0.93	0.37	ND	0.32	0.13	
107-06-2	1,2-Dichloroethane	ND	0.93	0.30	ND	0.23	0.074	
71-55-6	1,1,1-Trichloroethane	ND	0.93	0.32	ND	0.17	0.058	
71-43-2	Benzene	<b>0.45</b>	0.93	0.30	<b>0.14</b>	0.29	0.093	<b>J</b>
56-23-5	Carbon Tetrachloride	<b>0.34</b>	0.93	0.28	<b>0.054</b>	0.15	0.044	<b>J</b>
110-82-7	Cyclohexane	ND	1.9	0.54	ND	0.54	0.16	
78-87-5	1,2-Dichloropropane	ND	0.93	0.30	ND	0.20	0.064	
75-27-4	Bromodichloromethane	ND	0.93	0.28	ND	0.14	0.042	
79-01-6	Trichloroethene	ND	0.93	0.26	ND	0.17	0.048	
123-91-1	1,4-Dioxane	ND	0.93	0.30	ND	0.26	0.083	
142-82-5	n-Heptane	ND	0.93	0.32	ND	0.23	0.077	
10061-01-5	cis-1,3-Dichloropropene	ND	0.93	0.26	ND	0.20	0.057	
108-10-1	4-Methyl-2-pentanone	ND	0.93	0.30	ND	0.23	0.073	
10061-02-6	trans-1,3-Dichloropropene	ND	0.93	0.30	ND	0.20	0.066	
79-00-5	1,1,2-Trichloroethane	ND	0.93	0.30	ND	0.17	0.055	
108-88-3	Toluene	<b>1.5</b>	0.93	0.32	<b>0.39</b>	0.25	0.084	
591-78-6	2-Hexanone	ND	0.93	0.30	ND	0.23	0.073	

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-N-02

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P1702454-001

Test Code: EPA TO-15

Date Collected: 5/20/17

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Date Received: 5/23/17

Analyst: Simon Cao

Date Analyzed: 5/24/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01219

Initial Pressure (psig): -4.81      Final Pressure (psig): 3.70

Canister Dilution Factor: 1.86

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	0.93	0.30	ND	0.11	0.035	
106-93-4	1,2-Dibromoethane	ND	0.93	0.30	ND	0.12	0.039	
127-18-4	Tetrachloroethene	ND	0.93	0.26	ND	0.14	0.038	
108-90-7	Chlorobenzene	ND	0.93	0.30	ND	0.20	0.065	
100-41-4	Ethylbenzene	ND	0.93	0.30	ND	0.21	0.069	
179601-23-1	m,p-Xylenes	<b>0.68</b>	1.9	0.56	<b>0.16</b>	0.43	0.13	<b>J</b>
75-25-2	Bromoform	ND	0.93	0.28	ND	0.090	0.027	
100-42-5	Styrene	ND	0.93	0.28	ND	0.22	0.066	
95-47-6	o-Xylene	ND	0.93	0.28	ND	0.21	0.064	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.93	0.28	ND	0.14	0.041	
98-82-8	Cumene	ND	0.93	0.28	ND	0.19	0.057	
622-96-8	4-Ethyltoluene	ND	0.93	0.30	ND	0.19	0.061	
108-67-8	1,3,5-Trimethylbenzene	ND	0.93	0.30	ND	0.19	0.061	
95-63-6	1,2,4-Trimethylbenzene	ND	0.93	0.28	ND	0.19	0.057	
100-44-7	Benzyl Chloride	ND	0.93	0.20	ND	0.18	0.040	
541-73-1	1,3-Dichlorobenzene	ND	0.93	0.28	ND	0.15	0.046	
106-46-7	1,4-Dichlorobenzene	ND	0.93	0.26	ND	0.15	0.043	
95-50-1	1,2-Dichlorobenzene	ND	0.93	0.28	ND	0.15	0.046	
120-82-1	1,2,4-Trichlorobenzene	ND	0.93	0.30	ND	0.13	0.040	
91-20-3	Naphthalene	ND	0.93	0.33	ND	0.18	0.064	
87-68-3	Hexachlorobutadiene	ND	0.93	0.26	ND	0.087	0.024	

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 1 of 3

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

**Client Sample ID:** SHAA-S-02

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P1702454-002

Test Code: EPA TO-15

Date Collected: 5/20/17

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Date Received: 5/23/17

Analyst: Simon Cao

Date Analyzed: 5/24/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01146

Initial Pressure (psig): -7.00      Final Pressure (psig): 3.50

Canister Dilution Factor: 2.36

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	<b>1.3</b>	1.2	0.33	<b>0.78</b>	0.69	0.19	
75-71-8	Dichlorodifluoromethane (CFC 12)	<b>1.9</b>	1.2	0.40	<b>0.39</b>	0.24	0.081	
74-87-3	Chloromethane	ND	1.2	0.35	ND	0.57	0.17	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.2	0.45	ND	0.17	0.064	
75-01-4	Vinyl Chloride	ND	1.2	0.40	ND	0.46	0.16	
106-99-0	1,3-Butadiene	ND	1.2	0.52	ND	0.53	0.23	
74-83-9	Bromomethane	ND	1.2	0.45	ND	0.30	0.12	
75-00-3	Chloroethane	ND	1.2	0.40	ND	0.45	0.15	
67-64-1	Acetone	<b>5.7</b>	12	1.8	<b>2.4</b>	5.0	0.77	<b>J</b>
75-69-4	Trichlorofluoromethane (CFC 11)	<b>1.1</b>	1.2	0.40	<b>0.20</b>	0.21	0.071	<b>J</b>
67-63-0	2-Propanol (Isopropyl Alcohol)	<b>2.8</b>	12	0.99	<b>1.1</b>	4.8	0.40	<b>J</b>
75-35-4	1,1-Dichloroethene	ND	1.2	0.40	ND	0.30	0.10	
75-09-2	Methylene Chloride	<b>0.45</b>	1.2	0.40	<b>0.13</b>	0.34	0.12	<b>J</b>
76-13-1	Trichlorotrifluoroethane (CFC 113)	<b>0.41</b>	1.2	0.40	<b>0.053</b>	0.15	0.052	<b>J</b>
75-15-0	Carbon Disulfide	ND	12	0.35	ND	3.8	0.11	
156-60-5	trans-1,2-Dichloroethene	ND	1.2	0.45	ND	0.30	0.11	
75-34-3	1,1-Dichloroethane	ND	1.2	0.38	ND	0.29	0.093	
1634-04-4	Methyl tert-Butyl Ether	ND	1.2	0.40	ND	0.33	0.11	
108-05-4	Vinyl Acetate	ND	12	1.5	ND	3.4	0.44	
78-93-3	2-Butanone (MEK)	<b>0.56</b>	12	0.50	<b>0.19</b>	4.0	0.17	<b>J</b>
156-59-2	cis-1,2-Dichloroethene	ND	1.2	0.38	ND	0.30	0.095	

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-S-02

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P1702454-002

Test Code: EPA TO-15

Date Collected: 5/20/17

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Date Received: 5/23/17

Analyst: Simon Cao

Date Analyzed: 5/24/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01146

Initial Pressure (psig): -7.00      Final Pressure (psig): 3.50

Canister Dilution Factor: 2.36

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	<b>6.9</b>	2.4	0.83	<b>1.9</b>	0.66	0.23	
110-54-3	n-Hexane	ND	1.2	0.35	ND	0.33	0.10	
67-66-3	Chloroform	ND	1.2	0.40	ND	0.24	0.082	
109-99-9	Tetrahydrofuran (THF)	ND	1.2	0.47	ND	0.40	0.16	
107-06-2	1,2-Dichloroethane	ND	1.2	0.38	ND	0.29	0.093	
71-55-6	1,1,1-Trichloroethane	ND	1.2	0.40	ND	0.22	0.074	
71-43-2	Benzene	ND	1.2	0.38	ND	0.37	0.12	
56-23-5	Carbon Tetrachloride	<b>0.36</b>	1.2	0.35	<b>0.058</b>	0.19	0.056	<b>J</b>
110-82-7	Cyclohexane	ND	2.4	0.68	ND	0.69	0.20	
78-87-5	1,2-Dichloropropane	ND	1.2	0.38	ND	0.26	0.082	
75-27-4	Bromodichloromethane	ND	1.2	0.35	ND	0.18	0.053	
79-01-6	Trichloroethene	ND	1.2	0.33	ND	0.22	0.062	
123-91-1	1,4-Dioxane	ND	1.2	0.38	ND	0.33	0.10	
142-82-5	n-Heptane	ND	1.2	0.40	ND	0.29	0.098	
10061-01-5	cis-1,3-Dichloropropene	ND	1.2	0.33	ND	0.26	0.073	
108-10-1	4-Methyl-2-pentanone	ND	1.2	0.38	ND	0.29	0.092	
10061-02-6	trans-1,3-Dichloropropene	ND	1.2	0.38	ND	0.26	0.083	
79-00-5	1,1,2-Trichloroethane	ND	1.2	0.38	ND	0.22	0.069	
108-88-3	Toluene	<b>1.1</b>	1.2	0.40	<b>0.28</b>	0.31	0.11	<b>J</b>
591-78-6	2-Hexanone	ND	1.2	0.38	ND	0.29	0.092	

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 3 of 3

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

**Client Sample ID:** SHAA-S-02

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P1702454-002

Test Code: EPA TO-15

Date Collected: 5/20/17

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Date Received: 5/23/17

Analyst: Simon Cao

Date Analyzed: 5/24/17

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS01146

Initial Pressure (psig): -7.00      Final Pressure (psig): 3.50

Canister Dilution Factor: 2.36

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	1.2	0.38	ND	0.14	0.044	
106-93-4	1,2-Dibromoethane	ND	1.2	0.38	ND	0.15	0.049	
127-18-4	Tetrachloroethene	ND	1.2	0.33	ND	0.17	0.049	
108-90-7	Chlorobenzene	ND	1.2	0.38	ND	0.26	0.082	
100-41-4	Ethylbenzene	ND	1.2	0.38	ND	0.27	0.087	
179601-23-1	m,p-Xylenes	ND	2.4	0.71	ND	0.54	0.16	
75-25-2	Bromoform	ND	1.2	0.35	ND	0.11	0.034	
100-42-5	Styrene	ND	1.2	0.35	ND	0.28	0.083	
95-47-6	o-Xylene	ND	1.2	0.35	ND	0.27	0.082	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.2	0.35	ND	0.17	0.052	
98-82-8	Cumene	ND	1.2	0.35	ND	0.24	0.072	
622-96-8	4-Ethyltoluene	ND	1.2	0.38	ND	0.24	0.077	
108-67-8	1,3,5-Trimethylbenzene	ND	1.2	0.38	ND	0.24	0.077	
95-63-6	1,2,4-Trimethylbenzene	ND	1.2	0.35	ND	0.24	0.072	
100-44-7	Benzyl Chloride	ND	1.2	0.26	ND	0.23	0.050	
541-73-1	1,3-Dichlorobenzene	ND	1.2	0.35	ND	0.20	0.059	
106-46-7	1,4-Dichlorobenzene	ND	1.2	0.33	ND	0.20	0.055	
95-50-1	1,2-Dichlorobenzene	ND	1.2	0.35	ND	0.20	0.059	
120-82-1	1,2,4-Trichlorobenzene	ND	1.2	0.38	ND	0.16	0.051	
91-20-3	Naphthalene	ND	1.2	0.42	ND	0.23	0.081	
87-68-3	Hexachlorobutadiene	ND	1.2	0.33	ND	0.11	0.031	

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

Page 1 of 3

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

**Client Sample ID:** Method Blank

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P170524-MB

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 5/24/17

Volume(s) Analyzed: 1.00 Liter(s)

Canister 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

Page 2 of 3

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

**Client Sample ID:** Method Blank

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P170524-MB

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 5/24/17

Volume(s) Analyzed: 1.00 Liter(s)

Canister 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	
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.



# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 3 of 3

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

**Client Sample ID:** Method Blank

**Client Project ID:** Stony Hollow Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P170524-MB

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 5/24/17

Volume(s) Analyzed: 1.00 Liter(s)

Canister 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	0.50	0.11	ND	0.097	0.021	
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.

**ALS ENVIRONMENTAL**

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

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

ALS Project ID: P1702454

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9  
 Analyst: Simon Cao  
 Sample Type: 6.0 L Silonite Canister(s)  
 Test Notes:

Date(s) Collected: 5/20/17  
 Date(s) Received: 5/23/17  
 Date(s) Analyzed: 5/24/17

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	P170524-MB	<b>99</b>	<b>101</b>	<b>103</b>	60-140	
Lab Control Sample	P170524-LCS	<b>98</b>	<b>101</b>	<b>105</b>	60-140	
SHAA-N-02	P1702454-001	<b>99</b>	<b>99</b>	<b>105</b>	60-140	
SHAA-S-02	P1702454-002	<b>98</b>	<b>99</b>	<b>104</b>	60-140	

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 Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P170524-LCS

Test Code: EPA TO-15

Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Date Received: NA

Analyst: Simon Cao

Date Analyzed: 5/24/17

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	<b>158</b>	<b>75</b>	52-127	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	<b>164</b>	<b>78</b>	68-109	
74-87-3	Chloromethane	210	<b>139</b>	<b>66</b>	51-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	<b>154</b>	<b>73</b>	66-114	
75-01-4	Vinyl Chloride	210	<b>149</b>	<b>71</b>	61-125	
106-99-0	1,3-Butadiene	210	<b>174</b>	<b>83</b>	62-144	
74-83-9	Bromomethane	210	<b>168</b>	<b>80</b>	73-123	
75-00-3	Chloroethane	210	<b>166</b>	<b>79</b>	69-122	
67-64-1	Acetone	1,060	<b>845</b>	<b>80</b>	57-117	
75-69-4	Trichlorofluoromethane (CFC 11)	210	<b>161</b>	<b>77</b>	63-98	
67-63-0	2-Propanol (Isopropyl Alcohol)	424	<b>354</b>	<b>83</b>	66-121	
75-35-4	1,1-Dichloroethene	213	<b>175</b>	<b>82</b>	76-118	
75-09-2	Methylene Chloride	212	<b>160</b>	<b>75</b>	60-118	
76-13-1	Trichlorotrifluoroethane (CFC 113)	212	<b>170</b>	<b>80</b>	73-114	
75-15-0	Carbon Disulfide	213	<b>164</b>	<b>77</b>	57-102	
156-60-5	trans-1,2-Dichloroethene	213	<b>175</b>	<b>82</b>	74-123	
75-34-3	1,1-Dichloroethane	212	<b>169</b>	<b>80</b>	69-111	
1634-04-4	Methyl tert-Butyl Ether	213	<b>170</b>	<b>80</b>	69-113	
108-05-4	Vinyl Acetate	1,060	<b>1050</b>	<b>99</b>	76-128	
78-93-3	2-Butanone (MEK)	212	<b>181</b>	<b>85</b>	63-127	
156-59-2	cis-1,2-Dichloroethene	212	<b>168</b>	<b>79</b>	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.

# 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 Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P170524-LCS

Test Code: EPA TO-15

Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Date Received: NA

Analyst: Simon Cao

Date Analyzed: 5/24/17

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	363	85	68-127	
110-54-3	n-Hexane	213	166	78	55-116	
67-66-3	Chloroform	212	165	78	70-109	
109-99-9	Tetrahydrofuran (THF)	213	170	80	72-113	
107-06-2	1,2-Dichloroethane	212	167	79	69-113	
71-55-6	1,1,1-Trichloroethane	212	162	76	72-115	
71-43-2	Benzene	212	161	76	65-107	
56-23-5	Carbon Tetrachloride	213	166	78	71-113	
110-82-7	Cyclohexane	425	340	80	71-115	
78-87-5	1,2-Dichloropropane	212	174	82	71-115	
75-27-4	Bromodichloromethane	214	170	79	75-118	
79-01-6	Trichloroethene	212	168	79	68-114	
123-91-1	1,4-Dioxane	213	184	86	81-131	
142-82-5	n-Heptane	213	172	81	68-116	
10061-01-5	cis-1,3-Dichloropropene	210	181	86	77-126	
108-10-1	4-Methyl-2-pentanone	213	188	88	69-126	
10061-02-6	trans-1,3-Dichloropropene	213	193	91	79-125	
79-00-5	1,1,2-Trichloroethane	212	174	82	75-119	
108-88-3	Toluene	212	167	79	59-118	
591-78-6	2-Hexanone	213	199	93	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.

# 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 Odor Survey

ALS Project ID: P1702454

ALS Sample ID: P170524-LCS

Test Code: EPA TO-15

Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9

Date Received: NA

Analyst: Simon Cao

Date Analyzed: 5/24/17

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	
124-48-1	Dibromochloromethane	213	<b>186</b>	<b>87</b>	74-136	
106-93-4	1,2-Dibromoethane	212	<b>188</b>	<b>89</b>	73-131	
127-18-4	Tetrachloroethene	213	<b>181</b>	<b>85</b>	65-130	
108-90-7	Chlorobenzene	212	<b>175</b>	<b>83</b>	68-120	
100-41-4	Ethylbenzene	212	<b>171</b>	<b>81</b>	68-122	
179601-23-1	m,p-Xylenes	424	<b>343</b>	<b>81</b>	68-123	
75-25-2	Bromoform	212	<b>196</b>	<b>92</b>	69-130	
100-42-5	Styrene	212	<b>192</b>	<b>91</b>	71-133	
95-47-6	o-Xylene	212	<b>174</b>	<b>82</b>	68-122	
79-34-5	1,1,2,2-Tetrachloroethane	212	<b>194</b>	<b>92</b>	69-130	
98-82-8	Cumene	212	<b>179</b>	<b>84</b>	70-123	
622-96-8	4-Ethyltoluene	212	<b>189</b>	<b>89</b>	67-130	
108-67-8	1,3,5-Trimethylbenzene	212	<b>178</b>	<b>84</b>	67-124	
95-63-6	1,2,4-Trimethylbenzene	212	<b>186</b>	<b>88</b>	67-129	
100-44-7	Benzyl Chloride	212	<b>231</b>	<b>109</b>	79-138	
541-73-1	1,3-Dichlorobenzene	212	<b>194</b>	<b>92</b>	65-136	
106-46-7	1,4-Dichlorobenzene	213	<b>192</b>	<b>90</b>	66-141	
95-50-1	1,2-Dichlorobenzene	212	<b>194</b>	<b>92</b>	67-136	
120-82-1	1,2,4-Trichlorobenzene	212	<b>222</b>	<b>105</b>	64-134	
91-20-3	Naphthalene	214	<b>213</b>	<b>100</b>	62-136	
87-68-3	Hexachlorobutadiene	213	<b>196</b>	<b>92</b>	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.



25-May-2017

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

Tel: (937) 356-6204  
Fax:

Re: Stony Hollow Landfill

Work Order: **1705795**

Dear Alex,

ALS Environmental received 2 samples on 22-May-2017 01:13 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

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**Client:** Waste Management  
**Project:** Stony Hollow Landfill  
**Work Order:** 1705795

**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>
1705795-01	SHAA-S-02	Air		5/20/2017	5/22/2017	<input type="checkbox"/>
1705795-02	SHAA-N-02	Air		5/20/2017	5/22/2017	<input type="checkbox"/>

---

**Client:** Waste Management  
**Project:** Stony Hollow Landfill  
**Work Order:** 1705795

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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:** 1705795

**Analytical Results**

**Lab ID:** 1705795-01A  
**Client Sample ID:** SHAA-S-02

**Collection Date:** 5/20/2017  
**Matrix:** AIR

**Analyses**

<b>ALDEHYDE(S) BY OSHA 1007 MOD.</b>		Method: <b>O1007</b>	Time (Min): <b>1416</b>	Analyst: <b>JMB</b>
Date Analyzed: 5/23/2017 01:35		Reporting Limit		
	µg/sample	µg/sample	ppm	
Acetaldehyde	ND	0.090	<0.0015	
Benzaldehyde	ND	0.090	<0.0010	
Butyraldehyde	ND	0.090	<0.0013	
Crotonaldehyde	ND	0.090	<0.0023	
<b>Formaldehyde</b>	<b>0.16</b>	<b>0.090</b>	<b>0.0033</b>	
Hexanaldehyde	ND	0.18	<0.0032	
Propionaldehyde	ND	0.090	<0.0019	

**Lab ID:** 1705795-02A  
**Client Sample ID:** SHAA-N-02

**Collection Date:** 5/20/2017  
**Matrix:** AIR

**Analyses**

<b>ALDEHYDE(S) BY OSHA 1007 MOD.</b>		Method: <b>O1007</b>	Time (Min): <b>1431</b>	Analyst: <b>JMB</b>
Date Analyzed: 5/23/2017 01:35		Reporting Limit		
	µg/sample	µg/sample	ppm	
Acetaldehyde	ND	0.090	<0.0015	
Benzaldehyde	ND	0.090	<0.0010	
Butyraldehyde	ND	0.090	<0.0013	
Crotonaldehyde	ND	0.090	<0.0023	
Formaldehyde	ND	0.090	<0.0018	
Hexanaldehyde	ND	0.18	<0.0032	
Propionaldehyde	ND	0.090	<0.0019	

**Note:**

**Client:** Waste Management  
**Work Order:** 1705795  
**Project:** Stony Hollow Landfill

**QC BATCH REPORT**

Batch ID: **43350** Instrument ID: **HPLC2** Method: **O1007**

MBLK		Sample ID: <b>MBLK-43350-43350</b>			Units: <b>µg/sample</b>		Analysis Date: <b>5/23/2017 01:35 AM</b>			
Client ID:		Run ID: <b>HPLC2_170523A</b>			SeqNo: <b>1511800</b>		Prep Date: <b>5/23/2017</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	0.045								
Benzaldehyde	ND	0.045								
Butyraldehyde	ND	0.045								
Crotonaldehyde	ND	0.045								
Formaldehyde	ND	0.045								
Hexanaldehyde	ND	0.090								
Propionaldehyde	ND	0.045								

LCS		Sample ID: <b>LCS-43350-43350</b>			Units: <b>µg/sample</b>		Analysis Date: <b>5/23/2017 01:35 AM</b>			
Client ID:		Run ID: <b>HPLC2_170523A</b>			SeqNo: <b>1511801</b>		Prep Date: <b>5/23/2017</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetaldehyde	1.603	0.045	1.5	0	107	70-130	0			
Benzaldehyde	1.503	0.045	1.5	0	100	70-130	0			
Butyraldehyde	1.543	0.045	1.5	0	103	70-130	0			
Crotonaldehyde	1.5	0.045	1.5	0	100	70-130	0			
Formaldehyde	1.516	0.045	1.5	0	101	70-130	0			
Hexanaldehyde	3	0.090	3	0	100	70-130	0			
Propionaldehyde	1.548	0.045	1.5	0	103	70-130	0			

LCSD		Sample ID: <b>LCSD-43350-43350</b>			Units: <b>µg/sample</b>		Analysis Date: <b>5/23/2017 01:35 AM</b>			
Client ID:		Run ID: <b>HPLC2_170523A</b>			SeqNo: <b>1511812</b>		Prep Date: <b>5/23/2017</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetaldehyde	1.524	0.045	1.5	0	102	70-130	1.603	5.03	20	
Benzaldehyde	1.433	0.045	1.5	0	95.6	70-130	1.503	4.76	20	
Butyraldehyde	1.477	0.045	1.5	0	98.5	70-130	1.543	4.4	20	
Crotonaldehyde	1.43	0.045	1.5	0	95.4	70-130	1.5	4.74	20	
Formaldehyde	1.438	0.045	1.5	0	95.8	70-130	1.516	5.28	20	
Hexanaldehyde	2.917	0.090	3	0	97.2	70-130	3	2.81	20	
Propionaldehyde	1.477	0.045	1.5	0	98.5	70-130	1.548	4.68	20	

The following samples were analyzed in this batch: 1705795-01A 1705795-02A

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

**Client:** Waste Management  
**Project:** Stony Hollow Landfill  
**WorkOrder:** 1705795

**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: 22-May-17 13:13

Work Order: 1705795

Received by: JNW

Checklist completed by: J an Wilcox 22-May-17  
eSignature Date

Reviewed by: Rob Nieman 23-May-17  
eSignature Date

Matrices:

Carrier name: ALSHN

- 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:



**ANALYTICAL SERVICES REQUEST  
AND CHAIN OF CUSTODY**

Send to LJB: <input type="checkbox"/> Invoice <input checked="" type="checkbox"/> Results	Send to: <input checked="" type="checkbox"/> Invoice <input checked="" type="checkbox"/> Results
Contact: Alex Zelles	Contact: Peter Lucas
Address/Email: azelles@ljbinc.com 2500 Newmark Drive Miamisburg, OH 45342	Address/Email: plucas2@wm.com
Phone: 937-259-5022 or 630-632-5859	Phone:
Fax: 1705795	Fax:

LJB job #: \_\_\_\_\_ P.O. #: Per Peter Lucas/WM

Sample site: Stony Hollow Landfill

Sampled by: Alex Zelles + Shannon Mueller

Signature: *Shannon Mueller*

Rush  Phone results  
 Standard turnaround  Fax results  
 Need by: 3-day turnaround  Email results

Special instructions:

Sample ID	Date	Time	Matrix	Comp	Grab	# Btls	OSHA-1007	Analysis Requested				Remarks:
SHAA-S-02	5/19/17 - 5/20/17	0935 - 0911	Air		X	1	X	01				
SHAA-N-02	5/19/17 - 5/20/17	0904 - 0855	Air		X	1	X	02				

Sample ID	Date	Time	Matrix	Comp	Grab	# Btls
SHAA-S-02	5/19/17 - 5/20/17	0935 - 0911	Air		X	1
SHAA-N-02	5/19/17 - 5/20/17	0904 - 0855	Air		X	1

**ALS LAB USE ONLY**

COOLER TEMP: \_\_\_\_\_ °C pH ADJUSTMENTS: \_\_\_\_\_

COOLING METHOD: NONE COOLER WET ICE DRY ICE ICE PACK

DELIVERY METHOD: CLIENT DROP BOX FEDEX UPS  
 STD MAIL PRY MAIL ALS COURIER OTHER: \_\_\_\_\_

CUSTODY SEALS: NONE COOLER PACKAGE SAMPLES

EQUIP. RETURNED: \_\_\_\_\_

Relinquished by: <i>Shannon Mueller</i>	Date/time: 5/22/17 0922	Received by: <i>Rachel Adams Transport</i>	Date/time: 5/22/17 12:28
Relinquished by: <i>Alex Zelles</i>	Date/time: 5/22/17 13:13	Received by: <i>JL ATC</i>	Date/time: 5/22/17 13:13
Relinquished by: _____	Date/time: _____	Received at lab by: _____	Date/time: _____