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SCS ENGINEERS

TECHNICAL MEMORANDUM

DATE: March 14, 2014

TO: Jim Denson, Waste Management

Cc: Jeff O'Leary, William Carr, and Tim Watson, Waste Management
Larry Pierce, Riverbend Landfill, Company

FROM: Tim Browning, RG, LG, Louis Caruso, and Jason Davendonis,
SCS Engineers

SUBJECT: **Landfill Module 8A January 2014 Leachate Seep Soil Sampling Analytical Results**

At the request of Riverbend Landfill Company (RLC), SCS Engineers (SCS) completed a review of analytical data for soil samples collected by RLC personnel in response to the occurrence of a leachate seep along the side slope of Module 8A at the Riverbend Landfill (RL) in McMinnville, Oregon.

SCS understands that the following activities were performed by RLC personnel in response to the discovering the seep on January 28, 2014, which was localized to an area below where the seep occurred:

1. Collected a surface soil sample representing the soil potentially impacted by the seep on January 29, 2014. This sample was collected from the ground surface where the leachate gathered beneath the seep.

2. Collected a surface soil sample representing background soil conditions on January 29, 2014. This sample was collected at the ground surface from native soil away from the area potentially impacted by the seep.

3. Collected a liquid leachate sample representing the release source on January 30, 2014.

4. Performed soil excavation activities and collected a confirmatory soil sample representing the soil conditions after the potentially impacted soil was excavated on January 31, 2014. This confirmatory soil sample was collected at approximately three feet below ground surface (ft-bgs).

The soil and liquid samples were submitted to TestAmerica Laboratories, Inc. in Beaverton, Oregon and the laboratory analytical reports are provided in Attachment 1. Samples were tested for metals using EPA 6000 and 7000 test methods, volatile organic compounds (VOCs) using test method 8260B, and mercury using test method 7471a. Chloride and moisture content were also tested.

Analytical results of the leachate source liquid and soil samples showed the following:

- Inorganic parameters (including trace metals) detected above method detection limits in the source liquid were arsenic (0.13 milligrams/liter [mg/L]), barium (0.67 mg/L), chromium (0.21 mg/L), and chloride (1,200 mg/L).

- VOC's detected in the source liquid were acetone (0.780 mg/L), 2-butanone (MEK) (0.770 mg/L), and 2-hexanone (0.031 mg/L).

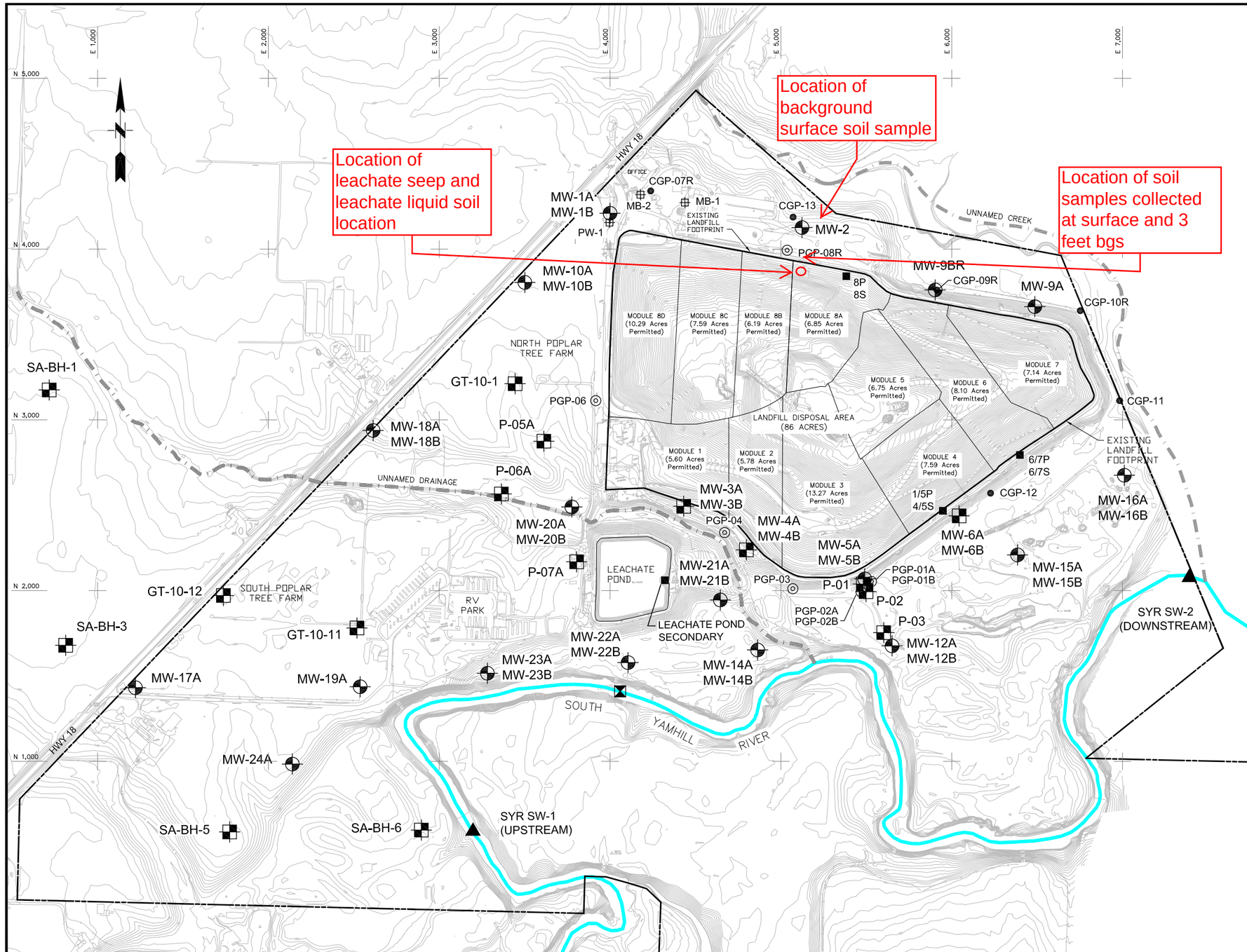
- VOCs were not detected in the surface and confirmatory soil samples suggesting that the limited number of VOCs identified in the leachate source sample did not adversely impact the soil sample collected where leachate gathered beneath the seep.

- Only four metals (arsenic, barium, chromium [Cr], and lead) were detected in the surface and confirmatory soil samples. For the most part, these metals are reflective of local background concentrations and do not appear to be associated with the leachate seep (see Table 1). This is believed to be the case, in part, because they occur in similar concentrations in the background sample, and occur at lower concentrations in the shallow soil sample than in the confirmatory sample, with the exception of Cr. Each metal result is below the concentrations in typical south Willamette Valley soils published by the DEQ in March 2013[1], except for Cr. Since the VOCs identified in the leachate source were not present in the shallow soil sample, the somewhat elevated Cr concentration in this sample is not believed to be from the leachate seep.

In summary, the metals detected in the surface and confirmatory soil sample can be generally characterized as background components of the shallow soils underlying the area and do not appear to be associated with the leachate seep. VOCs that were identified in the leachate source liquid were not detected in these soil samples. Based on the soil analytical data provided to SCS and included with this memorandum, SCS believes the shallow and confirmatory soil samples collected by RLC were not affected from the leachate seep.

Attachments: Table 1: Summary of Total Metals and Detected VOC Concentrations in Soil Samples
Attachment 1: Laboratory Analytical Reports

[1] Oregon Department of Environmental Quality, 2013, Background Levels of Metals in Soils for Cleanups, March 20.



LEGEND:

- Topographic Contours (Surveyed)
- Topographic Contours (USGS)
- Property Boundary
- Flow Line - Yamhill River
- Flow Line - Tributary Stream
- MW-19A — Groundwater Monitoring Well
- P-05A — Piezometer
- MB-2 — On-Site Water Well
- South Yamhill River Gauging Station
- CGP-11 — Compliance Landfill Gas Monitoring Probe
- PGP-06 — Performance Evaluation Landfill Gas Monitoring Probe
- 6/7P 6/7S — LCRS and LSCS Monitoring Location
- SYR SW-1 — South Yamhill River Sampling Location (Approximate)

SOURCE:

1) Existing contours based on aerial topography provided by Aero-Metric, flown on February 15, 2013. Contours are based on NAVD 88.

2) Horizontal Datum: Assumed
Iron pipe at scale house = N4000.000 E4000.000
Iron pipe at maintenance building = N2825.685 E4000.000

NOTES:

1) Monitoring wells and piezometers with "A" designation are screened in the shallow (Silt-Clay) water-bearing zone, and monitoring wells and piezometers with "B" designation are screened in the deeper (Sand-Gravel) water-bearing zone.

2) Piezometers with "GT" and "SA-BH" designations are screened in the shallow (Silt-Clay) water-bearing zone.

3) Leachate Collection and Removal System (LCRS) monitoring locations are identified by a "P" designation and Leachate Secondary Containment System (LSCS) monitoring locations are identified with a "S" designation.

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0 600 1200
SCALE IN FEET

PROJECT NO. 04213028.00	DES BY J.D.
SCALE AS SHOWN	CHK BY G.H.
CAD FILE FIGURE 1-2	APP BY L.C.

SITE PLAN AND MONITORING LOCATIONS
ENVIRONMENTAL MONITORING PLAN
RIVERBEND LANDFILL
McMINNVILLE, OREGON

DATE JULY 2013
FIGURE 1-2

Table 1

Table 1
Summary of Detected Metals and VOC Concentrations
Soil Assessment and Leachate Source Samples
Riverbend Landfill

Soil Sample Location	Date	Arsenic Total	Barium Total	Chromium Total	Lead Total	Acetone	2-Butanone (MEK)	2-Hexanone	Chloride
Regional Background[a]		18	730	100	28	--	--	--	--
Background Soil	29-Jan-14	7.8	210	31	12	ND (<0.026)	ND (<0.026)	ND (<0.026)	ND (<13)
Impacted Soil	29-Jan-14	7.4	220	150	11	ND (<0.024)	ND (<0.024)	ND (<0.024)	32
Confirmatory Soil	31-Jan-14	9.0	250	42	27	ND (<0.031)	ND (<0.031)	ND (<0.031)	23
Leachate Source	30-Jan-14	0.13	0.67	0.21	ND (<0.020)	0.780	0.770	0.031	1200

Notes:

[a] Oregon Department of Environmental Quality, 2013, Background Levels of Metals in Soils for Cleanups, March 20.

All results in mg/Kg except the leachate source sample which is in mg/L.

"--" Regional background data not available

ND (<0.020) indicates analyte not detected and the reporting limit.

Attachment 1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Portland
9405 SW Nimbus Ave.
Beaverton, OR 97008
Tel: (503)906-9200

TestAmerica Job ID: 250-16895-1
Client Project/Site: Riverbend Landfill

For:
Waste Management
13469 SW Highway 18
McMinnville, Oregon 97128

Attn: Mr. Jeff O'Leary

Authorized for release by:
2/4/2014 11:39:23 AM
Erica Fot, Project Management Assistant II
erica.fot@testamericainc.com

Designee for

Vanessa Berry, Project Manager I
(503)906-9233
vanessa.berry@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
250-16895-1	Impacted Soil	Solid	01/29/14 14:45	01/29/14 16:30
250-16895-2	Unimpacted Soil	Solid	01/29/14 15:00	01/29/14 16:30

Job ID: 250-16895-1

Laboratory: TestAmerica Portland

Narrative

Job Narrative
250-16895-1

Comments
No additional comments.

Receipt
The samples were received on 1/29/2014 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 2.8º C.

GC/MS VOA
No analytical or quality issues were noted.

Metals
Method 6020: The serial dilution performed for the following sample(s) associated with batch 250-24054 for As was outside control limits:
(250-16763-1 SD)

No other analytical or quality issues were noted.

General Chemistry
No other analytical or quality issues were noted.

Definitions/Glossary

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: Impacted Soil
Date Collected: 01/29/14 14:45
Date Received: 01/29/14 16:30

Lab Sample ID: 250-16895-1
Matrix: Solid
Percent Solids: 83.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,1,1-Trichloroethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,1,2,2-Tetrachloroethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,1,2-Trichloroethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,1-Dichloroethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,1-Dichloroethene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,1-Dichloropropene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2,3-Trichlorobenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2,3-Trichloropropane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2,4-Trichlorobenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2,4-Trimethylbenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2-Dibromo-3-Chloropropane	ND		12		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2-Dibromoethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2-Dichlorobenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2-Dichloroethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2-Dichloroethene, Total	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,2-Dichloropropane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,3,5-Trimethylbenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,3-Dichlorobenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,3-Dichloropropane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
1,4-Dichlorobenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
2,2-Dichloropropane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
2-Butanone (MEK)	ND		24		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
2-Chlorotoluene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
2-Hexanone	ND		24		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
4-Chlorotoluene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
4-Isopropyltoluene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
4-Methyl-2-pentanone (MIBK)	ND		24		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Acetone	ND		24		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Benzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Bromobenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Bromoform	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Bromomethane	ND		12		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Carbon tetrachloride	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Chlorobenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Chlorobromomethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Chlorodibromomethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Chloroethane	ND		12		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Chloroform	ND		12		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Chloromethane	ND		12		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
cis-1,2-Dichloroethene	ND		3.0		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
cis-1,3-Dichloropropene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Dibromomethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Dichlorobromomethane	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Dichlorodifluoromethane	ND		12		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Ethylbenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Hexachlorobutadiene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Isopropylbenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Methyl tert-butyl ether	ND		24		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Impacted Soil — **Lab Sample ID: 250-16895-1**
Date Collected: 01/29/14 14:45 — **Matrix: Solid**
Date Received: 01/29/14 16:30 — **Percent Solids: 83.7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
m-Xylene & p-Xylene	ND		3.0		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Naphthalene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
n-Butylbenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
N-Propylbenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
o-Xylene	ND		3.0		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
sec-Butylbenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Styrene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
tert-Butylbenzene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Tetrachloroethene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Toluene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
trans-1,2-Dichloroethene	ND		3.0		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
trans-1,3-Dichloropropene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Trichloroethene	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Trichlorofluoromethane	ND		12		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Vinyl chloride	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1
Xylenes, Total	ND		5.9		ug/Kg	☼	02/03/14 11:04	02/03/14 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*58 - 140*	*02/03/14 11:04*	*02/03/14 14:21*	*1*
4-Bromofluorobenzene (Surr)	*91*		*76 - 127*	*02/03/14 11:04*	*02/03/14 14:21*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 121*	*02/03/14 11:04*	*02/03/14 14:21*	*1*
Toluene-d8 (Surr)	*94*		*80 - 126*	*02/03/14 11:04*	*02/03/14 14:21*	*1*

Client Sample ID: Unimpacted Soil — **Lab Sample ID: 250-16895-2**
Date Collected: 01/29/14 15:00 — **Matrix: Solid**
Date Received: 01/29/14 16:30 — **Percent Solids: 78.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,1,1-Trichloroethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,1,2,2-Tetrachloroethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,1,2-Trichloroethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,1-Dichloroethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,1-Dichloroethene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,1-Dichloropropene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2,3-Trichlorobenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2,3-Trichloropropane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2,4-Trichlorobenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2,4-Trimethylbenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2-Dibromo-3-Chloropropane	ND		13		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2-Dibromoethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2-Dichlorobenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2-Dichloroethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2-Dichloroethene, Total	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,2-Dichloropropane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,3,5-Trimethylbenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,3-Dichlorobenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,3-Dichloropropane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
1,4-Dichlorobenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
2,2-Dichloropropane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1

Client Sample Results

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Unimpacted Soil
Date Collected: 01/29/14 15:00
Date Received: 01/29/14 16:30

Lab Sample ID: 250-16895-2
Matrix: Solid
Percent Solids: 78.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		26		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
2-Chlorotoluene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
2-Hexanone	ND		26		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
4-Chlorotoluene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
4-Isopropyltoluene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
4-Methyl-2-pentanone (MIBK)	ND		26		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Acetone	ND		26		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Benzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Bromobenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Bromoform	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Bromomethane	ND		13		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Carbon tetrachloride	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Chlorobenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Chlorobromomethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Chlorodibromomethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Chloroethane	ND		13		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Chloroform	ND		13		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Chloromethane	ND		13		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
cis-1,2-Dichloroethene	ND		3.2		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
cis-1,3-Dichloropropene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Dibromomethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Dichlorobromomethane	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Dichlorodifluoromethane	ND		13		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Ethylbenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Hexachlorobutadiene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Isopropylbenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Methyl tert-butyl ether	ND		26		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Methylene Chloride	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
m-Xylene & p-Xylene	ND		3.2		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Naphthalene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
n-Butylbenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
N-Propylbenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
o-Xylene	ND		3.2		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
sec-Butylbenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Styrene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
tert-Butylbenzene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Tetrachloroethene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Toluene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
trans-1,2-Dichloroethene	ND		3.2		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
trans-1,3-Dichloropropene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Trichloroethene	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Trichlorofluoromethane	ND		13		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Vinyl chloride	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1
Xylenes, Total	ND		6.4		ug/Kg	☼	02/03/14 11:04	02/03/14 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*58 - 140*	*02/03/14 11:04*	*02/03/14 15:02*	*1*
4-Bromofluorobenzene (Surr)	*95*		*76 - 127*	*02/03/14 11:04*	*02/03/14 15:02*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 121*	*02/03/14 11:04*	*02/03/14 15:02*	*1*
Toluene-d8 (Surr)	*97*		*80 - 126*	*02/03/14 11:04*	*02/03/14 15:02*	*1*

Client Sample Results

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: Impacted Soil — **Lab Sample ID: 250-16895-1**
Date Collected: 01/29/14 14:45 — **Matrix: Solid**
Date Received: 01/29/14 16:30 — **Percent Solids: 83.7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**7.4**		0.59		mg/Kg	☼	01/29/14 21:05	01/30/14 13:29	10
Barium	**220**		0.59		mg/Kg	☼	01/29/14 21:05	01/30/14 13:29	10
Cadmium	ND		0.59		mg/Kg	☼	01/29/14 21:05	01/30/14 13:29	10
Chromium	**150**		1.2		mg/Kg	☼	01/29/14 21:05	01/30/14 13:29	10
Lead	**11**		0.59		mg/Kg	☼	01/29/14 21:05	01/30/14 21:33	10
Selenium	ND		0.59		mg/Kg	☼	01/29/14 21:05	01/30/14 13:29	10
Silver	ND		0.59		mg/Kg	☼	01/29/14 21:05	01/30/14 13:29	10

Client Sample ID: Unimpacted Soil — **Lab Sample ID: 250-16895-2**
Date Collected: 01/29/14 15:00 — **Matrix: Solid**
Date Received: 01/29/14 16:30 — **Percent Solids: 78.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**7.8**		0.63		mg/Kg	☼	01/29/14 21:05	01/30/14 13:25	10
Barium	**210**		0.63		mg/Kg	☼	01/29/14 21:05	01/30/14 13:25	10
Cadmium	ND		0.63		mg/Kg	☼	01/29/14 21:05	01/30/14 13:25	10
Chromium	**31**		1.3		mg/Kg	☼	01/29/14 21:05	01/30/14 13:25	10
Lead	**12**		0.63		mg/Kg	☼	01/29/14 21:05	01/30/14 21:29	10
Selenium	ND		0.63		mg/Kg	☼	01/29/14 21:05	01/30/14 13:25	10
Silver	ND		0.63		mg/Kg	☼	01/29/14 21:05	01/30/14 13:25	10

Client Sample Results

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: Impacted Soil — **Lab Sample ID: 250-16895-1**
Date Collected: 01/29/14 14:45 — **Matrix: Solid**
Date Received: 01/29/14 16:30 — **Percent Solids: 83.7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		100		ug/Kg	☼	01/30/14 17:15	01/30/14 21:34	1

Client Sample ID: Unimpacted Soil — **Lab Sample ID: 250-16895-2**
Date Collected: 01/29/14 15:00 — **Matrix: Solid**
Date Received: 01/29/14 16:30 — **Percent Solids: 78.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		110		ug/Kg	☼	01/30/14 17:15	01/30/14 21:37	1

Client Sample Results

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

General Chemistry

Client Sample ID: Impacted Soil — **Lab Sample ID: 250-16895-1**
Date Collected: 01/29/14 14:45 — **Matrix: Solid**
Date Received: 01/29/14 16:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16		0.010		%			01/29/14 22:20	1
Percent Solids	84		0.010		%			01/29/14 22:20	1

Client Sample ID: Unimpacted Soil — **Lab Sample ID: 250-16895-2**
Date Collected: 01/29/14 15:00 — **Matrix: Solid**
Date Received: 01/29/14 16:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		0.010		%			01/29/14 22:20	1
Percent Solids	78		0.010		%			01/29/14 22:20	1

Client Sample Results

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

General Chemistry - Soluble

Client Sample ID: Impacted Soil — **Lab Sample ID: 250-16895-1**
Date Collected: 01/29/14 14:45 — **Matrix: Solid**
Date Received: 01/29/14 16:30 — **Percent Solids: 83.7**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32**		12		mg/Kg	☼		01/30/14 21:00	1

Client Sample ID: Unimpacted Soil — **Lab Sample ID: 250-16895-2**
Date Collected: 01/29/14 15:00 — **Matrix: Solid**
Date Received: 01/29/14 16:30 — **Percent Solids: 78.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		13		mg/Kg	☼		01/30/14 21:15	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: 250-16895-2 MS
Matrix: Solid
Analysis Batch: 211143

Client Sample ID: Unimpacted Soil
Prep Type: Total/NA
Prep Batch: 211139

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		64.3	56.5		ug/Kg	☼	88	70 - 135
1,1-Dichloroethane	ND		64.3	61.4		ug/Kg	☼	95	70 - 135
1,1-Dichloroethene	ND		64.3	62.0		ug/Kg	☼	96	79 - 135
1,2-Dichloropropane	ND		64.3	60.0		ug/Kg	☼	93	72 - 121
1,3-Dichlorobenzene	ND		64.3	54.9		ug/Kg	☼	85	69 - 135
Benzene	ND		64.3	61.2		ug/Kg	☼	95	75 - 135
Carbon tetrachloride	ND		64.3	60.8		ug/Kg	☼	94	69 - 138
Chlorobenzene	ND		64.3	57.1		ug/Kg	☼	89	78 - 135
Chloroform	ND		64.3	61.1		ug/Kg	☼	95	73 - 123
Dichlorobromomethane	ND		64.3	62.6		ug/Kg	☼	97	73 - 135
Ethylbenzene	ND		64.3	57.7		ug/Kg	☼	90	73 - 125
Methylene Chloride	ND		64.3	59.3		ug/Kg	☼	88	76 - 136
Tetrachloroethene	ND		64.3	57.8		ug/Kg	☼	90	76 - 135
Toluene	ND		64.3	61.8		ug/Kg	☼	96	77 - 122
trans-1,2-Dichloroethene	ND		64.3	61.4		ug/Kg	☼	95	77 - 135
Trichloroethene	ND		64.3	60.3		ug/Kg	☼	94	77 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*58 - 140*
4-Bromofluorobenzene (Surr)	*93*		*76 - 127*
Dibromofluoromethane (Surr)	*102*		*75 - 121*
Toluene-d8 (Surr)	*97*		*80 - 126*

Lab Sample ID: 250-16895-2 MSD
Matrix: Solid
Analysis Batch: 211143

Client Sample ID: Unimpacted Soil
Prep Type: Total/NA
Prep Batch: 211139

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		62.8	53.9		ug/Kg	☼	86	70 - 135	5	20
1,1-Dichloroethane	ND		62.8	58.5		ug/Kg	☼	93	70 - 135	5	20
1,1-Dichloroethene	ND		62.8	59.6		ug/Kg	☼	95	79 - 135	4	20
1,2-Dichloropropane	ND		62.8	56.3		ug/Kg	☼	90	72 - 121	6	20
1,3-Dichlorobenzene	ND		62.8	45.6		ug/Kg	☼	73	69 - 135	19	20
Benzene	ND		62.8	58.0		ug/Kg	☼	92	75 - 135	5	20
Carbon tetrachloride	ND		62.8	56.8		ug/Kg	☼	90	69 - 138	7	20
Chlorobenzene	ND		62.8	51.0		ug/Kg	☼	81	78 - 135	11	20
Chloroform	ND		62.8	57.8		ug/Kg	☼	92	73 - 123	6	20
Dichlorobromomethane	ND		62.8	58.4		ug/Kg	☼	93	73 - 135	7	20
Ethylbenzene	ND		62.8	50.6		ug/Kg	☼	81	73 - 125	13	20
Methylene Chloride	ND		62.8	56.3		ug/Kg	☼	85	76 - 136	5	21
Tetrachloroethene	ND		62.8	50.9		ug/Kg	☼	81	76 - 135	13	20
Toluene	ND		62.8	56.1		ug/Kg	☼	89	77 - 122	10	20
trans-1,2-Dichloroethene	ND		62.8	58.7		ug/Kg	☼	94	77 - 135	4	20
Trichloroethene	ND		62.8	55.7		ug/Kg	☼	89	77 - 135	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*58 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 250-16895-2 MSD
Matrix: Solid
Analysis Batch: 211143

Client Sample ID: Unimpacted Soil
Prep Type: Total/NA
Prep Batch: 211139

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		76 - 127
Dibromofluoromethane (Surr)	100		75 - 121
Toluene-d8 (Surr)	95		80 - 126

Lab Sample ID: MB 280-211143/5
Matrix: Solid
Analysis Batch: 211143

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,1-Dichloroethane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,1-Dichloroethene	ND		5.0		ug/Kg			02/03/14 09:48	1
1,1-Dichloropropene	ND		5.0		ug/Kg			02/03/14 09:48	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg			02/03/14 09:48	1
1,2-Dibromoethane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
1,2-Dichloroethane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,2-Dichloroethene, Total	ND		5.0		ug/Kg			02/03/14 09:48	1
1,2-Dichloropropane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
1,3-Dichloropropane	ND		5.0		ug/Kg			02/03/14 09:48	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
2,2-Dichloropropane	ND		5.0		ug/Kg			02/03/14 09:48	1
2-Butanone (MEK)	ND		20		ug/Kg			02/03/14 09:48	1
2-Chlorotoluene	ND		5.0		ug/Kg			02/03/14 09:48	1
2-Hexanone	ND		20		ug/Kg			02/03/14 09:48	1
4-Chlorotoluene	ND		5.0		ug/Kg			02/03/14 09:48	1
4-Isopropyltoluene	ND		5.0		ug/Kg			02/03/14 09:48	1
4-Methyl-2-pentanone (MIBK)	ND		20		ug/Kg			02/03/14 09:48	1
Acetone	ND		20		ug/Kg			02/03/14 09:48	1
Benzene	ND		5.0		ug/Kg			02/03/14 09:48	1
Bromobenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
Bromoform	ND		5.0		ug/Kg			02/03/14 09:48	1
Bromomethane	ND		10		ug/Kg			02/03/14 09:48	1
Carbon tetrachloride	ND		5.0		ug/Kg			02/03/14 09:48	1
Chlorobenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
Chlorobromomethane	ND		5.0		ug/Kg			02/03/14 09:48	1
Chlorodibromomethane	ND		5.0		ug/Kg			02/03/14 09:48	1
Chloroethane	ND		10		ug/Kg			02/03/14 09:48	1
Chloroform	ND		10		ug/Kg			02/03/14 09:48	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-211143/5
Matrix: Solid
Analysis Batch: 211143

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		10		ug/Kg			02/03/14 09:48	1
cis-1,2-Dichloroethene	ND		2.5		ug/Kg			02/03/14 09:48	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg			02/03/14 09:48	1
Dibromomethane	ND		5.0		ug/Kg			02/03/14 09:48	1
Dichlorobromomethane	ND		5.0		ug/Kg			02/03/14 09:48	1
Dichlorodifluoromethane	ND		10		ug/Kg			02/03/14 09:48	1
Ethylbenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
Hexachlorobutadiene	ND		5.0		ug/Kg			02/03/14 09:48	1
Isopropylbenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
Methyl tert-butyl ether	ND		20		ug/Kg			02/03/14 09:48	1
Methylene Chloride	ND		5.0		ug/Kg			02/03/14 09:48	1
m-Xylene & p-Xylene	ND		2.5		ug/Kg			02/03/14 09:48	1
Naphthalene	ND		5.0		ug/Kg			02/03/14 09:48	1
n-Butylbenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
N-Propylbenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
o-Xylene	ND		2.5		ug/Kg			02/03/14 09:48	1
sec-Butylbenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
Styrene	ND		5.0		ug/Kg			02/03/14 09:48	1
tert-Butylbenzene	ND		5.0		ug/Kg			02/03/14 09:48	1
Tetrachloroethene	ND		5.0		ug/Kg			02/03/14 09:48	1
Toluene	ND		5.0		ug/Kg			02/03/14 09:48	1
trans-1,2-Dichloroethene	ND		2.5		ug/Kg			02/03/14 09:48	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg			02/03/14 09:48	1
Trichloroethene	ND		5.0		ug/Kg			02/03/14 09:48	1
Trichlorofluoromethane	ND		10		ug/Kg			02/03/14 09:48	1
Vinyl chloride	ND		5.0		ug/Kg			02/03/14 09:48	1
Xylenes, Total	ND		5.0		ug/Kg			02/03/14 09:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*58 - 140*		*02/03/14 09:48*	*1*
4-Bromofluorobenzene (Surr)	*89*		*76 - 127*		*02/03/14 09:48*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 121*		*02/03/14 09:48*	*1*
Toluene-d8 (Surr)	*96*		*80 - 126*		*02/03/14 09:48*	*1*

Lab Sample ID: LCS 280-211143/4
Matrix: Solid
Analysis Batch: 211143

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	43.4		ug/Kg		87	70 - 135
1,1-Dichloroethane	50.0	45.6		ug/Kg		91	70 - 135
1,1-Dichloroethene	50.0	44.9		ug/Kg		90	79 - 135
1,2-Dichloropropane	50.0	45.0		ug/Kg		90	72 - 121
1,3-Dichlorobenzene	50.0	47.0		ug/Kg		94	69 - 135
Benzene	50.0	46.3		ug/Kg		93	75 - 135
Carbon tetrachloride	50.0	45.2		ug/Kg		90	69 - 138
Chlorobenzene	50.0	45.7		ug/Kg		91	78 - 135
Chloroform	50.0	45.3		ug/Kg		91	73 - 123

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-211143/4 — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 211143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorobromomethane	50.0	46.8		ug/Kg		94	73 - 135
Ethylbenzene	50.0	45.9		ug/Kg		92	73 - 125
Methylene Chloride	50.0	43.7		ug/Kg		87	76 - 136
Tetrachloroethene	50.0	45.6		ug/Kg		91	76 - 135
Toluene	50.0	46.9		ug/Kg		94	77 - 122
trans-1,2-Dichloroethene	50.0	46.5		ug/Kg		93	77 - 135
Trichloroethene	50.0	46.3		ug/Kg		93	77 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*58 - 140*
4-Bromofluorobenzene (Surr)	*90*		*76 - 127*
Dibromofluoromethane (Surr)	*102*		*75 - 121*
Toluene-d8 (Surr)	*96*		*80 - 126*

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 250-24054/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24102 — **Prep Batch: 24054**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.48		mg/Kg		01/29/14 21:05	01/30/14 13:08	10
Barium	ND		0.48		mg/Kg		01/29/14 21:05	01/30/14 13:08	10
Cadmium	ND		0.48		mg/Kg		01/29/14 21:05	01/30/14 13:08	10
Chromium	ND		0.95		mg/Kg		01/29/14 21:05	01/30/14 13:08	10
Selenium	ND		0.48		mg/Kg		01/29/14 21:05	01/30/14 13:08	10
Silver	ND		0.48		mg/Kg		01/29/14 21:05	01/30/14 13:08	10

Lab Sample ID: MB 250-24054/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24103 — **Prep Batch: 24054**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.48		mg/Kg		01/29/14 21:05	01/30/14 21:15	10

Lab Sample ID: LCS 250-24054/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24102 — **Prep Batch: 24054**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	49.1	49.6		mg/Kg		101	80 - 120
Barium	49.1	47.4		mg/Kg		97	80 - 120
Cadmium	49.1	51.2		mg/Kg		104	80 - 120
Chromium	49.1	51.3		mg/Kg		105	80 - 120
Selenium	49.1	47.1		mg/Kg		96	80 - 120
Silver	24.5	25.2		mg/Kg		103	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 250-24054/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24103 — **Prep Batch: 24054**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	49.1	48.9		mg/Kg		100	80 - 120

Lab Sample ID: 250-16763-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24102 — **Prep Batch: 24054**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		52.7	63.3		mg/Kg	☼	119	75 - 125
Barium	59		52.7	125		mg/Kg	☼	125	75 - 125
Cadmium	ND		52.7	68.2	F1	mg/Kg	☼	129	75 - 125
Chromium	6.3		52.7	71.4		mg/Kg	☼	124	75 - 125
Selenium	ND		52.7	59.7		mg/Kg	☼	113	75 - 125
Silver	ND		26.3	34.7	F1	mg/Kg	☼	132	75 - 125

Lab Sample ID: 250-16763-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24102 — **Prep Batch: 24054**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		52.2	64.4		mg/Kg	☼	123	75 - 125	2	40
Barium	59		52.2	131	F1	mg/Kg	☼	138	75 - 125	5	40
Cadmium	ND		52.2	67.0	F1	mg/Kg	☼	128	75 - 125	2	40
Chromium	6.3		52.2	74.3	F1	mg/Kg	☼	130	75 - 125	4	40
Selenium	ND		52.2	60.0		mg/Kg	☼	115	75 - 125	0	40
Silver	ND		26.1	34.4	F1	mg/Kg	☼	132	75 - 125	1	40

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 250-24093/10-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24097 — **Prep Batch: 24093**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		87		ug/Kg		01/30/14 17:15	01/30/14 21:24	1

Lab Sample ID: LCS 250-24093/11-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24097 — **Prep Batch: 24093**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	578	616		ug/Kg		107	80 - 120

Lab Sample ID: 250-16895-2 MS — **Client Sample ID: Unimpacted Soil**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24097 — **Prep Batch: 24093**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		727	739		ug/Kg	☼	99	75 - 125

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 250-16895-2 MSD — **Client Sample ID: Unimpacted Soil**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24097 — **Prep Batch: 24093**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		695	757		ug/Kg	☼	106	75 - 125	2	40

Method: 9056 - Chloride

Lab Sample ID: MB 250-24087/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24119

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10		mg/Kg			01/30/14 18:47	1

Lab Sample ID: LCS 250-24087/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	49.8	46.1		mg/Kg		93	90 - 110

Lab Sample ID: 250-16851-A-1-G MS ^1000 — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24119

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND		49800	45000		mg/Kg		89	75 - 125

Lab Sample ID: 250-16851-A-1-H MSD ^1000 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24119

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		49900	45500		mg/Kg		90	75 - 125	1	40

Lab Sample ID: 250-16851-A-1-F DU ^1000 — **Client Sample ID: Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24119

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	ND		ND		mg/Kg		NC	40

Method: D2216-80 - Percent Dry Weight (Solids) per ASTM D2216-80

Lab Sample ID: 250-16833-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24059

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	12		12		%		0.2	20
Percent Solids	88		88		%		0.03	20

Certification Summary

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

Laboratory: TestAmerica Portland

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-012	12-26-13 *
California	State Program	9	2597	09-30-15
Oregon	NELAP	10	OR100021	01-09-15
USDA	Federal		P330-11-00092	02-17-14
Washington	State Program	10	C586	06-23-14

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-14
Arizona	State Program	9	AZ0713	12-19-14
Arkansas DEQ	State Program	6	88-0687	06-01-14
California	ELAP	9	2513	08-31-14
Colorado	State Program	8	N/A	09-30-14
Connecticut	State Program	1	PH-0686	09-30-14
Florida	NELAP	4	E87667	06-30-14
Illinois	NELAP	5	200017	04-30-14
Iowa	State Program	7	370	12-01-14
Kansas	NELAP	7	E-10166	04-30-14
Louisiana	NELAP	6	30785	06-30-14 *
Maine	State Program	1	CO0002	03-03-15
Maryland	State Program	3	268	03-31-14
Minnesota	NELAP	5	8-999-405	12-31-14
Nevada	State Program	9	CO0026	07-31-14
New Hampshire	NELAP	1	205310	04-28-14
New Jersey	NELAP	2	CO004	06-30-14
New Mexico	State Program	6	CO00026	06-30-14
New York	NELAP	2	11964	04-01-14
North Carolina DENR	State Program	4	358	12-31-14
North Dakota	State Program	8	R-034	06-30-14
Oklahoma	State Program	6	8614	08-31-14
Oregon	NELAP	10	CO200001	01-09-15
Pennsylvania	NELAP	3	68-00664	07-30-14 *
South Carolina	State Program	4	72002	06-30-14
Texas	NELAP	6	T104704183-08-TX	10-01-14
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO000262012-4	07-31-14
Virginia	NELAP	3	460232	06-14-14
Washington	State Program	10	C583	08-03-14
West Virginia DEP	State Program	3	354	11-30-14
Wisconsin	State Program	5	999615430	08-31-14
Wyoming (UST)	A2LA	8	2907.01	10-31-15

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: Waste Management
Project/Site: Riverbend Landfill

TestAmerica Job ID: 250-16895-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
6020	Metals (ICP/MS)	SW846	TAL PRT
7471A	Mercury (CVAA)	SW846	TAL PRT
9056	Chloride	SW846	TAL PRT
D2216-80	Percent Dry Weight (Solids) per ASTM D2216-80	ASTM	TAL PRT

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200

TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

250-16895 Chain of Custody

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: J. O'Leary	Site Contact: J. O'Leary	Date: 1/29/14	COC No:
Your Company Name here Riverbend LF	Tel/Fax: 503-857-5870	Lab Contact: B. Berry	Carrier:	____ of ____ COCs
Address 13469 Hwy 18	Analysis Turnaround Time			For Lab Use Only:
City/State/Zip McMinnville, OR	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
(xxx) xxx-xxxx Phone 503-857-5870	TAT if different from Below ____			Lab Sampling:
(xxx) xxx-xxxx FAX	☐ 2 weeks			
Project Name: Berm leachate	☐ 1 week			Job / SDG No.:
Site: Riverbend	☒ 2 days			
P O #	☐ 1 day			Sampler:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOA 8260 B	RCRA 8 Metals 6020	Chloride	Moisture	Sample Specific Notes:
Impacted Soil	1/29/14	2:45pm	G	S	2			X	X	X	X	
Unimpacted Soil	1/29/14	3:00pm	G	S	2			X	X	X	X	

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Please ship vols to Betsy Sara at TestAmerica Denver. Results to jokary@wm.com

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	WM	1/29/14 4:30	Tom Krause	TAP	01/29/14 1630
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TAL-1003 (0413)

Form No. CA-C-WI-002, Rev. 4.1, dated 02/20/2013

IR 16/6 2.8°C

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 250-16895-1

Login Number: 16895

List Source: TestAmerica Portland

List Number: 1

Creator: Krause, Thomas A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	No sampler name on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 250-16895-1

Login Number: 16895
List Number: 1
Creator: Broander, Laura L

List Source: TestAmerica Denver
List Creation: 01/31/14 05:41 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Portland
9405 SW Nimbus Ave.
Beaverton, OR 97008
Tel: (503)906-9200

TestAmerica Job ID: 250-16920-1
Client Project/Site: Berm Leachate
Revision: 1

For:
Waste Management
13469 SW Highway 18
McMinnville, Oregon 97128

Attn: Mr. Jeff O'Leary

Authorized for release by:
2/24/2014 1:11:42 PM
Erica Fot, Project Management Assistant II
erica.fot@testamericainc.com

Designee for

Vanessa Berry, Project Manager I
(503)906-9233
vanessa.berry@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16920-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
250-16920-1	North Slope Leachate	Water	01/30/14 15:00	01/30/14 16:30

Job ID: 250-16920-1

Laboratory: TestAmerica Portland

Narrative

Job Narrative
250-16920-1

Comments
No additional comments.

Receipt
The samples were received on 1/30/2014 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8º C.

Except:

Trip Blank received not listed on COC. Trip Blank (250-16920-2)

Headspace in 3/3 voa vials. North Slope Leachate (250-16920-1)

Three of the three 40mL vials submitted for sample North Slope Leachate (250-16920-1), requesting 8260B analysis, contained small air bubbles. The Laboratory will proceed with the requested analysis instructed otherwise.

GC/MS VOA
Method(s) 8260B: In batch 211095 the surrogate recovery for the following sample was outside control limits: North Slope Leachate (250-16920-1). Dibromofluoromethane recovered at 133% (limit 77-120%) and 1,2-Dichloroethane-d4 at 137% (limit 70-127%). Evidence of matrix interference is present; therefore, re-analysis was not performed.

Method(s) 8260B: In batch 211095 the following samples required the addittion of 4uL and 2uL (respectively) of a silicon-based anti-foaming agent prior to analysis to protect the equipment North Slope Leachate (250-16920-1). The anti-foam was also added to the Method Blank to demonstrate that it is free of contamination.

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16920-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16920-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: North Slope Leachate
Date Collected: 01/30/14 15:00
Date Received: 01/30/14 16:30

Lab Sample ID: 250-16920-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**780**		40		ug/L			02/03/14 13:29	1
Benzene	ND		4.0		ug/L			02/03/14 13:29	1
Bromobenzene	ND		4.0		ug/L			02/03/14 13:29	1
Chlorobromomethane	ND		4.0		ug/L			02/03/14 13:29	1
Dichlorobromomethane	ND		4.0		ug/L			02/03/14 13:29	1
Bromoform	ND		4.0		ug/L			02/03/14 13:29	1
Bromomethane	ND		8.0		ug/L			02/03/14 13:29	1
2-Butanone (MEK)	**770**		24		ug/L			02/03/14 13:29	1
n-Butylbenzene	ND		4.0		ug/L			02/03/14 13:29	1
sec-Butylbenzene	ND		4.0		ug/L			02/03/14 13:29	1
tert-Butylbenzene	ND		4.0		ug/L			02/03/14 13:29	1
Carbon tetrachloride	ND		4.0		ug/L			02/03/14 13:29	1
Chlorobenzene	ND		4.0		ug/L			02/03/14 13:29	1
Chlorodibromomethane	ND		4.0		ug/L			02/03/14 13:29	1
Chloroethane	ND		8.0		ug/L			02/03/14 13:29	1
Chloroform	ND		4.0		ug/L			02/03/14 13:29	1
Chloromethane	ND		8.0		ug/L			02/03/14 13:29	1
2-Chlorotoluene	ND		4.0		ug/L			02/03/14 13:29	1
4-Chlorotoluene	ND		4.0		ug/L			02/03/14 13:29	1
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			02/03/14 13:29	1
Dibromomethane	ND		4.0		ug/L			02/03/14 13:29	1
1,2-Dichlorobenzene	ND		4.0		ug/L			02/03/14 13:29	1
1,3-Dichlorobenzene	ND		4.0		ug/L			02/03/14 13:29	1
1,4-Dichlorobenzene	ND		4.0		ug/L			02/03/14 13:29	1
Dichlorodifluoromethane	ND		8.0		ug/L			02/03/14 13:29	1
1,1-Dichloroethane	ND		4.0		ug/L			02/03/14 13:29	1
1,2-Dichloroethane	ND		4.0		ug/L			02/03/14 13:29	1
cis-1,2-Dichloroethene	ND		4.0		ug/L			02/03/14 13:29	1
trans-1,2-Dichloroethene	ND		4.0		ug/L			02/03/14 13:29	1
1,1-Dichloroethene	ND		4.0		ug/L			02/03/14 13:29	1
1,2-Dichloroethene, Total	ND		4.0		ug/L			02/03/14 13:29	1
1,2-Dichloropropane	ND		4.0		ug/L			02/03/14 13:29	1
1,3-Dichloropropane	ND		4.0		ug/L			02/03/14 13:29	1
2,2-Dichloropropane	ND		4.0		ug/L			02/03/14 13:29	1
cis-1,3-Dichloropropene	ND		4.0		ug/L			02/03/14 13:29	1
trans-1,3-Dichloropropene	ND		12		ug/L			02/03/14 13:29	1
1,1-Dichloropropene	ND		4.0		ug/L			02/03/14 13:29	1
Ethylbenzene	ND		4.0		ug/L			02/03/14 13:29	1
Hexachlorobutadiene	ND		4.0		ug/L			02/03/14 13:29	1
2-Hexanone	**31**		20		ug/L			02/03/14 13:29	1
Isopropylbenzene	ND		4.0		ug/L			02/03/14 13:29	1
4-Isopropyltoluene	ND		4.0		ug/L			02/03/14 13:29	1
Methylene Chloride	ND		8.0		ug/L			02/03/14 13:29	1
4-Methyl-2-pentanone (MIBK)	ND		20		ug/L			02/03/14 13:29	1
Methyl tert-butyl ether	ND		20		ug/L			02/03/14 13:29	1
Naphthalene	ND		4.0		ug/L			02/03/14 13:29	1
N-Propylbenzene	ND		4.0		ug/L			02/03/14 13:29	1
Styrene	ND		4.0		ug/L			02/03/14 13:29	1
1,1,1,2-Tetrachloroethane	ND		4.0		ug/L			02/03/14 13:29	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: North Slope Leachate
Date Collected: 01/30/14 15:00
Date Received: 01/30/14 16:30

Lab Sample ID: 250-16920-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.0		ug/L			02/03/14 13:29	1
Tetrachloroethene	ND		4.0		ug/L			02/03/14 13:29	1
Toluene	ND		4.0		ug/L			02/03/14 13:29	1
1,2,3-Trichlorobenzene	ND		4.0		ug/L			02/03/14 13:29	1
1,2,4-Trichlorobenzene	ND		4.0		ug/L			02/03/14 13:29	1
1,1,1-Trichloroethane	ND		4.0		ug/L			02/03/14 13:29	1
1,1,2-Trichloroethane	ND		4.0		ug/L			02/03/14 13:29	1
Trichloroethene	ND		4.0		ug/L			02/03/14 13:29	1
Trichlorofluoromethane	ND		8.0		ug/L			02/03/14 13:29	1
1,2,3-Trichloropropane	ND		10		ug/L			02/03/14 13:29	1
1,2,4-Trimethylbenzene	ND		4.0		ug/L			02/03/14 13:29	1
1,3,5-Trimethylbenzene	ND		4.0		ug/L			02/03/14 13:29	1
Vinyl chloride	ND		4.0		ug/L			02/03/14 13:29	1
m-Xylene & p-Xylene	ND		8.0		ug/L			02/03/14 13:29	1
o-Xylene	ND		4.0		ug/L			02/03/14 13:29	1
Xylenes, Total	ND		8.0		ug/L			02/03/14 13:29	1
1,2-Dibromoethane	ND		4.0		ug/L			02/03/14 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*137*	*X*	*70 - 127*		*02/03/14 13:29*	*1*
Toluene-d8 (Surr)	*118*		*80 - 125*		*02/03/14 13:29*	*1*
4-Bromofluorobenzene (Surr)	*120*		*78 - 120*		*02/03/14 13:29*	*1*
Dibromofluoromethane (Surr)	*133*	*X*	*77 - 120*		*02/03/14 13:29*	*1*

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16920-1

Method: 200.8 - Metals (ICP/MS)

Client Sample ID: North Slope Leachate
Date Collected: 01/30/14 15:00
Date Received: 01/30/14 16:30

Lab Sample ID: 250-16920-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.13**		0.020		mg/L		01/31/14 12:50	02/04/14 01:49	20
Barium	**0.67**		0.020		mg/L		01/31/14 12:50	02/04/14 01:49	20
Cadmium	ND		0.020		mg/L		01/31/14 12:50	02/04/14 01:49	20
Chromium	**0.21**		0.040		mg/L		01/31/14 12:50	02/04/14 14:34	20
Lead	ND		0.020		mg/L		01/31/14 12:50	02/04/14 01:49	20
Selenium	ND		0.020		mg/L		01/31/14 12:50	02/04/14 01:49	20
Silver	ND		0.020		mg/L		01/31/14 12:50	02/04/14 01:49	20

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16920-1

Method: 7470A - Mercury (CVAA)

Client Sample ID: North Slope Leachate
Date Collected: 01/30/14 15:00
Date Received: 01/30/14 16:30

Lab Sample ID: 250-16920-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		02/03/14 17:17	02/03/14 23:22	1

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16920-1

General Chemistry

Client Sample ID: North Slope Leachate
Date Collected: 01/30/14 15:00
Date Received: 01/30/14 16:30

Lab Sample ID: 250-16920-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1200		50		mg/L			01/31/14 19:43	100

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-211095/5
Matrix: Water
Analysis Batch: 211095

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10		ug/L			02/03/14 11:13	1
Benzene	ND		1.0		ug/L			02/03/14 11:13	1
Bromobenzene	ND		1.0		ug/L			02/03/14 11:13	1
Chlorobromomethane	ND		1.0		ug/L			02/03/14 11:13	1
Dichlorobromomethane	ND		1.0		ug/L			02/03/14 11:13	1
Bromoform	ND		1.0		ug/L			02/03/14 11:13	1
Bromomethane	ND		2.0		ug/L			02/03/14 11:13	1
2-Butanone (MEK)	ND		6.0		ug/L			02/03/14 11:13	1
n-Butylbenzene	ND		1.0		ug/L			02/03/14 11:13	1
sec-Butylbenzene	ND		1.0		ug/L			02/03/14 11:13	1
tert-Butylbenzene	ND		1.0		ug/L			02/03/14 11:13	1
Carbon tetrachloride	ND		1.0		ug/L			02/03/14 11:13	1
Chlorobenzene	ND		1.0		ug/L			02/03/14 11:13	1
Chlorodibromomethane	ND		1.0		ug/L			02/03/14 11:13	1
Chloroethane	ND		2.0		ug/L			02/03/14 11:13	1
Chloroform	ND		1.0		ug/L			02/03/14 11:13	1
Chloromethane	ND		2.0		ug/L			02/03/14 11:13	1
2-Chlorotoluene	ND		1.0		ug/L			02/03/14 11:13	1
4-Chlorotoluene	ND		1.0		ug/L			02/03/14 11:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			02/03/14 11:13	1
Dibromomethane	ND		1.0		ug/L			02/03/14 11:13	1
1,2-Dichlorobenzene	ND		1.0		ug/L			02/03/14 11:13	1
1,3-Dichlorobenzene	ND		1.0		ug/L			02/03/14 11:13	1
1,4-Dichlorobenzene	ND		1.0		ug/L			02/03/14 11:13	1
Dichlorodifluoromethane	ND		2.0		ug/L			02/03/14 11:13	1
1,1-Dichloroethane	ND		1.0		ug/L			02/03/14 11:13	1
1,2-Dichloroethane	ND		1.0		ug/L			02/03/14 11:13	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			02/03/14 11:13	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			02/03/14 11:13	1
1,1-Dichloroethene	ND		1.0		ug/L			02/03/14 11:13	1
1,2-Dichloroethene, Total	ND		1.0		ug/L			02/03/14 11:13	1
1,2-Dichloropropane	ND		1.0		ug/L			02/03/14 11:13	1
1,3-Dichloropropane	ND		1.0		ug/L			02/03/14 11:13	1
2,2-Dichloropropane	ND		1.0		ug/L			02/03/14 11:13	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			02/03/14 11:13	1
trans-1,3-Dichloropropene	ND		3.0		ug/L			02/03/14 11:13	1
1,1-Dichloropropene	ND		1.0		ug/L			02/03/14 11:13	1
Ethylbenzene	ND		1.0		ug/L			02/03/14 11:13	1
Hexachlorobutadiene	ND		1.0		ug/L			02/03/14 11:13	1
2-Hexanone	ND		5.0		ug/L			02/03/14 11:13	1
Isopropylbenzene	ND		1.0		ug/L			02/03/14 11:13	1
4-Isopropyltoluene	ND		1.0		ug/L			02/03/14 11:13	1
Methylene Chloride	ND		2.0		ug/L			02/03/14 11:13	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			02/03/14 11:13	1
Methyl tert-butyl ether	ND		5.0		ug/L			02/03/14 11:13	1
Naphthalene	ND		1.0		ug/L			02/03/14 11:13	1
N-Propylbenzene	ND		1.0		ug/L			02/03/14 11:13	1
Styrene	ND		1.0		ug/L			02/03/14 11:13	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-211095/5
Matrix: Water
Analysis Batch: 211095

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			02/03/14 11:13	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			02/03/14 11:13	1
Tetrachloroethene	ND		1.0		ug/L			02/03/14 11:13	1
Toluene	ND		1.0		ug/L			02/03/14 11:13	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			02/03/14 11:13	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			02/03/14 11:13	1
1,1,1-Trichloroethane	ND		1.0		ug/L			02/03/14 11:13	1
1,1,2-Trichloroethane	ND		1.0		ug/L			02/03/14 11:13	1
Trichloroethene	ND		1.0		ug/L			02/03/14 11:13	1
Trichlorofluoromethane	ND		2.0		ug/L			02/03/14 11:13	1
1,2,3-Trichloropropane	ND		2.5		ug/L			02/03/14 11:13	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			02/03/14 11:13	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			02/03/14 11:13	1
Vinyl chloride	ND		1.0		ug/L			02/03/14 11:13	1
m-Xylene & p-Xylene	ND		2.0		ug/L			02/03/14 11:13	1
o-Xylene	ND		1.0		ug/L			02/03/14 11:13	1
Xylenes, Total	ND		2.0		ug/L			02/03/14 11:13	1
1,2-Dibromoethane	ND		1.0		ug/L			02/03/14 11:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 127*		*02/03/14 11:13*	*1*
Toluene-d8 (Surr)	*97*		*80 - 125*		*02/03/14 11:13*	*1*
4-Bromofluorobenzene (Surr)	*96*		*78 - 120*		*02/03/14 11:13*	*1*
Dibromofluoromethane (Surr)	*100*		*77 - 120*		*02/03/14 11:13*	*1*

Lab Sample ID: LCS 280-211095/4
Matrix: Water
Analysis Batch: 211095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	4.37		ug/L		87	74 - 135
Dichlorobromomethane	5.00	4.71		ug/L		94	73 - 135
Carbon tetrachloride	5.00	5.25		ug/L		105	67 - 135
Chlorobenzene	5.00	4.18		ug/L		84	76 - 135
Chloroform	5.00	4.55		ug/L		91	76 - 120
1,3-Dichlorobenzene	5.00	4.00		ug/L		80	74 - 135
1,1-Dichloroethane	5.00	4.60		ug/L		92	75 - 135
trans-1,2-Dichloroethene	5.00	4.42		ug/L		88	75 - 135
1,1-Dichloroethene	5.00	4.20		ug/L		84	71 - 136
1,2-Dichloropropane	5.00	4.34		ug/L		87	71 - 120
Ethylbenzene	5.00	4.02		ug/L		80	72 - 120
Methylene Chloride	5.00	4.58		ug/L		92	54 - 141
Tetrachloroethene	5.00	3.93		ug/L		79	70 - 135
Toluene	5.00	4.64		ug/L		93	73 - 120
1,1,1-Trichloroethane	5.00	5.02		ug/L		100	70 - 135
Trichloroethene	5.00	4.48		ug/L		90	73 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-211095/4
Matrix: Water
Analysis Batch: 211095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 127
Toluene-d8 (Surr)	94		80 - 125
4-Bromofluorobenzene (Surr)	91		78 - 120
Dibromofluoromethane (Surr)	97		77 - 120

Lab Sample ID: 280-51706-K-1 MS
Matrix: Water
Analysis Batch: 211095

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		5.00	5.04		ug/L		101	74 - 135
Dichlorobromomethane	ND		5.00	5.66		ug/L		113	73 - 135
Carbon tetrachloride	ND		5.00	6.30		ug/L		126	67 - 135
Chlorobenzene	ND		5.00	4.73		ug/L		95	76 - 135
Chloroform	ND		5.00	5.40		ug/L		108	76 - 120
1,3-Dichlorobenzene	ND		5.00	4.47		ug/L		89	74 - 135
1,1-Dichloroethane	ND		5.00	5.38		ug/L		108	75 - 135
trans-1,2-Dichloroethene	ND		5.00	5.26		ug/L		105	75 - 135
1,1-Dichloroethene	ND		5.00	4.77		ug/L		95	71 - 136
1,2-Dichloropropane	ND		5.00	5.28		ug/L		106	71 - 120
Ethylbenzene	ND		5.00	4.22		ug/L		84	72 - 120
Methylene Chloride	ND		5.00	4.98		ug/L		93	54 - 141
Tetrachloroethene	ND		5.00	4.35		ug/L		87	70 - 135
Toluene	ND		5.00	5.47		ug/L		104	73 - 120
1,1,1-Trichloroethane	ND		5.00	5.74		ug/L		115	70 - 135
Trichloroethene	ND		5.00	5.16		ug/L		103	73 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	125		70 - 127
Toluene-d8 (Surr)	102		80 - 125
4-Bromofluorobenzene (Surr)	103		78 - 120
Dibromofluoromethane (Surr)	117		77 - 120

Lab Sample ID: 280-51706-K-1 MSD
Matrix: Water
Analysis Batch: 211095

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		5.00	4.66		ug/L		93	74 - 135	8	20
Dichlorobromomethane	ND		5.00	5.21		ug/L		104	73 - 135	8	20
Carbon tetrachloride	ND		5.00	5.67		ug/L		113	67 - 135	10	21
Chlorobenzene	ND		5.00	4.38		ug/L		88	76 - 135	8	20
Chloroform	ND		5.00	5.03		ug/L		101	76 - 120	7	20
1,3-Dichlorobenzene	ND		5.00	4.23		ug/L		85	74 - 135	5	20
1,1-Dichloroethane	ND		5.00	4.95		ug/L		99	75 - 135	8	21
trans-1,2-Dichloroethene	ND		5.00	4.75		ug/L		95	75 - 135	10	24
1,1-Dichloroethene	ND		5.00	4.30		ug/L		86	71 - 136	10	20
1,2-Dichloropropane	ND		5.00	4.71		ug/L		94	71 - 120	11	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-51706-K-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 211095

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	ND		5.00	4.26		ug/L		85	72 - 120	1	26
Methylene Chloride	ND		5.00	4.59		ug/L		85	54 - 141	8	20
Tetrachloroethene	ND		5.00	4.09		ug/L		82	70 - 135	6	20
Toluene	ND		5.00	5.26		ug/L		100	73 - 120	4	20
1,1,1-Trichloroethane	ND		5.00	5.28		ug/L		106	70 - 135	8	20
Trichloroethene	ND		5.00	4.80		ug/L		96	73 - 135	7	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 127*
Toluene-d8 (Surr)	*91*		*80 - 125*
4-Bromofluorobenzene (Surr)	*90*		*78 - 120*
Dibromofluoromethane (Surr)	*103*		*77 - 120*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 250-24115/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24150 — **Prep Batch: 24115**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 01:31	1
Barium	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 01:31	1
Cadmium	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 01:31	1
Lead	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 01:31	1
Selenium	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 01:31	1
Silver	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 01:31	1

Lab Sample ID: MB 250-24115/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24169 — **Prep Batch: 24115**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 14:16	1
Barium	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 14:16	1
Cadmium	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 14:16	1
Chromium	ND		0.0020		mg/L		01/31/14 12:50	02/04/14 14:16	1
Lead	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 14:16	1
Selenium	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 14:16	1
Silver	ND		0.0010		mg/L		01/31/14 12:50	02/04/14 14:16	1

Lab Sample ID: LCS 250-24115/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24150 — **Prep Batch: 24115**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.110		mg/L		110	85 - 115
Barium	0.100	0.109		mg/L		109	85 - 115
Cadmium	0.100	0.107		mg/L		107	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 250-24115/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24150 — **Prep Batch: 24115**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.100	0.109		mg/L		109	85 - 115
Selenium	0.100	0.106		mg/L		106	85 - 115
Silver	0.0500	0.0545		mg/L		109	85 - 115

Lab Sample ID: LCS 250-24115/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24169 — **Prep Batch: 24115**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.108		mg/L		108	85 - 115
Barium	0.100	0.107		mg/L		107	85 - 115
Cadmium	0.100	0.101		mg/L		101	85 - 115
Chromium	0.100	0.111		mg/L		111	85 - 115
Lead	0.100	0.108		mg/L		108	85 - 115
Selenium	0.100	0.109		mg/L		109	85 - 115
Silver	0.0500	0.0505		mg/L		101	85 - 115

Lab Sample ID: 250-16920-1 MS — **Client Sample ID: North Slope Leachate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24150 — **Prep Batch: 24115**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.13		0.100	0.238		mg/L		109	70 - 130
Barium	0.67		0.100	0.777	4	mg/L		106	70 - 130
Cadmium	ND		0.100	0.109		mg/L		109	70 - 130
Lead	ND		0.100	0.111		mg/L		101	70 - 130
Selenium	ND		0.100	0.0970		mg/L		95	70 - 130
Silver	ND		0.0500	0.0529		mg/L		106	70 - 130

Lab Sample ID: 250-16920-1 MS — **Client Sample ID: North Slope Leachate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24169 — **Prep Batch: 24115**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.21		0.100	0.312		mg/L		106	70 - 130

Lab Sample ID: 250-16905-A-1-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24150 — **Prep Batch: 24115**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.071		0.0755		mg/L		7	20
Barium	0.78		0.805		mg/L		3	20
Cadmium	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20

QC Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16920-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 250-16905-A-1-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24169 — **Prep Batch: 24115**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium	0.080			0.0720		mg/L				11	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 250-24135/11-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24140 — **Prep Batch: 24135**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		02/03/14 17:17	02/03/14 23:17	1

Lab Sample ID: LCS 250-24135/12-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24140 — **Prep Batch: 24135**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00500	0.00515		mg/L		103	85 - 115		

Lab Sample ID: 250-16935-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24140 — **Prep Batch: 24135**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND		0.00500	0.00489		mg/L		98	75 - 125		

Lab Sample ID: 250-16935-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24140 — **Prep Batch: 24135**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00500	0.00487		mg/L		97	75 - 125	0	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 250-24156/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24156

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/L			01/31/14 17:38	1

Lab Sample ID: LCS 250-24156/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24156

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.67		mg/L		93	90 - 110		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 250-16848-C-1 MS ^10 — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24156

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	7.1		50.0	52.6		mg/L		91	80 - 120		

Lab Sample ID: 250-16848-C-1 MSD ^10 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24156

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	7.1		50.0	52.9		mg/L		92	80 - 120	0	20

Lab Sample ID: 250-16848-C-1 DU ^10 — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 24156

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	7.1			6.44		mg/L				10	20

Certification Summary

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16920-1

Laboratory: TestAmerica Portland

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-012	12-26-13 *
California	State Program	9	2597	09-30-15
Oregon	NELAP	10	OR100021	01-09-15
USDA	Federal		P330-11-00092	02-17-14 *
Washington	State Program	10	C586	06-23-14

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-14
Arizona	State Program	9	AZ0713	12-19-14
Arkansas DEQ	State Program	6	88-0687	06-01-14
California	State Program	9	2513	08-31-14
Colorado	State Program	8	N/A	09-30-14
Connecticut	State Program	1	PH-0686	09-30-14
Florida	NELAP	4	E87667	06-30-14
Illinois	NELAP	5	200017	04-30-14
Iowa	State Program	7	370	12-01-14
Kansas	NELAP	7	E-10166	04-30-14
Louisiana	NELAP	6	30785	06-30-14 *
Maine	State Program	1	CO0002	03-03-15
Maryland	State Program	3	268	03-31-14
Minnesota	NELAP	5	8-999-405	12-31-14
Nevada	State Program	9	CO0026	07-31-14
New Hampshire	NELAP	1	205310	04-28-14
New Jersey	NELAP	2	CO004	06-30-14
New Mexico	State Program	6	CO00026	06-30-14
New York	NELAP	2	11964	04-01-14
North Carolina DENR	State Program	4	358	12-31-14
North Dakota	State Program	8	R-034	06-30-14
Oklahoma	State Program	6	8614	08-31-14
Oregon	NELAP	10	CO200001	01-09-15
Pennsylvania	NELAP	3	68-00664	07-30-14 *
South Carolina	State Program	4	72002001	06-30-14
Texas	NELAP	6	T104704183-13-8	10-01-14
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-14
Virginia	NELAP	3	460232	06-14-14
Washington	State Program	10	C583	08-03-14
West Virginia DEP	State Program	3	354	11-30-14
Wisconsin	State Program	5	999615430	08-31-14
Wyoming (UST)	A2LA	8	2907.01	10-31-15

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16920-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
200.8	Metals (ICP/MS)	EPA	TAL PRT
7470A	Mercury (CVAA)	SW846	TAL PRT
300.0	Anions, Ion Chromatography	MCAWW	TAL PRT

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200

TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

250-16920 Chain of Custody

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: J. O'Leary	Site Contact: J. O'Leary	Date: 1/30/2014	COC No:
Your Company Name here Riverbend LF	Tel/Fax: 503-857-5870	Lab Contact: V. Berry	Carrier:	____ of ____ COCs
Address 13469 Hwy 18	Analysis Turnaround Time			For Lab Use Only:
City/State/Zip McMinnville, OR	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
(xxx) xxx-xxxx Phone	TAT if different from Below ____			Lab Sampling:
(xxx) xxx-xxxx FAX	☐ 2 weeks			
Project Name: Berm Leachate	☐ 1 week			Job / SDG No.:
Site:	☒ 2 days			
P O #	☐ 1 day			Sampler:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOA 8260B	RCRA 8 Metals	Chloride	Moisture	Sample Specific Notes:
North slope leachate	1/30/14	3:00pm	G	L	5			X	X	X	X	

Preservation Used: 1=Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:

Please ship Vols to Betsy Sara @ TestAmerica Denver.

12/G/L 3.8°C

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	WM	1/30/14 4:30	Tom Krause	TAP	01/30/14 1630
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TAL-1003 (0413)

Form No. CA-C-WI-002, Rev. 4.1, dated 02/20/2013

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 250-16920-1

Login Number: 16920

List Source: TestAmerica Portland

List Number: 1

Creator: Krause, Thomas A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	No sampler name on COC.
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	Headspace larger than 1/4".
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 250-16920-1

Login Number: 16920
List Number: 1
Creator: O'Tormey, Stephanie R

List Source: TestAmerica Denver
List Creation: 02/01/14 01:03 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	False	3/3 SAMPLE 1 HAS BUBBLES
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Portland
9405 SW Nimbus Ave.
Beaverton, OR 97008
Tel: (503)906-9200

TestAmerica Job ID: 250-16947-1
TestAmerica Sample Delivery Group: Riverbend Landfill
Client Project/Site: Berm Leachate

For:
Waste Management
13469 SW Highway 18
McMinnville, Oregon 97128

Attn: Mr. Jeff O'Leary

Authorized for release by:
2/9/2014 8:11:31 PM
Erica Fot, Project Management Assistant II
erica.fot@testamericainc.com

Designee for

Vanessa Berry, Project Manager I
(503)906-9233
vanessa.berry@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
250-16947-1	Clean-up Soil	Solid	01/31/14 11:30	01/31/14 16:15

Case Narrative

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

Job ID: 250-16947-1

Laboratory: TestAmerica Portland

Narrative

Job Narrative
250-16947-1

Comments
No additional comments.

Receipt
The sample was received on 1/31/2014 4:15 PM; the sample arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 8.1º C.

GC/MS VOA
No analytical or quality issues were noted.

Metals
Method(s) 6020: The serial dilution performed for the following sample(s) associated with batch 250-24150 for Cr was outside control limits: (250-16947-1 SD)

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: Clean-up Soil
Date Collected: 01/31/14 11:30
Date Received: 01/31/14 16:15

Lab Sample ID: 250-16947-1
Matrix: Solid
Percent Solids: 74.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,1,1-Trichloroethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,1,2,2-Tetrachloroethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,1,2-Trichloroethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,1-Dichloroethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,1-Dichloroethene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,1-Dichloropropene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2,3-Trichlorobenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2,3-Trichloropropane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2,4-Trichlorobenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2,4-Trimethylbenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2-Dibromo-3-Chloropropane	ND		15		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2-Dibromoethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2-Dichlorobenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2-Dichloroethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2-Dichloroethene, Total	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,2-Dichloropropane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,3,5-Trimethylbenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,3-Dichlorobenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,3-Dichloropropane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
1,4-Dichlorobenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
2,2-Dichloropropane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
2-Butanone (MEK)	ND		31		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
2-Chlorotoluene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
2-Hexanone	ND		31		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
4-Chlorotoluene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
4-Isopropyltoluene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
4-Methyl-2-pentanone (MIBK)	ND		31		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Acetone	ND		31		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Benzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Bromobenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Bromoform	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Bromomethane	ND		15		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Carbon tetrachloride	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Chlorobenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Chlorobromomethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Chlorodibromomethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Chloroethane	ND		15		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Chloroform	ND		15		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Chloromethane	ND		15		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
cis-1,2-Dichloroethene	ND		3.8		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
cis-1,3-Dichloropropene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Dibromomethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Dichlorobromomethane	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Dichlorodifluoromethane	ND		15		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Ethylbenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Hexachlorobutadiene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Isopropylbenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Methyl tert-butyl ether	ND		31		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Clean-up Soil
Date Collected: 01/31/14 11:30
Date Received: 01/31/14 16:15

Lab Sample ID: 250-16947-1
Matrix: Solid
Percent Solids: 74.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
m-Xylene & p-Xylene	ND		3.8		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Naphthalene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
n-Butylbenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
N-Propylbenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
o-Xylene	ND		3.8		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
sec-Butylbenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Styrene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
tert-Butylbenzene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Tetrachloroethene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Toluene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
trans-1,2-Dichloroethene	ND		3.8		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
trans-1,3-Dichloropropene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Trichloroethene	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Trichlorofluoromethane	ND		15		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Vinyl chloride	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1
Xylenes, Total	ND		7.7		ug/Kg	☼	02/05/14 16:00	02/05/14 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*58 - 140*	*02/05/14 16:00*	*02/05/14 21:46*	*1*
4-Bromofluorobenzene (Surr)	*101*		*76 - 127*	*02/05/14 16:00*	*02/05/14 21:46*	*1*
Dibromofluoromethane (Surr)	*101*		*75 - 121*	*02/05/14 16:00*	*02/05/14 21:46*	*1*
Toluene-d8 (Surr)	*107*		*80 - 126*	*02/05/14 16:00*	*02/05/14 21:46*	*1*

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

Method: 6020 - Metals (ICP/MS)

Client Sample ID: Clean-up Soil
Date Collected: 01/31/14 11:30
Date Received: 01/31/14 16:15

Lab Sample ID: 250-16947-1
Matrix: Solid
Percent Solids: 74.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**9.0**		0.66		mg/Kg	☼	02/03/14 11:09	02/04/14 04:03	10
Barium	**250**		0.66		mg/Kg	☼	02/03/14 11:09	02/04/14 13:43	10
Cadmium	ND		0.66		mg/Kg	☼	02/03/14 11:09	02/04/14 04:03	10
Chromium	**42**		1.3		mg/Kg	☼	02/03/14 11:09	02/04/14 04:03	10
Lead	**27**		0.66		mg/Kg	☼	02/03/14 11:09	02/04/14 13:43	10
Selenium	ND		0.66		mg/Kg	☼	02/03/14 11:09	02/04/14 04:03	10
Silver	ND		0.66		mg/Kg	☼	02/03/14 11:09	02/04/14 04:03	10

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

Method: 7471A - Mercury (CVAA)

Client Sample ID: Clean-up Soil
Date Collected: 01/31/14 11:30
Date Received: 01/31/14 16:15

Lab Sample ID: 250-16947-1
Matrix: Solid
Percent Solids: 74.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		100		ug/Kg	☼	02/03/14 19:40	02/04/14 01:34	1

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

General Chemistry

Client Sample ID: Clean-up Soil
Date Collected: 01/31/14 11:30
Date Received: 01/31/14 16:15

Lab Sample ID: 250-16947-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		0.010		%			02/03/14 12:08	1
Percent Solids	75		0.010		%			02/03/14 12:08	1

Client Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

General Chemistry - Soluble

Client Sample ID: Clean-up Soil
Date Collected: 01/31/14 11:30
Date Received: 01/31/14 16:15

Lab Sample ID: 250-16947-1
Matrix: Solid
Percent Solids: 74.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23		13		mg/Kg	☼		02/06/14 13:53	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-211682/1-A
Matrix: Solid
Analysis Batch: 211664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 211682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,1-Dichloroethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,1-Dichloroethene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,1-Dichloropropene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2-Dibromoethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2-Dichloroethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2-Dichloroethene, Total	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,2-Dichloropropane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,3-Dichloropropane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
2,2-Dichloropropane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
2-Butanone (MEK)	ND		20		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
2-Chlorotoluene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
2-Hexanone	ND		20		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
4-Chlorotoluene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
4-Isopropyltoluene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
4-Methyl-2-pentanone (MIBK)	ND		20		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Acetone	ND		20		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Benzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Bromobenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Bromoform	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Bromomethane	ND		10		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Carbon tetrachloride	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Chlorobenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Chlorobromomethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Chlorodibromomethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Chloroethane	ND		10		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Chloroform	ND		10		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Chloromethane	ND		10		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
cis-1,2-Dichloroethene	ND		2.5		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Dibromomethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Dichlorobromomethane	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Dichlorodifluoromethane	ND		10		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Ethylbenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Hexachlorobutadiene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Isopropylbenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-211682/1-A
Matrix: Solid
Analysis Batch: 211664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 211682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		20		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Methylene Chloride	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
m-Xylene & p-Xylene	ND		2.5		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Naphthalene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
n-Butylbenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
N-Propylbenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
o-Xylene	ND		2.5		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
sec-Butylbenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Styrene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
tert-Butylbenzene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Tetrachloroethene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Toluene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
trans-1,2-Dichloroethene	ND		2.5		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Trichloroethene	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Trichlorofluoromethane	ND		10		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Vinyl chloride	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1
Xylenes, Total	ND		5.0		ug/Kg		02/05/14 16:00	02/05/14 21:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*58 - 140*	*02/05/14 16:00*	*02/05/14 21:26*	*1*
4-Bromofluorobenzene (Surr)	*93*		*76 - 127*	*02/05/14 16:00*	*02/05/14 21:26*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 121*	*02/05/14 16:00*	*02/05/14 21:26*	*1*
Toluene-d8 (Surr)	*98*		*80 - 126*	*02/05/14 16:00*	*02/05/14 21:26*	*1*

Lab Sample ID: LCS 280-211682/2-A
Matrix: Solid
Analysis Batch: 211664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211682

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	41.6		ug/Kg		83	70 - 135
1,1-Dichloroethane	50.0	44.3		ug/Kg		89	70 - 135
1,1-Dichloroethene	50.0	46.5		ug/Kg		93	79 - 135
1,2-Dichloropropane	50.0	45.1		ug/Kg		90	72 - 121
1,3-Dichlorobenzene	50.0	50.6		ug/Kg		101	69 - 135
Benzene	50.0	46.4		ug/Kg		93	75 - 135
Carbon tetrachloride	50.0	45.1		ug/Kg		90	69 - 138
Chlorobenzene	50.0	48.3		ug/Kg		97	78 - 135
Chloroform	50.0	44.3		ug/Kg		89	73 - 123
Dichlorobromomethane	50.0	46.4		ug/Kg		93	73 - 135
Ethylbenzene	50.0	48.4		ug/Kg		97	73 - 125
Methylene Chloride	50.0	44.0		ug/Kg		88	76 - 136
Tetrachloroethene	50.0	48.1		ug/Kg		96	76 - 135
Toluene	50.0	47.5		ug/Kg		95	77 - 122
trans-1,2-Dichloroethene	50.0	46.9		ug/Kg		94	77 - 135
Trichloroethene	50.0	46.0		ug/Kg		92	77 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-211682/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 211664 — **Prep Batch: 211682**

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*58 - 140*
4-Bromofluorobenzene (Surr)	*87*		*76 - 127*
Dibromofluoromethane (Surr)	*90*		*75 - 121*
Toluene-d8 (Surr)	*91*		*80 - 126*

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 250-24127/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24150 — **Prep Batch: 24127**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.49		mg/Kg		02/03/14 11:09	02/04/14 03:48	10
Cadmium	ND		0.49		mg/Kg		02/03/14 11:09	02/04/14 03:48	10
Chromium	ND		0.98		mg/Kg		02/03/14 11:09	02/04/14 03:48	10
Selenium	ND		0.49		mg/Kg		02/03/14 11:09	02/04/14 03:48	10
Silver	ND		0.49		mg/Kg		02/03/14 11:09	02/04/14 03:48	10

Lab Sample ID: MB 250-24127/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24165 — **Prep Batch: 24127**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		0.49		mg/Kg		02/03/14 11:09	02/04/14 13:29	10
Lead	ND		0.49		mg/Kg		02/03/14 11:09	02/04/14 13:29	10

Lab Sample ID: LCS 250-24127/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24150 — **Prep Batch: 24127**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	49.8	56.5		mg/Kg		114	80 - 120
Cadmium	49.8	55.0		mg/Kg		111	80 - 120
Chromium	49.8	57.6		mg/Kg		116	80 - 120
Selenium	49.8	54.9		mg/Kg		110	80 - 120
Silver	24.9	28.4		mg/Kg		114	80 - 120

Lab Sample ID: LCS 250-24127/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24165 — **Prep Batch: 24127**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	49.8	54.3		mg/Kg		109	80 - 120
Lead	49.8	57.8		mg/Kg		116	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 250-16947-1 MS — **Client Sample ID: Clean-up Soil**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24150 — **Prep Batch: 24127**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	9.0		64.3	73.9		mg/Kg	☼	101	75 - 125
Cadmium	ND		64.3	73.7		mg/Kg	☼	114	75 - 125
Chromium	42		64.3	98.3		mg/Kg	☼	88	75 - 125
Selenium	ND		64.3	66.2		mg/Kg	☼	103	75 - 125
Silver	ND		32.1	36.1		mg/Kg	☼	112	75 - 125

Lab Sample ID: 250-16947-1 MS — **Client Sample ID: Clean-up Soil**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24165 — **Prep Batch: 24127**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	250		64.3	304		mg/Kg	☼	78	75 - 125
Lead	27		64.3	85.9		mg/Kg	☼	91	75 - 125

Lab Sample ID: 250-16947-1 MSD — **Client Sample ID: Clean-up Soil**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24150 — **Prep Batch: 24127**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	9.0		65.3	84.7		mg/Kg	☼	116	75 - 125	14	40
Cadmium	ND		65.3	87.2	F1	mg/Kg	☼	133	75 - 125	17	40
Chromium	42		65.3	113		mg/Kg	☼	109	75 - 125	14	40
Selenium	ND		65.3	75.2		mg/Kg	☼	115	75 - 125	13	40
Silver	ND		32.7	42.4	F1	mg/Kg	☼	129	75 - 125	16	40

Lab Sample ID: 250-16947-1 MSD — **Client Sample ID: Clean-up Soil**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24165 — **Prep Batch: 24127**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Barium	250		65.3	290	F1	mg/Kg	☼	56	75 - 125	5	40
Lead	27		65.3	83.9		mg/Kg	☼	87	75 - 125	2	40

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 250-24137/10-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24141 — **Prep Batch: 24137**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		81		ug/Kg		02/03/14 19:40	02/04/14 01:26	1

Lab Sample ID: LCS 250-24137/11-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24141 — **Prep Batch: 24137**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	553	576		ug/Kg		104	80 - 120

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 250-16911-A-2-C MS ^5 — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24141 — **Prep Batch: 24137**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	1600		610	1960	F1	ug/Kg	☼	66	75 - 125		

Lab Sample ID: 250-16911-A-2-D MSD ^5 — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 24141 — **Prep Batch: 24137**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	1600		544	1820	F1	ug/Kg	☼	49	75 - 125	7	40

Method: 9056 - Chloride

Lab Sample ID: MB 250-24216/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10		mg/Kg			02/06/14 13:22	1

Lab Sample ID: LCS 250-24216/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24226

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			49.9	47.6		mg/Kg		95	90 - 110		

Lab Sample ID: 250-16947-1 MS — **Client Sample ID: Clean-up Soil**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24226

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	23		66.6	92.3		mg/Kg	☼	104	75 - 125		

Lab Sample ID: 250-16947-1 MSD — **Client Sample ID: Clean-up Soil**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24226

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	23		66.6	84.1		mg/Kg	☼	92	75 - 125	9	40

Lab Sample ID: 250-16947-1 DU — **Client Sample ID: Clean-up Soil**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 24226

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	23			23.1		mg/Kg	☼			0.5	40

QC Sample Results

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

Method: D2216-80 - Percent Dry Weight (Solids) per ASTM D2216-80

Lab Sample ID: 250-16928-A-1 DU
Matrix: Solid
Analysis Batch: 24129

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	13			12		%				2	20
Percent Solids	87			88		%				0.2	20

Certification Summary

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

Laboratory: TestAmerica Portland

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-012	12-26-13 *
California	State Program	9	2597	09-30-15
Oregon	NELAP	10	OR100021	01-09-15
USDA	Federal		P330-11-00092	02-17-14
Washington	State Program	10	C586	06-23-14

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-14
Arizona	State Program	9	AZ0713	12-19-14
Arkansas DEQ	State Program	6	88-0687	06-01-14
California	ELAP	9	2513	08-31-14
Colorado	State Program	8	N/A	09-30-14
Connecticut	State Program	1	PH-0686	09-30-14
Florida	NELAP	4	E87667	06-30-14
Illinois	NELAP	5	200017	04-30-14
Iowa	State Program	7	370	12-01-14
Kansas	NELAP	7	E-10166	04-30-14
Louisiana	NELAP	6	30785	06-30-14 *
Maine	State Program	1	CO0002	03-03-15
Maryland	State Program	3	268	03-31-14
Minnesota	NELAP	5	8-999-405	12-31-14
Nevada	State Program	9	CO0026	07-31-14
New Hampshire	NELAP	1	205310	04-28-14
New Jersey	NELAP	2	CO004	06-30-14
New Mexico	State Program	6	CO00026	06-30-14
New York	NELAP	2	11964	04-01-14
North Carolina DENR	State Program	4	358	12-31-14
North Dakota	State Program	8	R-034	06-30-14
Oklahoma	State Program	6	8614	08-31-14
Oregon	NELAP	10	CO200001	01-09-15
Pennsylvania	NELAP	3	68-00664	07-30-14 *
South Carolina	State Program	4	72002	06-30-14
Texas	NELAP	6	T104704183-08-TX	10-01-14
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO000262012-4	07-31-14
Virginia	NELAP	3	460232	06-14-14
Washington	State Program	10	C583	08-03-14
West Virginia DEP	State Program	3	354	11-30-14
Wisconsin	State Program	5	999615430	08-31-14
Wyoming (UST)	A2LA	8	2907.01	10-31-15

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: Waste Management
Project/Site: Berm Leachate

TestAmerica Job ID: 250-16947-1
SDG: Riverbend Landfill

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
6020	Metals (ICP/MS)	SW846	TAL PRT
7471A	Mercury (CVAA)	SW846	TAL PRT
9056	Chloride	SW846	TAL PRT
D2216-80	Percent Dry Weight (Solids) per ASTM D2216-80	ASTM	TAL PRT

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200

Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

250-16947 Chain of Custody

Client Contact	Project Manager: Jeff O'Leary	Site Contact: Jeff O'Leary	Date: 1/31/2014	COC No:
Waste Management-Riverbend landfill	Tel/Fax: 503.857.5870	Lab Contact: Vanessa Berry	Carrier:	____ of ____ COCs
13469 SW Hwy 18	Analysis Turnaround Time			Job No.
McMinnville, OR 97128	Calendar (C) or Work Days (W) _____			
503-857-5870	TAT if different from Below _____			
503-472-4788	☐ 2 weeks			SDG No.
Project Name: Berm Leachate	☐ 1 week			
Site: Riverbend Landfill	■ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOA's 8260 B	RCRA 8 Metals 6020	Chloride	Moisture	Sample Specific Notes:
Clean-up Soil	1/31/14	11:30	G	S	2		X	X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
■ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments: *Please send Vols to Betsy Sara at TestAmerica Denver. Please send results to Jeff O'Leary: joleary@wm.com*

8.1° IR

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Jeff O'Leary	WM	1/31/14 4:15	Jay Wells	TAP	1/31/14 1615
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 250-16947-1
SDG Number: Riverbend Landfill

Login Number: 16947
List Number: 1
Creator: Krause, Thomas A

List Source: TestAmerica Portland

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not requested on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Waste Management

Job Number: 250-16947-1
SDG Number: Riverbend Landfill

Login Number: 16947
List Number: 1
Creator: Soto, Mayra A

List Source: TestAmerica Denver
List Creation: 02/04/14 05:07 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	