

US EPA ARCHIVE DOCUMENT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-3079-1
Client Project/Site: West Lake Landfill

For:
Engineering Management Support, Inc.
7220 W. Jefferson AVE
Suite 406
Lakewood, Colorado 80235

Attn: Mr. Paul Rosasco

Rhonda Ridenhower

Authorized for release by:
8/7/2013 12:04:22 PM

Rhonda Ridenhower, Customer Service Manager
rhonda.ridenhower@testamericainc.com

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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.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Chain of Custody	6
Receipt Checklists	7
Definitions/Glossary	8
Method Summary	9
Sample Summary	10
Detection Summary	11
Client Sample Results	12
QC Sample Results	16
QC Association Summary	25
Surrogate Summary	27

Case Narrative

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Job ID: 160-3079-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Client: Engineering Management Support, Inc.

Project: West Lake Landfill

Report Number: 160-3079-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

Per client request to report all analytical runs, analyses included in the package that were not used in the final report were re-analyzed due to QC failures in the analytical sequence

RECEIPT

The samples were received on 07/23/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.0 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples PZ-100-KS (160-3079-1) and TRIP BLANK (160-3079-2) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 07/24/2013.

The continuing calibration verification (CCV) for Chloroethane associated with batch 62847 recovered above the upper control limit. The samples associated with this CCV were not detected above the RL for the affected analytes.

No other difficulties were encountered during the VOCs analysis.

Case Narrative

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Job ID: 160-3079-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

All other quality control parameters were within the acceptance limits.

METALS (ICP)-Dissolved and Total

Sample PZ-100-KS (160-3079-1) was analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 07/29/2013 and analyzed on 07/30/2013.

The following samples were diluted to bring the concentration of target analytes (calcium and sodium) within the calibration range: (160-3079-1 MS), (160-3079-1 MSD), (160-3079-1 SD), PZ-100-KS (160-3079-1). Elevated reporting limits (RLs) are provided.

Due to the high concentration of sodium, the matrix spike / matrix spike duplicate (MS/MSD) for prep batch 63421 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Sample PZ-100-KS (160-3079-1) was analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 07/24/2013.

Due to matrix interference, the matrix spike / matrix spike duplicate (MS/MSD) recoveries were below control limits. The RPD and associated laboratory control sample (LCS) recovery met acceptance criteria.

No other difficulties were encountered during the mercury analysis.

All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample PZ-100-KS (160-3079-1) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 07/24/2013.

Due to matrix interference, the matrix spike / matrix spike duplicate (MS/MSD) recoveries were below control limits. The RPD and associated laboratory control sample (LCS) recovery met acceptance criteria.

No other difficulties were encountered during the mercury analysis.

All other quality control parameters were within the acceptance limits.

ANIONS

Sample PZ-100-KS (160-3079-1) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 07/23/2013 and 07/24/2013.

The following sample was diluted to bring the concentrations of Chloride and Sulfate within the calibration range in IC batch 62927: PZ-100-KS (160-3079-1). Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the anions analysis.

All other quality control parameters were within the acceptance limits.

ALKALINITY

Sample PZ-100-KS (160-3079-1) was analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 07/31/2013.

No difficulties were encountered during the alkalinity analysis.

Case Narrative

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Job ID: 160-3079-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

All quality control parameters were within the acceptance limits.

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TestAmerica St. Louis
 13715 Rider Trail North
 Earth City, MO 63045
 Phone (314) 298-8566 Fax (314) 298-8757

Chain of Custody Record

TestAmerica
 THE CHAIN OF CUSTODY DOCUMENT

Client Information Sampler: <u>Jo Wilkison/Hest + Asso</u> Phone: <u>630-939-9111</u> Lab PM: <u>Ridenhower, Rhonda E</u> E-Mail: <u>rhonda.ridenhower@testamericainc.com</u>		Carrier Tracking No(s): COC No: <u>160-499-253.1</u> Page: <u>Page 1 of 10</u> Job #:	
Address: <u>7220 W. Jefferson AVE, Suite 406</u> City: <u>Lakewood</u> State, Zip: <u>CO, 80235</u> Phone: PO #: <u>Purchase Order not required</u> IWO #:		Analysis Requested 8260C - Standard List 8260C - VOA 6010C, 7470A 300 - Atriona- 310.1 - Alkalinity - 310.0	
Email: <u>paulrosasco@emsidenver.com</u> Project Name: <u>West Lake Landfill- July</u> Site:		Preservation Codes: A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Due Date Requested: TAT Requested (days): Field Filled Sample (Yes or No)		Total Number of Containers	
Sample Identification <u>P2-100-KS</u> <u>TSP BLEND</u>		Special Instructions/Note:	
Sample Date <u>7/23/2013</u>	Sample Time <u>0745</u>	Matrix (Newman, Solid, Dewastol, ST-TRAC, AVAL)	Preservation Code: <u>6</u>
Sample Date <u>7/23/2013</u>	Sample Time <u>N/A</u>	Matrix (Newman, Solid, Dewastol, ST-TRAC, AVAL)	Preservation Code: <u>6</u>
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: <u>Jo Wilkison</u> Date/Time: <u>7/23/2013 0935</u>		Received by: <u>Hest + Assoc, Inc.</u> Date/Time: <u>7/23/13 0935</u>	
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Custody Seals Intact: <u>Δ Yes Δ No</u>		Cooler Temperature(s) °C and Other Remarks:	

Login Sample Receipt Checklist

Client: Engineering Management Support, Inc.

Job Number: 160-3079-1

Login Number: 3079

List Source: TestAmerica St. Louis

List Number: 1

Creator: Daniels, Brian J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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.	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?	True	
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)
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)

US EPA ARCHIVE DOCUMENT

13

Method Summary

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
300.0	Anions, Ion Chromatography	MCAWW	TAL SL
310.1	Alkalinity	MCAWW	TAL SL

Protocol References:

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 SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-3079-1	PZ-100-KS	Water	07/23/13 07:04	07/23/13 09:30
160-3079-2	TRIP BLANK	Water	07/23/13 00:00	07/23/13 09:30

US EPA ARCHIVE DOCUMENT

13

Detection Summary

Client: Engineering Management Support, Inc.
 Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Client Sample ID: PZ-100-KS

Lab Sample ID: 160-3079-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	4.7	J	50	4.0	ug/L	1		6010C	Total/NA
Calcium	20000		1000	110	ug/L	1		6010C	Total/NA
Chromium	5.3	J	10	3.1	ug/L	1		6010C	Total/NA
Iron	240		100	28	ug/L	1		6010C	Total/NA
Magnesium	13000		1000	130	ug/L	1		6010C	Total/NA
Manganese	17		15	3.3	ug/L	1		6010C	Total/NA
Potassium	4900	J	5000	1700	ug/L	1		6010C	Total/NA
Sodium	240000	E	1000	320	ug/L	1		6010C	Total/NA
Sodium	240000		10000	3200	ug/L	10		6010C	Total/NA
Zinc	10	J	20	5.2	ug/L	1		6010C	Total/NA
Barium	4.4	J	50	4.0	ug/L	1		6010C	Dissolved
Calcium	20000		1000	110	ug/L	1		6010C	Dissolved
Chromium	4.8	J	10	3.1	ug/L	1		6010C	Dissolved
Iron	50	J	100	28	ug/L	1		6010C	Dissolved
Magnesium	13000		1000	130	ug/L	1		6010C	Dissolved
Manganese	17		15	3.3	ug/L	1		6010C	Dissolved
Potassium	4900	J	5000	1700	ug/L	1		6010C	Dissolved
Sodium	240000	E	1000	320	ug/L	1		6010C	Dissolved
Sodium	230000		10000	3200	ug/L	10		6010C	Dissolved
Zinc	10	J	20	5.2	ug/L	1		6010C	Dissolved
Nitrate as N	0.0080	J	0.020	0.0040	mg/L	1		300.0	Total/NA
Bromide	0.23	J	0.25	0.025	mg/L	1		300.0	Total/NA
Alkalinity	500	B	5.0	0.54	mg/L	1		310.1	Total/NA
Chloride - DL	54		4.0	0.40	mg/L	20		300.0	Total/NA
Sulfate - DL	36		10	1.0	mg/L	20		300.0	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-3079-2

No Detections.

US EPA ARCHIVE DOCUMENT

13

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Client Sample ID: PZ-100-KS

Lab Sample ID: 160-3079-1

Date Collected: 07/23/13 07:04

Matrix: Water

Date Received: 07/23/13 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			07/24/13 11:36	1
1,1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/24/13 11:36	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/24/13 11:36	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/24/13 11:36	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/24/13 11:36	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/24/13 11:36	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/24/13 11:36	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/24/13 11:36	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/24/13 11:36	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/24/13 11:36	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/24/13 11:36	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/24/13 11:36	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			07/24/13 11:36	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/24/13 11:36	1
2-Hexanone	ND		20	0.59	ug/L			07/24/13 11:36	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/24/13 11:36	1
Acetone	ND		20	6.7	ug/L			07/24/13 11:36	1
Benzene	ND		5.0	0.25	ug/L			07/24/13 11:36	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/24/13 11:36	1
Bromoform	ND		5.0	0.37	ug/L			07/24/13 11:36	1
Bromomethane	ND		10	0.40	ug/L			07/24/13 11:36	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/24/13 11:36	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/24/13 11:36	1
Chlorobenzene	ND		5.0	0.38	ug/L			07/24/13 11:36	1
Chloroethane	ND		10	0.38	ug/L			07/24/13 11:36	1
Chloroform	ND		5.0	0.15	ug/L			07/24/13 11:36	1
Chloromethane	ND		10	0.55	ug/L			07/24/13 11:36	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/24/13 11:36	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/24/13 11:36	1
Cyclohexane	ND		10	0.36	ug/L			07/24/13 11:36	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/24/13 11:36	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/24/13 11:36	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/24/13 11:36	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/24/13 11:36	1
Methyl acetate	ND		25	2.3	ug/L			07/24/13 11:36	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/24/13 11:36	1
Methylcyclohexane	ND		10	0.26	ug/L			07/24/13 11:36	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/24/13 11:36	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/24/13 11:36	1
o-Xylene	ND		5.0	0.32	ug/L			07/24/13 11:36	1
Styrene	ND		5.0	0.35	ug/L			07/24/13 11:36	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/24/13 11:36	1
Toluene	ND		5.0	1.0	ug/L			07/24/13 11:36	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/24/13 11:36	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/24/13 11:36	1
Trichloroethene	ND		5.0	0.29	ug/L			07/24/13 11:36	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/24/13 11:36	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/24/13 11:36	1
Xylenes, Total	ND		10	0.85	ug/L			07/24/13 11:36	1

US EPA ARCHIVE DOCUMENT

13

TestAmerica St. Louis

Client Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Client Sample ID: PZ-100-KS

Lab Sample ID: 160-3079-1

Date Collected: 07/23/13 07:04

Matrix: Water

Date Received: 07/23/13 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		82 - 132		07/24/13 11:36	1
4-Bromofluorobenzene (Surr)	111		82 - 121		07/24/13 11:36	1
Dibromofluoromethane (Surr)	107		85 - 119		07/24/13 11:36	1
Toluene-d8 (Surr)	105		85 - 115		07/24/13 11:36	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/29/13 11:34	07/30/13 15:52	1
Antimony	ND		10	4.0	ug/L		07/29/13 11:34	07/30/13 15:52	1
Arsenic	ND		10	2.0	ug/L		07/29/13 11:34	07/30/13 15:52	1
Barium	4.7	J	50	4.0	ug/L		07/29/13 11:34	07/30/13 15:52	1
Beryllium	ND		5.0	0.61	ug/L		07/29/13 11:34	07/30/13 15:52	1
Cadmium	ND		5.0	0.91	ug/L		07/29/13 11:34	07/30/13 15:52	1
Calcium	20000		1000	110	ug/L		07/29/13 11:34	07/30/13 15:52	1
Chromium	5.3	J	10	3.1	ug/L		07/29/13 11:34	07/30/13 15:52	1
Cobalt	ND		50	4.0	ug/L		07/29/13 11:34	07/30/13 15:52	1
Copper	ND		25	4.6	ug/L		07/29/13 11:34	07/30/13 15:52	1
Iron	240		100	28	ug/L		07/29/13 11:34	07/30/13 15:52	1
Lead	ND		10	1.5	ug/L		07/29/13 11:34	07/30/13 15:52	1
Magnesium	13000		1000	130	ug/L		07/29/13 11:34	07/30/13 15:52	1
Manganese	17		15	3.3	ug/L		07/29/13 11:34	07/30/13 15:52	1
Nickel	ND		40	13	ug/L		07/29/13 11:34	07/30/13 15:52	1
Potassium	4900	J	5000	1700	ug/L		07/29/13 11:34	07/30/13 15:52	1
Selenium	ND		15	2.7	ug/L		07/29/13 11:34	07/30/13 15:52	1
Silver	ND		10	6.0	ug/L		07/29/13 11:34	07/30/13 15:52	1
Sodium	240000	E	1000	320	ug/L		07/29/13 11:34	07/30/13 15:52	1
Sodium	240000		10000	3200	ug/L		07/29/13 11:34	07/30/13 16:26	10
Thallium	ND		20	4.0	ug/L		07/29/13 11:34	07/30/13 15:52	1
Vanadium	ND		50	4.1	ug/L		07/29/13 11:34	07/30/13 15:52	1
Zinc	10	J	20	5.2	ug/L		07/29/13 11:34	07/30/13 15:52	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/29/13 11:34	07/30/13 16:07	1
Antimony	ND		10	4.0	ug/L		07/29/13 11:34	07/30/13 16:07	1
Arsenic	ND		10	2.0	ug/L		07/29/13 11:34	07/30/13 16:07	1
Barium	4.4	J	50	4.0	ug/L		07/29/13 11:34	07/30/13 16:07	1
Beryllium	ND		5.0	0.61	ug/L		07/29/13 11:34	07/30/13 16:07	1
Cadmium	ND		5.0	0.91	ug/L		07/29/13 11:34	07/30/13 16:07	1
Calcium	20000		1000	110	ug/L		07/29/13 11:34	07/30/13 16:07	1
Chromium	4.8	J	10	3.1	ug/L		07/29/13 11:34	07/30/13 16:07	1
Cobalt	ND		50	4.0	ug/L		07/29/13 11:34	07/30/13 16:07	1
Copper	ND		25	4.6	ug/L		07/29/13 11:34	07/30/13 16:07	1
Iron	50	J	100	28	ug/L		07/29/13 11:34	07/30/13 16:07	1
Lead	ND		10	1.5	ug/L		07/29/13 11:34	07/30/13 16:07	1
Magnesium	13000		1000	130	ug/L		07/29/13 11:34	07/30/13 16:07	1
Manganese	17		15	3.3	ug/L		07/29/13 11:34	07/30/13 16:07	1
Nickel	ND		40	13	ug/L		07/29/13 11:34	07/30/13 16:07	1
Potassium	4900	J	5000	1700	ug/L		07/29/13 11:34	07/30/13 16:07	1
Selenium	ND		15	2.7	ug/L		07/29/13 11:34	07/30/13 16:07	1

TestAmerica St. Louis

US EPA ARCHIVE DOCUMENT

13

Client Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Client Sample ID: PZ-100-KS

Lab Sample ID: 160-3079-1

Date Collected: 07/23/13 07:04

Matrix: Water

Date Received: 07/23/13 09:30

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		10	6.0	ug/L		07/29/13 11:34	07/30/13 16:07	1
Sodium	240000	E	1000	320	ug/L		07/29/13 11:34	07/30/13 16:07	1
Sodium	230000		10000	3200	ug/L		07/29/13 11:34	07/30/13 16:41	10
Thallium	ND		20	4.0	ug/L		07/29/13 11:34	07/30/13 16:07	1
Vanadium	ND		50	4.1	ug/L		07/29/13 11:34	07/30/13 16:07	1
Zinc	10	J	20	5.2	ug/L		07/29/13 11:34	07/30/13 16:07	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/24/13 10:11	07/24/13 16:14	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/24/13 10:13	07/24/13 17:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0080	J	0.020	0.0040	mg/L			07/23/13 14:21	1
Bromide	0.23	J	0.25	0.025	mg/L			07/23/13 14:21	1
Iodide	ND		1.0	0.10	mg/L			07/24/13 20:47	1
Alkalinity	500	B	5.0	0.54	mg/L			07/31/13 09:58	1

General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	54		4.0	0.40	mg/L			07/23/13 14:37	20
Sulfate	36		10	1.0	mg/L			07/23/13 14:37	20

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-3079-2

Date Collected: 07/23/13 00:00

Matrix: Water

Date Received: 07/23/13 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			07/24/13 10:44	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/24/13 10:44	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/24/13 10:44	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/24/13 10:44	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/24/13 10:44	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/24/13 10:44	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/24/13 10:44	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/24/13 10:44	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/24/13 10:44	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/24/13 10:44	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/24/13 10:44	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/24/13 10:44	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			07/24/13 10:44	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/24/13 10:44	1
2-Hexanone	ND		20	0.59	ug/L			07/24/13 10:44	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/24/13 10:44	1
Acetone	ND		20	6.7	ug/L			07/24/13 10:44	1
Benzene	ND		5.0	0.25	ug/L			07/24/13 10:44	1

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US EPA ARCHIVE DOCUMENT

13

Client Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 160-3079-2

Date Collected: 07/23/13 00:00

Matrix: Water

Date Received: 07/23/13 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		5.0	0.25	ug/L			07/24/13 10:44	1
Bromoform	ND		5.0	0.37	ug/L			07/24/13 10:44	1
Bromomethane	ND		10	0.40	ug/L			07/24/13 10:44	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/24/13 10:44	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/24/13 10:44	1
Chlorobenzene	ND		5.0	0.38	ug/L			07/24/13 10:44	1
Chloroethane	ND		10	0.38	ug/L			07/24/13 10:44	1
Chloroform	ND		5.0	0.15	ug/L			07/24/13 10:44	1
Chloromethane	ND		10	0.55	ug/L			07/24/13 10:44	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/24/13 10:44	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/24/13 10:44	1
Cyclohexane	ND		10	0.36	ug/L			07/24/13 10:44	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/24/13 10:44	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/24/13 10:44	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/24/13 10:44	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/24/13 10:44	1
Methyl acetate	ND		25	2.3	ug/L			07/24/13 10:44	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/24/13 10:44	1
Methylcyclohexane	ND		10	0.26	ug/L			07/24/13 10:44	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/24/13 10:44	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/24/13 10:44	1
o-Xylene	ND		5.0	0.32	ug/L			07/24/13 10:44	1
Styrene	ND		5.0	0.35	ug/L			07/24/13 10:44	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/24/13 10:44	1
Toluene	ND		5.0	1.0	ug/L			07/24/13 10:44	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/24/13 10:44	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/24/13 10:44	1
Trichloroethene	ND		5.0	0.29	ug/L			07/24/13 10:44	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/24/13 10:44	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/24/13 10:44	1
Xylenes, Total	ND		10	0.85	ug/L			07/24/13 10:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		82 - 132		07/24/13 10:44	1
4-Bromofluorobenzene (Surr)	106		82 - 121		07/24/13 10:44	1
Dibromofluoromethane (Surr)	107		85 - 119		07/24/13 10:44	1
Toluene-d8 (Surr)	106		85 - 115		07/24/13 10:44	1

US EPA ARCHIVE DOCUMENT

13

QC Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-62847/2

Matrix: Water

Analysis Batch: 62847

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-Trichloroethane	ND		5.0	0.29	ug/L			07/24/13 09:52	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/24/13 09:52	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/24/13 09:52	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/24/13 09:52	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/24/13 09:52	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/24/13 09:52	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/24/13 09:52	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/24/13 09:52	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/24/13 09:52	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/24/13 09:52	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/24/13 09:52	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/24/13 09:52	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			07/24/13 09:52	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/24/13 09:52	1
2-Hexanone	ND		20	0.59	ug/L			07/24/13 09:52	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/24/13 09:52	1
Acetone	ND		20	6.7	ug/L			07/24/13 09:52	1
Benzene	ND		5.0	0.25	ug/L			07/24/13 09:52	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/24/13 09:52	1
Bromoform	ND		5.0	0.37	ug/L			07/24/13 09:52	1
Bromomethane	ND		10	0.40	ug/L			07/24/13 09:52	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/24/13 09:52	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/24/13 09:52	1
Chlorobenzene	ND		5.0	0.38	ug/L			07/24/13 09:52	1
Chloroethane	ND		10	0.38	ug/L			07/24/13 09:52	1
Chloroform	ND		5.0	0.15	ug/L			07/24/13 09:52	1
Chloromethane	ND		10	0.55	ug/L			07/24/13 09:52	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/24/13 09:52	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/24/13 09:52	1
Cyclohexane	ND		10	0.36	ug/L			07/24/13 09:52	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/24/13 09:52	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/24/13 09:52	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/24/13 09:52	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/24/13 09:52	1
Methyl acetate	ND		25	2.3	ug/L			07/24/13 09:52	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/24/13 09:52	1
Methylcyclohexane	ND		10	0.26	ug/L			07/24/13 09:52	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/24/13 09:52	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/24/13 09:52	1
o-Xylene	ND		5.0	0.32	ug/L			07/24/13 09:52	1
Styrene	ND		5.0	0.35	ug/L			07/24/13 09:52	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/24/13 09:52	1
Toluene	ND		5.0	1.0	ug/L			07/24/13 09:52	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/24/13 09:52	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/24/13 09:52	1
Trichloroethene	ND		5.0	0.29	ug/L			07/24/13 09:52	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/24/13 09:52	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/24/13 09:52	1

US EPA ARCHIVE DOCUMENT

13

TestAmerica St. Louis

QC Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

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

Lab Sample ID: MB 160-62847/2

Matrix: Water

Analysis Batch: 62847

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		10	0.85	ug/L			07/24/13 09:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		82 - 132		07/24/13 09:52	1
4-Bromofluorobenzene (Surr)	108		82 - 121		07/24/13 09:52	1
Dibromofluoromethane (Surr)	107		85 - 119		07/24/13 09:52	1
Toluene-d8 (Surr)	103		85 - 115		07/24/13 09:52	1

Lab Sample ID: LCS 160-62847/4

Matrix: Water

Analysis Batch: 62847

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	51.0		ug/L		102	85 - 115
1,1,2,2-Tetrachloroethane	50.0	48.7		ug/L		97	84 - 115
1,1,2-Trichloroethane	50.0	49.1		ug/L		98	85 - 115
1,1-Dichloroethane	50.0	50.4		ug/L		101	85 - 115
1,1-Dichloroethene	50.0	50.7		ug/L		101	85 - 118
1,2,4-Trichlorobenzene	50.0	51.9		ug/L		104	75 - 124
1,2-Dibromo-3-Chloropropane	50.0	46.7		ug/L		93	71 - 123
1,2-Dibromoethane (EDB)	50.0	51.1		ug/L		102	85 - 115
1,2-Dichlorobenzene	50.0	51.6		ug/L		103	85 - 115
1,2-Dichloroethane	50.0	50.1		ug/L		100	79 - 122
1,2-Dichloropropane	50.0	48.5		ug/L		97	85 - 115
1,3-Dichlorobenzene	50.0	53.2		ug/L		106	85 - 115
1,4-Dichlorobenzene	50.0	51.5		ug/L		103	85 - 115
2-Butanone (MEK)	50.0	41.5		ug/L		83	71 - 123
2-Hexanone	50.0	47.6		ug/L		95	66 - 121
4-Methyl-2-pentanone (MIBK)	50.0	45.8		ug/L		92	74 - 123
Acetone	50.0	42.0		ug/L		84	51 - 140
Benzene	50.0	49.1		ug/L		98	85 - 115
Bromodichloromethane	50.0	47.4		ug/L		95	85 - 117
Bromoform	50.0	48.1		ug/L		96	85 - 115
Bromomethane	50.0	61.6		ug/L		123	70 - 135
Carbon disulfide	50.0	51.6		ug/L		103	85 - 123
Carbon tetrachloride	50.0	47.3		ug/L		95	85 - 118
Chlorobenzene	50.0	52.1		ug/L		104	85 - 115
Chloroethane	50.0	55.9		ug/L		112	75 - 125
Chloroform	50.0	50.5		ug/L		101	85 - 115
Chloromethane	50.0	50.0		ug/L		100	73 - 132
cis-1,2-Dichloroethene	50.0	51.1		ug/L		102	85 - 115
cis-1,3-Dichloropropene	50.0	49.5		ug/L		99	85 - 127
Cyclohexane	50.0	50.9		ug/L		102	73 - 115
Dibromochloromethane	50.0	49.1		ug/L		98	85 - 115
Dichlorodifluoromethane	50.0	48.9		ug/L		98	62 - 115
Ethylbenzene	50.0	51.4		ug/L		103	85 - 115
Isopropylbenzene	50.0	52.3		ug/L		105	85 - 124
Methyl acetate	250	233		ug/L		93	73 - 135

TestAmerica St. Louis

US EPA ARCHIVE DOCUMENT

13

QC Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

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

Lab Sample ID: LCS 160-62847/4

Matrix: Water

Analysis Batch: 62847

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	48.7		ug/L		97	73 - 115
Methylcyclohexane	50.0	51.1		ug/L		102	85 - 134
Methylene Chloride	50.0	49.5		ug/L		99	84 - 115
m-Xylene & p-Xylene	50.0	52.6		ug/L		105	85 - 115
o-Xylene	50.0	52.0		ug/L		104	85 - 115
Styrene	50.0	54.4		ug/L		109	85 - 115
Tetrachloroethene	50.0	51.6		ug/L		103	85 - 115
Toluene	50.0	53.6		ug/L		107	85 - 115
trans-1,2-Dichloroethene	50.0	50.6		ug/L		101	85 - 115
trans-1,3-Dichloropropene	50.0	50.3		ug/L		101	85 - 123
Trichloroethene	50.0	47.7		ug/L		95	85 - 115
Trichlorofluoromethane	50.0	50.1		ug/L		100	85 - 116
Vinyl chloride	50.0	52.0		ug/L		104	68 - 133
Xylenes, Total	100	105		ug/L		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		82 - 132
4-Bromofluorobenzene (Surr)	100		82 - 121
Dibromofluoromethane (Surr)	100		85 - 119
Toluene-d8 (Surr)	101		85 - 115

Lab Sample ID: LCSD 160-62847/5

Matrix: Water

Analysis Batch: 62847

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	50.0	50.7		ug/L		101	85 - 115	1	20
1,1,1,2-Tetrachloroethane	50.0	47.2		ug/L		94	84 - 115	3	20
1,1,1,2-Trichloroethane	50.0	51.2		ug/L		102	85 - 115	4	20
1,1-Dichloroethane	50.0	51.8		ug/L		104	85 - 115	3	20
1,1-Dichloroethene	50.0	48.5		ug/L		97	85 - 118	4	20
1,2,4-Trichlorobenzene	50.0	53.1		ug/L		106	75 - 124	2	20
1,2-Dibromo-3-Chloropropane	50.0	44.9		ug/L		90	71 - 123	4	20
1,2-Dibromoethane (EDB)	50.0	48.9		ug/L		98	85 - 115	4	20
1,2-Dichlorobenzene	50.0	51.7		ug/L		103	85 - 115	0	20
1,2-Dichloroethane	50.0	50.6		ug/L		101	79 - 122	1	20
1,2-Dichloropropane	50.0	49.8		ug/L		100	85 - 115	3	20
1,3-Dichlorobenzene	50.0	52.2		ug/L		104	85 - 115	2	20
1,4-Dichlorobenzene	50.0	53.7		ug/L		107	85 - 115	4	20
2-Butanone (MEK)	50.0	46.7		ug/L		93	71 - 123	12	20
2-Hexanone	50.0	47.9		ug/L		96	66 - 121	1	20
4-Methyl-2-pentanone (MIBK)	50.0	43.1		ug/L		86	74 - 123	6	20
Acetone	50.0	43.4		ug/L		87	51 - 140	3	20
Benzene	50.0	50.7		ug/L		101	85 - 115	3	20
Bromodichloromethane	50.0	48.7		ug/L		97	85 - 117	3	20
Bromoform	50.0	48.1		ug/L		96	85 - 115	0	20
Bromomethane	50.0	53.9		ug/L		108	70 - 135	13	20
Carbon disulfide	50.0	50.8		ug/L		102	85 - 123	2	20

TestAmerica St. Louis

US EPA ARCHIVE DOCUMENT

13

QC Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

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

Lab Sample ID: LCSD 160-62847/5

Matrix: Water

Analysis Batch: 62847

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD
									Limit
Carbon tetrachloride	50.0	48.1		ug/L		96	85 - 118	2	20
Chlorobenzene	50.0	51.5		ug/L		103	85 - 115	1	20
Chloroethane	50.0	54.1		ug/L		108	75 - 125	3	20
Chloroform	50.0	51.1		ug/L		102	85 - 115	1	20
Chloromethane	50.0	49.7		ug/L		99	73 - 132	1	20
cis-1,2-Dichloroethene	50.0	51.0		ug/L		102	85 - 115	0	20
cis-1,3-Dichloropropene	50.0	51.0		ug/L		102	85 - 127	3	20
Cyclohexane	50.0	51.7		ug/L		103	73 - 115	2	20
Dibromochloromethane	50.0	48.6		ug/L		97	85 - 115	1	20
Dichlorodifluoromethane	50.0	48.6		ug/L		97	62 - 115	1	20
Ethylbenzene	50.0	52.2		ug/L		104	85 - 115	2	20
Isopropylbenzene	50.0	51.7		ug/L		103	85 - 124	1	20
Methyl acetate	250	237		ug/L		95	73 - 135	1	20
Methyl tert-butyl ether	50.0	49.3		ug/L		99	73 - 115	1	20
Methylcyclohexane	50.0	51.0		ug/L		102	85 - 134	0	20
Methylene Chloride	50.0	49.7		ug/L		99	84 - 115	0	20
m-Xylene & p-Xylene	50.0	52.6		ug/L		105	85 - 115	0	20
o-Xylene	50.0	53.4		ug/L		107	85 - 115	3	20
Styrene	50.0	53.7		ug/L		107	85 - 115	1	20
Tetrachloroethene	50.0	53.0		ug/L		106	85 - 115	3	20
Toluene	50.0	54.2		ug/L		108	85 - 115	1	20
trans-1,2-Dichloroethene	50.0	51.1		ug/L		102	85 - 115	1	20
trans-1,3-Dichloropropene	50.0	51.1		ug/L		102	85 - 123	2	20
Trichloroethene	50.0	49.9		ug/L		100	85 - 115	5	20
Trichlorofluoromethane	50.0	48.9		ug/L		98	85 - 116	2	20
Vinyl chloride	50.0	51.9		ug/L		104	68 - 133	0	20
Xylenes, Total	100	106		ug/L		106	70 - 130	1	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	96		82 - 132
4-Bromofluorobenzene (Surr)	100		82 - 121
Dibromofluoromethane (Surr)	101		85 - 119
Toluene-d8 (Surr)	103		85 - 115

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-63421/1-A

Matrix: Water

Analysis Batch: 63920

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 63421

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	ND		200	80	ug/L		07/29/13 11:34	07/30/13 15:44	1
Antimony	ND		10	4.0	ug/L		07/29/13 11:34	07/30/13 15:44	1
Arsenic	ND		10	2.0	ug/L		07/29/13 11:34	07/30/13 15:44	1
Barium	ND		50	4.0	ug/L		07/29/13 11:34	07/30/13 15:44	1
Beryllium	ND		5.0	0.61	ug/L		07/29/13 11:34	07/30/13 15:44	1
Cadmium	ND		5.0	0.91	ug/L		07/29/13 11:34	07/30/13 15:44	1
Calcium	ND		1000	110	ug/L		07/29/13 11:34	07/30/13 15:44	1

TestAmerica St. Louis

US EPA ARCHIVE DOCUMENT

13

QC Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 160-63421/1-A

Matrix: Water

Analysis Batch: 63920

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 63421

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chromium	ND		10	3.1	ug/L		07/29/13 11:34	07/30/13 15:44	1
Cobalt	ND		50	4.0	ug/L		07/29/13 11:34	07/30/13 15:44	1
Copper	ND		25	4.6	ug/L		07/29/13 11:34	07/30/13 15:44	1
Iron	ND		100	28	ug/L		07/29/13 11:34	07/30/13 15:44	1
Lead	ND		10	1.5	ug/L		07/29/13 11:34	07/30/13 15:44	1
Magnesium	ND		1000	130	ug/L		07/29/13 11:34	07/30/13 15:44	1
Manganese	ND		15	3.3	ug/L		07/29/13 11:34	07/30/13 15:44	1
Nickel	ND		40	13	ug/L		07/29/13 11:34	07/30/13 15:44	1
Potassium	ND		5000	1700	ug/L		07/29/13 11:34	07/30/13 15:44	1
Selenium	ND		15	2.7	ug/L		07/29/13 11:34	07/30/13 15:44	1
Silver	ND		10	6.0	ug/L		07/29/13 11:34	07/30/13 15:44	1
Sodium	ND		1000	320	ug/L		07/29/13 11:34	07/30/13 15:44	1
Thallium	ND		20	4.0	ug/L		07/29/13 11:34	07/30/13 15:44	1
Vanadium	ND		50	4.1	ug/L		07/29/13 11:34	07/30/13 15:44	1
Zinc	ND		20	5.2	ug/L		07/29/13 11:34	07/30/13 15:44	1

Lab Sample ID: LCS 160-63421/2-A

Matrix: Water

Analysis Batch: 63920

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 63421

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Aluminum	10000	9790		ug/L		98	80 - 120
Antimony	500	510		ug/L		102	80 - 120
Arsenic	1000	987		ug/L		99	80 - 120
Barium	1000	1030		ug/L		103	80 - 120
Beryllium	1000	1020		ug/L		102	80 - 120
Cadmium	1000	1010		ug/L		101	80 - 120
Calcium	10000	10400		ug/L		104	80 - 120
Chromium	1000	1030		ug/L		103	80 - 120
Cobalt	1000	1040		ug/L		104	80 - 120
Copper	1000	1030		ug/L		103	80 - 120
Iron	10000	10200		ug/L		102	80 - 120
Lead	1000	1050		ug/L		105	80 - 120
Magnesium	10000	10000		ug/L		100	80 - 120
Manganese	1000	1020		ug/L		102	80 - 120
Nickel	1000	1030		ug/L		103	80 - 120
Potassium	10000	9920		ug/L		99	80 - 120
Selenium	1000	1010		ug/L		101	80 - 120
Silver	100	86.9		ug/L		87	80 - 120
Sodium	10000	10100		ug/L		101	80 - 120
Thallium	200	222		ug/L		111	80 - 120
Vanadium	1000	989		ug/L		99	80 - 120
Zinc	1000	1010		ug/L		101	80 - 120

US EPA ARCHIVE DOCUMENT

13

TestAmerica St. Louis

QC Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-3079-1 MS

Matrix: Water

Analysis Batch: 63920

Client Sample ID: PZ-100-KS

Prep Type: Dissolved

Prep Batch: 63421

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Aluminum	ND		10000	9720		ug/L		97	75 - 125	
Antimony	ND		500	488		ug/L		98	75 - 125	
Arsenic	ND		1000	962		ug/L		96	75 - 125	
Barium	4.4	J	1000	1030		ug/L		102	75 - 125	
Beryllium	ND		1000	1010		ug/L		101	75 - 125	
Cadmium	ND		1000	964		ug/L		96	75 - 125	
Calcium	20000		10000	28800		ug/L		89	75 - 125	
Chromium	4.8	J	1000	963		ug/L		96	75 - 125	
Cobalt	ND		1000	960		ug/L		96	75 - 125	
Copper	ND		1000	964		ug/L		96	75 - 125	
Iron	50	J	10000	10300		ug/L		102	75 - 125	
Lead	ND		1000	949		ug/L		95	75 - 125	
Magnesium	13000		10000	22300		ug/L		98	75 - 125	
Manganese	17		1000	1020		ug/L		100	75 - 125	
Nickel	ND		1000	955		ug/L		96	75 - 125	
Potassium	4900	J	10000	15000		ug/L		101	75 - 125	
Selenium	ND		1000	971		ug/L		97	75 - 125	
Silver	ND		100	82.9		ug/L		83	75 - 125	
Sodium	240000	E	10000	243000	E 4	ug/L		76	75 - 125	
Thallium	ND		200	193		ug/L		96	75 - 125	
Vanadium	ND		1000	990		ug/L		99	75 - 125	
Zinc	10	J	1000	986		ug/L		98	75 - 125	

Lab Sample ID: 160-3079-1 MS

Matrix: Water

Analysis Batch: 63920

Client Sample ID: PZ-100-KS

Prep Type: Dissolved

Prep Batch: 63421

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Sodium	230000		10000	243000	4	ug/L		160	75 - 125	

Lab Sample ID: 160-3079-1 MSD

Matrix: Water

Analysis Batch: 63920

Client Sample ID: PZ-100-KS

Prep Type: Dissolved

Prep Batch: 63421

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.	Limits	RPD	
	Result	Qualifier		Result	Qualifier						RPD	Limit
Aluminum	ND		10000	9870		ug/L		99	75 - 125	2	20	
Antimony	ND		500	503		ug/L		101	75 - 125	3	20	
Arsenic	ND		1000	990		ug/L		99	75 - 125	3	20	
Barium	4.4	J	1000	1040		ug/L		103	75 - 125	1	20	
Beryllium	ND		1000	1030		ug/L		103	75 - 125	1	20	
Cadmium	ND		1000	993		ug/L		99	75 - 125	3	20	
Calcium	20000		10000	29600		ug/L		96	75 - 125	3	20	
Chromium	4.8	J	1000	991		ug/L		99	75 - 125	3	20	
Cobalt	ND		1000	985		ug/L		99	75 - 125	3	20	
Copper	ND		1000	994		ug/L		99	75 - 125	3	20	
Iron	50	J	10000	10400		ug/L		104	75 - 125	2	20	
Lead	ND		1000	978		ug/L		98	75 - 125	3	20	
Magnesium	13000		10000	22600		ug/L		100	75 - 125	1	20	

TestAmerica St. Louis

QC Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-3079-1 MSD

Matrix: Water

Analysis Batch: 63920

Client Sample ID: PZ-100-KS

Prep Type: Dissolved

Prep Batch: 63421

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Manganese	17		1000	1030		ug/L		101	75 - 125	1	20
Nickel	ND		1000	983		ug/L		98	75 - 125	3	20
Potassium	4900	J	10000	15200		ug/L		103	75 - 125	1	20
Selenium	ND		1000	996		ug/L		100	75 - 125	3	20
Silver	ND		100	84.9		ug/L		85	75 - 125	2	20
Sodium	240000	E	10000	243000	E 4	ug/L		82	75 - 125	0	20
Thallium	ND		200	198		ug/L		99	75 - 125	3	20
Vanadium	ND		1000	997		ug/L		100	75 - 125	1	20
Zinc	10	J	1000	1010		ug/L		100	75 - 125	3	20

Lab Sample ID: 160-3079-1 MSD

Matrix: Water

Analysis Batch: 63920

Client Sample ID: PZ-100-KS

Prep Type: Dissolved

Prep Batch: 63421

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Sodium	230000		10000	241000	4	ug/L		137	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-62431/1-A

Matrix: Water

Analysis Batch: 62861

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 62431

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Mercury	ND		0.20	0.060	ug/L		07/24/13 10:11	07/24/13 15:53		1

Lab Sample ID: LCS 160-62431/2-A

Matrix: Water

Analysis Batch: 62861

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 62431

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
							Added
Mercury	5.00	5.64		ug/L		113	80 - 120

Lab Sample ID: MB 160-62433/1-A

Matrix: Water

Analysis Batch: 62861

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 62433

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Mercury	ND		0.20	0.060	ug/L		07/24/13 10:13	07/24/13 16:41		1

Lab Sample ID: LCS 160-62433/2-A

Matrix: Water

Analysis Batch: 62861

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 62433

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
							Added
Mercury	5.00	5.54		ug/L		111	80 - 120

US EPA ARCHIVE DOCUMENT

13

TestAmerica St. Louis

QC Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-62927/3

Matrix: Water

Analysis Batch: 62927

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.020	0.0040	mg/L			07/23/13 13:48	1
Chloride	ND		0.20	0.020	mg/L			07/23/13 13:48	1
Bromide	ND		0.25	0.025	mg/L			07/23/13 13:48	1
Sulfate	ND		0.50	0.050	mg/L			07/23/13 13:48	1

Lab Sample ID: LCS 160-62927/4

Matrix: Water

Analysis Batch: 62927

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.400	0.391		mg/L		98	90 - 110
Chloride	2.00	1.91		mg/L		95	90 - 110
Bromide	2.00	1.97		mg/L		99	90 - 110
Sulfate	8.00	7.65		mg/L		96	90 - 110

Lab Sample ID: 160-3079-1 MS

Matrix: Water

Analysis Batch: 62927

Client Sample ID: PZ-100-KS

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.0080	J	0.400	0.420		mg/L		103	90 - 110
Bromide	0.23	J	2.00	2.30		mg/L		104	90 - 110

Lab Sample ID: 160-3079-1 DU

Matrix: Water

Analysis Batch: 62927

Client Sample ID: PZ-100-KS

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.0080	J	0.00830	J	mg/L		4	20
Bromide	0.23	J	0.228	J	mg/L		1	20

Lab Sample ID: MB 160-62933/9

Matrix: Water

Analysis Batch: 62933

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iodide	ND		1.0	0.10	mg/L			07/24/13 16:18	1

Lab Sample ID: LCS 160-62933/10

Matrix: Water

Analysis Batch: 62933

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iodide	4.00	4.04		mg/L		101	90 - 110

US EPA ARCHIVE DOCUMENT

13

TestAmerica St. Louis

QC Sample Results

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 160-3079-1 MS
Matrix: Water
Analysis Batch: 62933

Client Sample ID: PZ-100-KS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iodide	ND		4.00	3.84		mg/L		96	90 - 110

Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-3079-1 MS
Matrix: Water
Analysis Batch: 62927

Client Sample ID: PZ-100-KS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride - DL	54		40.0	97.7		mg/L		108	90 - 110
Sulfate - DL	36		80.0	113		mg/L		96	90 - 110

Lab Sample ID: 160-3079-1 DU
Matrix: Water
Analysis Batch: 62927

Client Sample ID: PZ-100-KS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride - DL	54		54.0		mg/L		0.6	20
Sulfate - DL	36		36.2		mg/L		0.8	20

Method: 310.1 - Alkalinity

Lab Sample ID: MB 160-63939/1
Matrix: Water
Analysis Batch: 63939

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	0.250	J	1.3	0.14	mg/L			07/31/13 09:58	1

Lab Sample ID: LCS 160-63939/3
Matrix: Water
Analysis Batch: 63939

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	400	376		mg/L		94	90 - 110

Lab Sample ID: LLCS 160-63939/2
Matrix: Water
Analysis Batch: 63939

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	190		mg/L		95	90 - 110

US EPA ARCHIVE DOCUMENT

13

QC Association Summary

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

GC/MS VOA

Analysis Batch: 62847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3079-1	PZ-100-KS	Total/NA	Water	8260C	
160-3079-2	TRIP BLANK	Total/NA	Water	8260C	
LCS 160-62847/4	Lab Control Sample	Total/NA	Water	8260C	
LCS 160-62847/5	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-62847/2	Method Blank	Total/NA	Water	8260C	

Metals

Prep Batch: 62431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3079-1	PZ-100-KS	Total/NA	Water	7470A	
LCS 160-62431/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-62431/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 62433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3079-1	PZ-100-KS	Dissolved	Water	7470A	
LCS 160-62433/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-62433/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 62861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3079-1	PZ-100-KS	Dissolved	Water	7470A	62433
160-3079-1	PZ-100-KS	Total/NA	Water	7470A	62431
LCS 160-62431/2-A	Lab Control Sample	Total/NA	Water	7470A	62431
LCS 160-62433/2-A	Lab Control Sample	Total/NA	Water	7470A	62433
MB 160-62431/1-A	Method Blank	Total/NA	Water	7470A	62431
MB 160-62433/1-A	Method Blank	Total/NA	Water	7470A	62433

Prep Batch: 63421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3079-1	PZ-100-KS	Dissolved	Water	3010A	
160-3079-1	PZ-100-KS	Total/NA	Water	3010A	
160-3079-1 MS	PZ-100-KS	Dissolved	Water	3010A	
160-3079-1 MSD	PZ-100-KS	Dissolved	Water	3010A	
LCS 160-63421/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-63421/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 63920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3079-1	PZ-100-KS	Dissolved	Water	6010C	63421
160-3079-1	PZ-100-KS	Dissolved	Water	6010C	63421
160-3079-1	PZ-100-KS	Total/NA	Water	6010C	63421
160-3079-1	PZ-100-KS	Total/NA	Water	6010C	63421
160-3079-1 MS	PZ-100-KS	Dissolved	Water	6010C	63421
160-3079-1 MS	PZ-100-KS	Dissolved	Water	6010C	63421
160-3079-1 MSD	PZ-100-KS	Dissolved	Water	6010C	63421
160-3079-1 MSD	PZ-100-KS	Dissolved	Water	6010C	63421
LCS 160-63421/2-A	Lab Control Sample	Total/NA	Water	6010C	63421
MB 160-63421/1-A	Method Blank	Total/NA	Water	6010C	63421

TestAmerica St. Louis

QC Association Summary

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

General Chemistry

Analysis Batch: 62927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3079-1	PZ-100-KS	Total/NA	Water	300.0	
160-3079-1 - DL	PZ-100-KS	Total/NA	Water	300.0	
160-3079-1 DU	PZ-100-KS	Total/NA	Water	300.0	
160-3079-1 DU - DL	PZ-100-KS	Total/NA	Water	300.0	
160-3079-1 MS	PZ-100-KS	Total/NA	Water	300.0	
160-3079-1 MS - DL	PZ-100-KS	Total/NA	Water	300.0	
LCS 160-62927/4	Lab Control Sample	Total/NA	Water	300.0	
MB 160-62927/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 62933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3079-1	PZ-100-KS	Total/NA	Water	300.0	
160-3079-1 MS	PZ-100-KS	Total/NA	Water	300.0	
LCS 160-62933/10	Lab Control Sample	Total/NA	Water	300.0	
MB 160-62933/9	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 63939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3079-1	PZ-100-KS	Total/NA	Water	310.1	
LCS 160-63939/3	Lab Control Sample	Total/NA	Water	310.1	
LLCS 160-63939/2	Lab Control Sample	Total/NA	Water	310.1	
MB 160-63939/1	Method Blank	Total/NA	Water	310.1	

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13

Surrogate Summary

Client: Engineering Management Support, Inc.
Project/Site: West Lake Landfill

TestAmerica Job ID: 160-3079-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (82-132)	BFB (82-121)	DBFM (85-119)	TOL (85-115)
160-3079-1	PZ-100-KS	105	111	107	105
160-3079-2	TRIP BLANK	103	106	107	106
LCS 160-62847/4	Lab Control Sample	95	100	100	101
LCSD 160-62847/5	Lab Control Sample Dup	96	100	101	103
MB 160-62847/2	Method Blank	100	108	107	103

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

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13