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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica St. Louis  
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TestAmerica Job ID: 160-3013-1  
Client Project/Site: West Lake Landfill

For:  
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Attn: Mr. Paul Rosasco

*Rhonda Ridenhower*

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Authorized for release by:  
7/31/2013 9:50:17 AM

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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.*



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## Case Narrative

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

TestAmerica Job ID: 160-3013-1

**Job ID: 160-3013-1**

**Laboratory: TestAmerica St. Louis**

Narrative

### CASE NARRATIVE

**Client: Engineering Management Support, Inc.**

**Project: West Lake Landfill**

**Report Number: 160-3013-1**

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 07/17/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.0 C.

#### VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples PZ-208-SS (160-3013-1), PZ-303-AI (160-3013-2), PZ-304-AS (160-3013-3), MW-104 (160-3013-4), P2-204A-SS (160-3013-5), PS-302-AI (160-3013-6), PS-302-AS (160-3013-7) and TRIP BLANK (160-3013-8) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 07/17/2013.

#### Analytical batch 61806

The continuing calibration verification (CCV) for Chloroethane associated with batch 61806 recovered above the upper control limit indicating that results for this analyte will be biased high. This analyte was not detected above the reporting limit in the associated

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## Case Narrative

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

TestAmerica Job ID: 160-3013-1

### Job ID: 160-3013-1 (Continued)

#### Laboratory: TestAmerica St. Louis (Continued)

samples; therefore, the data have been reported.

The laboratory control sample (LCS) for batch 61806 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCS and was not detected above the reporting limit in the associated samples; therefore, the data have been reported.

Surrogate (4-BFB) recovery for the following sample was outside control limits: MW-104 (160-3013-4). Re-analysis was performed with concurring results. The original analysis has been reported.

The matrix spike duplicate (MSD) recovery for batch 61806 was outside control limits for Bromoform. The associated laboratory control sample (LCS) recovery met acceptance criteria.

The MS/MSD recovery of Chloroethane is outside the upper recovery limit, indicating a high bias for this analyte. Chloroethane was not detected above the reporting limit in the associated samples.

No other difficulties were encountered during the VOCs analysis.

All other quality control parameters were within the acceptance limits.

#### **METALS (ICP)-Total and Dissolved**

Samples PZ-208-SS (160-3013-1), PZ-303-AI (160-3013-2), PZ-304-AS (160-3013-3), MW-104 (160-3013-4), P2-204A-SS (160-3013-5), PS-302-AI (160-3013-6) and PS-302-AS (160-3013-7) were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 07/18/2013 and analyzed on 07/19/2013 and 7/23/2013.

#### Analytical batch 61766

The following samples were diluted to bring the concentration of target analytes (calcium, magnesium, manganese, and sodium) within the calibration range. Magnesium also interferes with iron: D-12 (160-3000-8 MSD), MW-104 (160-3013-4), P2-204A-SS (160-3013-5), PS-302-AI (160-3013-6), PS-302-AS (160-3013-7), PZ-208-SS (160-3013-1), PZ-303-AI (160-3013-2), PZ-304-AS (160-3013-3). Elevated reporting limits (RLs) are provided.

The serial dilution performed for the following samples associated with prep batch 61452 was outside control limits for arsenic, cobalt, and lead indicating a possible matrix interference: (160-3000-8 SD)

The following sample(s) was diluted due to the presence of iron which interferes with arsenic, chromium, selenium and zinc: PS-302-AS (160-3013-7). Elevated reporting limits (RLs) are provided

#### Analytical batch 62088

Due to the high concentration of calcium, the matrix spike / matrix spike duplicate (MS/MSD) for prep batch 61452 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

The following samples were diluted to bring the concentration of target analytes within the calibration range: (160-3000-8 SD), D-12 (160-3000-8), D-12 (160-3000-8 MS), D-12 (160-3000-8 MSD). Elevated reporting limits (RLs) are provided.

#### Analytical batch 62409

The following samples were diluted to bring the concentration of target analytes (calcium, magnesium, iron, and manganese) within the calibration range. Magnesium also interferes with iron and iron interferes with arsenic, chromium, selenium, and zinc: (160-3013-1 MS), (160-3013-1 MSD), (160-3013-1 SD), MW-104 (160-3013-4), P2-204A-SS (160-3013-5), PS-302-AI (160-3013-6), PS-302-AS (160-3013-7), PZ-208-SS (160-3013-1), PZ-303-AI (160-3013-2), PZ-304-AS (160-3013-3). Elevated reporting limits (RLs) are provided.

The target analyte concentration for magnesium (which also interferes with iron) in the unspiked sample is such that the MS and/or MSD spike concentrations are above the instrument's linear range. MS/MSD results are considered estimated values. The said analyte concentration in the original sample is greater than 4 times the amount spiked, making % recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

The initial calibration verification (ICV) for prep batch 61454 was above the upper control limit for thallium indicating a potential high bias.

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## Case Narrative

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

TestAmerica Job ID: 160-3013-1

### Job ID: 160-3013-1 (Continued)

#### Laboratory: TestAmerica St. Louis (Continued)

The affected samples were ND for thallium and the data is reported with this narrative.

PZ-208-SS (160-3013-1): The sample results for aluminum and were observed outside the dissolved verses total criteria. All other elements were within QC limits, indicating that this is an anomaly due to matrix interference.

No other difficulties were encountered during the ICP analysis.

All other quality control parameters were within the acceptance limits.

#### DISSOLVED MERCURY (CVAA)

Samples PZ-208-SS (160-3013-1), PZ-303-AI (160-3013-2), PZ-304-AS (160-3013-3), MW-104 (160-3013-4), P2-204A-SS (160-3013-5), PS-302-AI (160-3013-6) and PS-302-AS (160-3013-7) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 07/18/2013 and analyzed on 07/19/2013.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

#### TOTAL MERCURY

Samples PZ-208-SS (160-3013-1), PZ-303-AI (160-3013-2), PZ-304-AS (160-3013-3), MW-104 (160-3013-4), P2-204A-SS (160-3013-5), PS-302-AI (160-3013-6) and PS-302-AS (160-3013-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 07/18/2013 and analyzed on 07/18/2013 and 07/19/2013.

No difficulties were encountered during the mercury analysis.

All quality control parameters were within the acceptance limits.

#### ANIONS

Samples PZ-208-SS (160-3013-1), PZ-303-AI (160-3013-2), PZ-304-AS (160-3013-3), MW-104 (160-3013-4), P2-204A-SS (160-3013-5), PS-302-AI (160-3013-6) and PS-302-AS (160-3013-7) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 07/17/2013.

The following samples were diluted to bring the concentrations of Chloride and Sulfate within the calibration range in IC batch 62926: MW-104 (160-3013-4), P2-204A-SS (160-3013-5), PS-302-AI (160-3013-6), PS-302-AS (160-3013-7), PZ-208-SS (160-3013-1), PZ-303-AI (160-3013-2), PZ-304-AS (160-3013-3). Elevated reporting limits (RLs) are provided.

The matrix spike (MS) recovery for Chloride in IC batch 62926 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria, as did the MS recoveries for the other reported anions in this batch. (160-3013-1 MS)

No other difficulties were encountered during the anions analysis.

All other quality control parameters were within the acceptance limits.

#### ALKALINITY

Samples PZ-208-SS (160-3013-1), PZ-303-AI (160-3013-2), PZ-304-AS (160-3013-3), MW-104 (160-3013-4), P2-204A-SS (160-3013-5), PS-302-AI (160-3013-6) and PS-302-AS (160-3013-7) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 07/29/2013.

The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: PS-302-AS (160-3013-7), PZ-304-AS (160-3013-3). Elevated reporting limits (RLs) are provided.

No difficulties were encountered during the alkalinity analysis.

All quality control parameters were within the acceptance limits.

## Login Sample Receipt Checklist

Client: Engineering Management Support, Inc.

Job Number: 160-3013-1

**Login Number: 3013**

**List Source: TestAmerica St. Louis**

**List Number: 1**

**Creator: McNairy, Jason A**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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	2
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.	False	PZ-304-AI on COC, bottles labeled PZ-303-AI
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 <math><6\text{mm}</math> (1/4").	False	One Trip blank sample was received with head space
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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# Definitions/Glossary

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

TestAmerica Job ID: 160-3013-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
F	MS or MSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

### Metals

Qualifier	Qualifier Description
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
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.
B	Compound was found in the blank and sample.

### 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.
F	MS or MSD exceeds the control limits
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.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
$\alpha$	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)

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# Method Summary

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

TestAmerica Job ID: 160-3013-1

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

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# Sample Summary

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

TestAmerica Job ID: 160-3013-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-3013-1	PZ-208-SS	Water	07/16/13 09:25	07/17/13 12:16
160-3013-2	PZ-303-AI	Water	07/16/13 12:05	07/17/13 12:16
160-3013-3	PZ-304-AS	Water	07/16/13 12:34	07/17/13 12:16
160-3013-4	MW-104	Water	07/16/13 13:25	07/17/13 12:16
160-3013-5	P2-204A-SS	Water	07/16/13 13:56	07/17/13 12:16
160-3013-6	PS-302-AI	Water	07/16/13 15:18	07/17/13 12:16
160-3013-7	PS-302-AS	Water	07/16/13 15:30	07/17/13 12:16
160-3013-8	TRIP BLANK	Water	07/16/13 00:00	07/17/13 12:16

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## Detection Summary

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-208-SS**

**Lab Sample ID: 160-3013-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	530		200	80	ug/L	1		6010C	Total/NA
Antimony	4.0	J	10	4.0	ug/L	1		6010C	Total/NA
Barium	150		50	4.0	ug/L	1		6010C	Total/NA
Calcium	94000	E	1000	110	ug/L	1		6010C	Total/NA
Calcium	100000		10000	1100	ug/L	10		6010C	Total/NA
Iron	1000		100	28	ug/L	1		6010C	Total/NA
Lead	2.6	J	10	1.5	ug/L	1		6010C	Total/NA
Magnesium	46000		1000	130	ug/L	1		6010C	Total/NA
Manganese	26		15	3.3	ug/L	1		6010C	Total/NA
Selenium	6.4	J	15	2.7	ug/L	1		6010C	Total/NA
Sodium	39000		1000	320	ug/L	1		6010C	Total/NA
Zinc	9.9	J	20	5.2	ug/L	1		6010C	Total/NA
Aluminum	740		200	80	ug/L	1		6010C	Dissolved
Barium	150		50	4.0	ug/L	1		6010C	Dissolved
Calcium	97000	E	1000	110	ug/L	1		6010C	Dissolved
Calcium	110000		10000	1100	ug/L	10		6010C	Dissolved
Chromium	3.7	J	10	3.1	ug/L	1		6010C	Dissolved
Iron	720		100	28	ug/L	1		6010C	Dissolved
Lead	2.4	J	10	1.5	ug/L	1		6010C	Dissolved
Magnesium	45000		1000	130	ug/L	1		6010C	Dissolved
Manganese	20		15	3.3	ug/L	1		6010C	Dissolved
Potassium	1700	J	5000	1700	ug/L	1		6010C	Dissolved
Selenium	6.9	J	15	2.7	ug/L	1		6010C	Dissolved
Sodium	43000		1000	320	ug/L	1		6010C	Dissolved
Zinc	6.7	J	20	5.2	ug/L	1		6010C	Dissolved
Nitrate as N	0.61		0.020	0.0040	mg/L	1		300.0	Total/NA
Bromide	0.069	J	0.25	0.025	mg/L	1		300.0	Total/NA
Alkalinity	370		5.0	0.54	mg/L	1		310.1	Total/NA
Chloride - DL	89		4.0	0.40	mg/L	20		300.0	Total/NA
Sulfate - DL	32		10	1.0	mg/L	20		300.0	Total/NA

**Client Sample ID: PZ-303-AI**

**Lab Sample ID: 160-3013-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	2.0	J	5.0	0.35	ug/L	1		8260C	Total/NA
Benzene	1.6	J	5.0	0.25	ug/L	1		8260C	Total/NA
Chlorobenzene	14		5.0	0.38	ug/L	1		8260C	Total/NA
Antimony	4.8	J	10	4.0	ug/L	1		6010C	Total/NA
Barium	1300		50	4.0	ug/L	1		6010C	Total/NA
Calcium	180000	E	1000	110	ug/L	1		6010C	Total/NA
Calcium	220000		10000	1100	ug/L	10		6010C	Total/NA
Cobalt	4.0	J B	50	4.0	ug/L	1		6010C	Total/NA
Iron	16000		100	28	ug/L	1		6010C	Total/NA
Iron	16000		1000	280	ug/L	10		6010C	Total/NA
Lead	3.2	J	10	1.5	ug/L	1		6010C	Total/NA
Magnesium	62000	E	1000	130	ug/L	1		6010C	Total/NA
Magnesium	64000		10000	1300	ug/L	10		6010C	Total/NA
Manganese	1000		15	3.3	ug/L	1		6010C	Total/NA
Nickel	22	J	40	13	ug/L	1		6010C	Total/NA
Potassium	15000		5000	1700	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

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## Detection Summary

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

TestAmerica Job ID: 160-3013-1

### Client Sample ID: PZ-303-AI (Continued)

### Lab Sample ID: 160-3013-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	170000	E	1000	320	ug/L	1		6010C	Total/NA
Sodium	170000		10000	3200	ug/L	10		6010C	Total/NA
Antimony	4.4	J	10	4.0	ug/L	1		6010C	Dissolved
Barium	1300		50	4.0	ug/L	1		6010C	Dissolved
Calcium	180000	E	1000	110	ug/L	1		6010C	Dissolved
Calcium	210000		10000	1100	ug/L	10		6010C	Dissolved
Iron	15000		100	28	ug/L	1		6010C	Dissolved
Iron	15000		1000	280	ug/L	10		6010C	Dissolved
Lead	2.6	J	10	1.5	ug/L	1		6010C	Dissolved
Magnesium	58000	E	1000	130	ug/L	1		6010C	Dissolved
Magnesium	59000		10000	1300	ug/L	10		6010C	Dissolved
Manganese	990		15	3.3	ug/L	1		6010C	Dissolved
Nickel	22	J	40	13	ug/L	1		6010C	Dissolved
Potassium	16000		5000	1700	ug/L	1		6010C	Dissolved
Selenium	2.7	J	15	2.7	ug/L	1		6010C	Dissolved
Sodium	170000	E	1000	320	ug/L	1		6010C	Dissolved
Sodium	180000		10000	3200	ug/L	10		6010C	Dissolved
Nitrate as N	0.033		0.020	0.0040	mg/L	1		300.0	Total/NA
Bromide	2.3		0.25	0.025	mg/L	1		300.0	Total/NA
Sulfate	0.81		0.50	0.050	mg/L	1		300.0	Total/NA
Iodide	0.44	J	1.0	0.10	mg/L	1		300.0	Total/NA
Alkalinity	840		5.0	0.54	mg/L	1		310.1	Total/NA
Chloride - DL2	270		20	2.0	mg/L	100		300.0	Total/NA

### Client Sample ID: PZ-304-AS

### Lab Sample ID: 160-3013-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	7.1		5.0	0.25	ug/L	1		8260C	Total/NA
Chlorobenzene	58		5.0	0.38	ug/L	1		8260C	Total/NA
1,4-Dichlorobenzene	13		5.0	0.35	ug/L	1		8260C	Total/NA
Isopropylbenzene	0.53	J	5.0	0.26	ug/L	1		8260C	Total/NA
Toluene	1.1	J	5.0	1.0	ug/L	1		8260C	Total/NA
Aluminum	280		200	80	ug/L	1		6010C	Total/NA
Antimony	4.7	J	10	4.0	ug/L	1		6010C	Total/NA
Arsenic	220		10	2.0	ug/L	1		6010C	Total/NA
Barium	2000		50	4.0	ug/L	1		6010C	Total/NA
Calcium	100000	E	1000	110	ug/L	1		6010C	Total/NA
Calcium	110000		10000	1100	ug/L	10		6010C	Total/NA
Chromium	4.9	J	10	3.1	ug/L	1		6010C	Total/NA
Cobalt	6.3	J B	50	4.0	ug/L	1		6010C	Total/NA
Iron	26000		100	28	ug/L	1		6010C	Total/NA
Iron	27000		1000	280	ug/L	10		6010C	Total/NA
Lead	6.6	J	10	1.5	ug/L	1		6010C	Total/NA
Magnesium	74000	E	1000	130	ug/L	1		6010C	Total/NA
Magnesium	74000		10000	1300	ug/L	10		6010C	Total/NA
Manganese	130		15	3.3	ug/L	1		6010C	Total/NA
Nickel	62		40	13	ug/L	1		6010C	Total/NA
Potassium	82000		5000	1700	ug/L	1		6010C	Total/NA
Sodium	390000	E	1000	320	ug/L	1		6010C	Total/NA
Sodium	390000		10000	3200	ug/L	10		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica St. Louis

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# Detection Summary

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

TestAmerica Job ID: 160-3013-1

## Client Sample ID: PZ-304-AS (Continued)

## Lab Sample ID: 160-3013-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	8.6	J	20	5.2	ug/L	1		6010C	Total/NA
Antimony	4.3	J	10	4.0	ug/L	1		6010C	Dissolved
Arsenic	210		10	2.0	ug/L	1		6010C	Dissolved
Barium	2000		50	4.0	ug/L	1		6010C	Dissolved
Calcium	98000	E	1000	110	ug/L	1		6010C	Dissolved
Calcium	120000		10000	1100	ug/L	10		6010C	Dissolved
Chromium	3.2	J	10	3.1	ug/L	1		6010C	Dissolved
Cobalt	4.9	J	50	4.0	ug/L	1		6010C	Dissolved
Iron	24000		100	28	ug/L	1		6010C	Dissolved
Iron	25000		1000	280	ug/L	10		6010C	Dissolved
Lead	3.1	J	10	1.5	ug/L	1		6010C	Dissolved
Magnesium	70000	E	1000	130	ug/L	1		6010C	Dissolved
Magnesium	71000		10000	1300	ug/L	10		6010C	Dissolved
Manganese	110		15	3.3	ug/L	1		6010C	Dissolved
Nickel	54		40	13	ug/L	1		6010C	Dissolved
Potassium	83000		5000	1700	ug/L	1		6010C	Dissolved
Sodium	400000	E	1000	320	ug/L	1		6010C	Dissolved
Sodium	410000		10000	3200	ug/L	10		6010C	Dissolved
Zinc	6.9	J	20	5.2	ug/L	1		6010C	Dissolved
Bromide	3.3		0.25	0.025	mg/L	1		300.0	Total/NA
Sulfate	0.21	J	0.50	0.050	mg/L	1		300.0	Total/NA
Iodide	0.83	J	1.0	0.10	mg/L	1		300.0	Total/NA
Alkalinity	1300		25	2.7	mg/L	5		310.1	Total/NA
Chloride - DL2	360		40	4.0	mg/L	200		300.0	Total/NA

## Client Sample ID: MW-104

## Lab Sample ID: 160-3013-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	33000		200	80	ug/L	1		6010C	Total/NA
Antimony	9.3	J	10	4.0	ug/L	1		6010C	Total/NA
Arsenic	39		10	2.0	ug/L	1		6010C	Total/NA
Barium	810		50	4.0	ug/L	1		6010C	Total/NA
Beryllium	1.7	J	5.0	0.61	ug/L	1		6010C	Total/NA
Cadmium	1.1	J	5.0	0.91	ug/L	1		6010C	Total/NA
Calcium	190000	E	1000	110	ug/L	1		6010C	Total/NA
Calcium	230000		10000	1100	ug/L	10		6010C	Total/NA
Chromium	37		10	3.1	ug/L	1		6010C	Total/NA
Cobalt	20	J B	50	4.0	ug/L	1		6010C	Total/NA
Copper	45		25	4.6	ug/L	1		6010C	Total/NA
Iron	52000		100	28	ug/L	1		6010C	Total/NA
Iron	58000		1000	280	ug/L	10		6010C	Total/NA
Lead	59		10	1.5	ug/L	1		6010C	Total/NA
Magnesium	73000	E	1000	130	ug/L	1		6010C	Total/NA
Magnesium	79000		10000	1300	ug/L	10		6010C	Total/NA
Manganese	3000		15	3.3	ug/L	1		6010C	Total/NA
Nickel	72		40	13	ug/L	1		6010C	Total/NA
Potassium	11000		5000	1700	ug/L	1		6010C	Total/NA
Selenium	6.2	J	15	2.7	ug/L	1		6010C	Total/NA
Sodium	11000		1000	320	ug/L	1		6010C	Total/NA
Vanadium	82		50	4.1	ug/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica St. Louis

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## Detection Summary

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: MW-104 (Continued)**

**Lab Sample ID: 160-3013-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	230		20	5.2	ug/L	1		6010C	Total/NA
Antimony	4.0	J	10	4.0	ug/L	1		6010C	Dissolved
Arsenic	17		10	2.0	ug/L	1		6010C	Dissolved
Barium	410		50	4.0	ug/L	1		6010C	Dissolved
Calcium	180000	E	1000	110	ug/L	1		6010C	Dissolved
Calcium	210000		10000	1100	ug/L	10		6010C	Dissolved
Iron	16000		100	28	ug/L	1		6010C	Dissolved
Iron	16000		1000	280	ug/L	10		6010C	Dissolved
Lead	1.7	J	10	1.5	ug/L	1		6010C	Dissolved
Magnesium	60000	E	1000	130	ug/L	1		6010C	Dissolved
Magnesium	62000		10000	1300	ug/L	10		6010C	Dissolved
Manganese	2400		15	3.3	ug/L	1		6010C	Dissolved
Potassium	4300	J	5000	1700	ug/L	1		6010C	Dissolved
Selenium	2.9	J	15	2.7	ug/L	1		6010C	Dissolved
Sodium	11000		1000	320	ug/L	1		6010C	Dissolved
Zinc	16	J	20	5.2	ug/L	1		6010C	Dissolved
Mercury	0.086	J	0.20	0.060	ug/L	1		7470A	Total/NA
Chloride	3.0		0.20	0.020	mg/L	1		300.0	Total/NA
Bromide	0.12	J	0.25	0.025	mg/L	1		300.0	Total/NA
Alkalinity	760		5.0	0.54	mg/L	1		310.1	Total/NA
Sulfate - DL	20		10	1.0	mg/L	20		300.0	Total/NA

**Client Sample ID: P2-204A-SS**

**Lab Sample ID: 160-3013-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	7.3		5.0	0.25	ug/L	1		8260C	Total/NA
Chlorobenzene	1.1	J	5.0	0.38	ug/L	1		8260C	Total/NA
Aluminum	2600		200	80	ug/L	1		6010C	Total/NA
Antimony	4.1	J	10	4.0	ug/L	1		6010C	Total/NA
Arsenic	15		10	2.0	ug/L	1		6010C	Total/NA
Barium	440		50	4.0	ug/L	1		6010C	Total/NA
Calcium	220000	E	1000	110	ug/L	1		6010C	Total/NA
Calcium	280000		10000	1100	ug/L	10		6010C	Total/NA
Chromium	4.3	J	10	3.1	ug/L	1		6010C	Total/NA
Cobalt	8.4	J B	50	4.0	ug/L	1		6010C	Total/NA
Iron	9500		100	28	ug/L	1		6010C	Total/NA
Iron	9900		1000	280	ug/L	10		6010C	Total/NA
Lead	5.6	J	10	1.5	ug/L	1		6010C	Total/NA
Magnesium	69000	E	1000	130	ug/L	1		6010C	Total/NA
Magnesium	73000		10000	1300	ug/L	10		6010C	Total/NA
Manganese	2300		15	3.3	ug/L	1		6010C	Total/NA
Nickel	20	J	40	13	ug/L	1		6010C	Total/NA
Potassium	19000		5000	1700	ug/L	1		6010C	Total/NA
Sodium	200000	E	1000	320	ug/L	1		6010C	Total/NA
Sodium	200000		10000	3200	ug/L	10		6010C	Total/NA
Vanadium	6.4	J	50	4.1	ug/L	1		6010C	Total/NA
Zinc	20		20	5.2	ug/L	1		6010C	Total/NA
Antimony	4.7	J	10	4.0	ug/L	1		6010C	Dissolved
Arsenic	15		10	2.0	ug/L	1		6010C	Dissolved
Barium	350		50	4.0	ug/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica St. Louis

## Detection Summary

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: P2-204A-SS (Continued)**

**Lab Sample ID: 160-3013-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	230000	E	1000	110	ug/L	1		6010C	Dissolved
Calcium	290000		10000	1100	ug/L	10		6010C	Dissolved
Chromium	4.5	J	10	3.1	ug/L	1		6010C	Dissolved
Cobalt	8.3	J	50	4.0	ug/L	1		6010C	Dissolved
Iron	6800		100	28	ug/L	1		6010C	Dissolved
Iron	7000		1000	280	ug/L	10		6010C	Dissolved
Lead	2.6	J	10	1.5	ug/L	1		6010C	Dissolved
Magnesium	66000	E	1000	130	ug/L	1		6010C	Dissolved
Magnesium	69000		10000	1300	ug/L	10		6010C	Dissolved
Manganese	2100		15	3.3	ug/L	1		6010C	Dissolved
Nickel	17	J	40	13	ug/L	1		6010C	Dissolved
Potassium	19000		5000	1700	ug/L	1		6010C	Dissolved
Sodium	210000	E	1000	320	ug/L	1		6010C	Dissolved
Sodium	210000		10000	3200	ug/L	10		6010C	Dissolved
Vanadium	4.1	J	50	4.1	ug/L	1		6010C	Dissolved
Nitrate as N	0.018	J	0.020	0.0040	mg/L	1		300.0	Total/NA
Bromide	0.87		0.25	0.025	mg/L	1		300.0	Total/NA
Iodide	0.42	J	1.0	0.10	mg/L	1		300.0	Total/NA
Alkalinity	510		5.0	0.54	mg/L	1		310.1	Total/NA
Sulfate - DL	340		10	1.0	mg/L	20		300.0	Total/NA
Chloride - DL2	410		20	2.0	mg/L	100		300.0	Total/NA

**Client Sample ID: PS-302-AI**

**Lab Sample ID: 160-3013-6**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	320		200	80	ug/L	1		6010C	Total/NA
Arsenic	2.8	J	10	2.0	ug/L	1		6010C	Total/NA
Barium	350		50	4.0	ug/L	1		6010C	Total/NA
Calcium	170000	E	1000	110	ug/L	1		6010C	Total/NA
Calcium	190000		10000	1100	ug/L	10		6010C	Total/NA
Chromium	4.0	J	10	3.1	ug/L	1		6010C	Total/NA
Cobalt	6.7	J B	50	4.0	ug/L	1		6010C	Total/NA
Iron	2000		100	28	ug/L	1		6010C	Total/NA
Iron	2000		1000	280	ug/L	10		6010C	Total/NA
Lead	2.4	J	10	1.5	ug/L	1		6010C	Total/NA
Magnesium	52000	E	1000	130	ug/L	1		6010C	Total/NA
Magnesium	53000		10000	1300	ug/L	10		6010C	Total/NA
Manganese	230		15	3.3	ug/L	1		6010C	Total/NA
Nickel	22	J	40	13	ug/L	1		6010C	Total/NA
Potassium	7400		5000	1700	ug/L	1		6010C	Total/NA
Sodium	67000		1000	320	ug/L	1		6010C	Total/NA
Zinc	8.0	J	20	5.2	ug/L	1		6010C	Total/NA
Antimony	4.1	J	10	4.0	ug/L	1		6010C	Dissolved
Arsenic	2.2	J	10	2.0	ug/L	1		6010C	Dissolved
Barium	350		50	4.0	ug/L	1		6010C	Dissolved
Calcium	170000	E	1000	110	ug/L	1		6010C	Dissolved
Calcium	210000		10000	1100	ug/L	10		6010C	Dissolved
Cobalt	5.7	J	50	4.0	ug/L	1		6010C	Dissolved
Iron	1500		100	28	ug/L	1		6010C	Dissolved
Iron	1500		1000	280	ug/L	10		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica St. Louis

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## Detection Summary

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

TestAmerica Job ID: 160-3013-1

### Client Sample ID: PS-302-AI (Continued)

Lab Sample ID: 160-3013-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.8	J	10	1.5	ug/L	1		6010C	Dissolved
Magnesium	51000	E	1000	130	ug/L	1		6010C	Dissolved
Magnesium	52000		10000	1300	ug/L	10		6010C	Dissolved
Manganese	210		15	3.3	ug/L	1		6010C	Dissolved
Nickel	21	J	40	13	ug/L	1		6010C	Dissolved
Potassium	7600		5000	1700	ug/L	1		6010C	Dissolved
Sodium	70000		1000	320	ug/L	1		6010C	Dissolved
Zinc	7.7	J	20	5.2	ug/L	1		6010C	Dissolved
Nitrate as N	0.0085	J	0.020	0.0040	mg/L	1		300.0	Total/NA
Bromide	0.39		0.25	0.025	mg/L	1		300.0	Total/NA
Iodide	0.10	J	1.0	0.10	mg/L	1		300.0	Total/NA
Alkalinity	680		5.0	0.54	mg/L	1		310.1	Total/NA
Chloride - DL	71		4.0	0.40	mg/L	20		300.0	Total/NA
Sulfate - DL	71		10	1.0	mg/L	20		300.0	Total/NA

### Client Sample ID: PS-302-AS

Lab Sample ID: 160-3013-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	14		5.0	0.35	ug/L	1		8260C	Total/NA
Benzene	10		5.0	0.25	ug/L	1		8260C	Total/NA
Chlorobenzene	48		5.0	0.38	ug/L	1		8260C	Total/NA
Aluminum	1400		200	80	ug/L	1		6010C	Total/NA
Antimony	12		10	4.0	ug/L	1		6010C	Total/NA
Arsenic	390		10	2.0	ug/L	1		6010C	Total/NA
Arsenic	390		100	20	ug/L	10		6010C	Total/NA
Barium	550		50	4.0	ug/L	1		6010C	Total/NA
Calcium	210000	E	1000	110	ug/L	1		6010C	Total/NA
Calcium	250000		10000	1100	ug/L	10		6010C	Total/NA
Cobalt	21	J B	50	4.0	ug/L	1		6010C	Total/NA
Copper	5.6	J	25	4.6	ug/L	1		6010C	Total/NA
Iron	140000	E	100	28	ug/L	1		6010C	Total/NA
Iron	150000		1000	280	ug/L	10		6010C	Total/NA
Lead	11		10	1.5	ug/L	1		6010C	Total/NA
Magnesium	86000	E	1000	130	ug/L	1		6010C	Total/NA
Magnesium	88000		10000	1300	ug/L	10		6010C	Total/NA
Manganese	14000	E	15	3.3	ug/L	1		6010C	Total/NA
Manganese	14000		150	33	ug/L	10		6010C	Total/NA
Nickel	72		40	13	ug/L	1		6010C	Total/NA
Potassium	6700		5000	1700	ug/L	1		6010C	Total/NA
Selenium	11	J	15	2.7	ug/L	1		6010C	Total/NA
Sodium	56000		1000	320	ug/L	1		6010C	Total/NA
Thallium	17	J ^	20	4.0	ug/L	1		6010C	Total/NA
Vanadium	7.9	J	50	4.1	ug/L	1		6010C	Total/NA
Zinc	80		20	5.2	ug/L	1		6010C	Total/NA
Zinc	80	J	200	52	ug/L	10		6010C	Total/NA
Antimony	12		10	4.0	ug/L	1		6010C	Dissolved
Arsenic	340		10	2.0	ug/L	1		6010C	Dissolved
Arsenic	330		100	20	ug/L	10		6010C	Dissolved
Barium	390		50	4.0	ug/L	1		6010C	Dissolved
Calcium	220000	E	1000	110	ug/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica St. Louis



## Detection Summary

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PS-302-AS (Continued)**

**Lab Sample ID: 160-3013-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	260000		10000	1100	ug/L	10		6010C	Dissolved
Cobalt	5.9	J	50	4.0	ug/L	1		6010C	Dissolved
Iron	130000	E	100	28	ug/L	1		6010C	Dissolved
Iron	130000		1000	280	ug/L	10		6010C	Dissolved
Lead	7.1	J	10	1.5	ug/L	1		6010C	Dissolved
Magnesium	85000	E	1000	130	ug/L	1		6010C	Dissolved
Magnesium	84000		10000	1300	ug/L	10		6010C	Dissolved
Manganese	13000	E	15	3.3	ug/L	1		6010C	Dissolved
Manganese	13000		150	33	ug/L	10		6010C	Dissolved
Nickel	19	J	40	13	ug/L	1		6010C	Dissolved
Potassium	6800		5000	1700	ug/L	1		6010C	Dissolved
Selenium	12	J	15	2.7	ug/L	1		6010C	Dissolved
Sodium	60000		1000	320	ug/L	1		6010C	Dissolved
Thallium	16	J	20	4.0	ug/L	1		6010C	Dissolved
Vanadium	4.3	J	50	4.1	ug/L	1		6010C	Dissolved
Zinc	7.2	J	20	5.2	ug/L	1		6010C	Dissolved
Nitrate as N	0.037		0.020	0.0040	mg/L	1		300.0	Total/NA
Bromide	0.95		0.25	0.025	mg/L	1		300.0	Total/NA
Iodide	0.16	J	1.0	0.10	mg/L	1		300.0	Total/NA
Alkalinity	1200		25	2.7	mg/L	5		310.1	Total/NA
Chloride - DL	53		4.0	0.40	mg/L	20		300.0	Total/NA
Sulfate - DL	47		10	1.0	mg/L	20		300.0	Total/NA

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 160-3013-8**

No Detections.

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This Detection Summary does not include radiochemical test results.

TestAmerica St. Louis

# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-208-SS**

**Lab Sample ID: 160-3013-1**

**Date Collected: 07/16/13 09:25**

**Matrix: Water**

**Date Received: 07/17/13 12:16**

**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			07/17/13 20:13	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/17/13 20:13	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/17/13 20:13	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/17/13 20:13	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/17/13 20:13	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/17/13 20:13	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/17/13 20:13	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/17/13 20:13	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/17/13 20:13	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/17/13 20:13	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/17/13 20:13	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/17/13 20:13	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			07/17/13 20:13	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/17/13 20:13	1
2-Hexanone	ND		20	0.59	ug/L			07/17/13 20:13	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/17/13 20:13	1
Acetone	ND		20	6.7	ug/L			07/17/13 20:13	1
Benzene	ND		5.0	0.25	ug/L			07/17/13 20:13	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/17/13 20:13	1
Bromoform	ND		5.0	0.37	ug/L			07/17/13 20:13	1
Bromomethane	ND		10	0.40	ug/L			07/17/13 20:13	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/17/13 20:13	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/17/13 20:13	1
Chlorobenzene	ND		5.0	0.38	ug/L			07/17/13 20:13	1
Chloroethane	ND	*	10	0.38	ug/L			07/17/13 20:13	1
Chloroform	ND		5.0	0.15	ug/L			07/17/13 20:13	1
Chloromethane	ND		10	0.55	ug/L			07/17/13 20:13	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/17/13 20:13	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/17/13 20:13	1
Cyclohexane	ND		10	0.36	ug/L			07/17/13 20:13	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/17/13 20:13	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/17/13 20:13	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/17/13 20:13	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/17/13 20:13	1
Methyl acetate	ND		25	2.3	ug/L			07/17/13 20:13	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/17/13 20:13	1
Methylcyclohexane	ND		10	0.26	ug/L			07/17/13 20:13	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/17/13 20:13	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/17/13 20:13	1
o-Xylene	ND		5.0	0.32	ug/L			07/17/13 20:13	1
Styrene	ND		5.0	0.35	ug/L			07/17/13 20:13	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/17/13 20:13	1
Toluene	ND		5.0	1.0	ug/L			07/17/13 20:13	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/17/13 20:13	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/17/13 20:13	1
Trichloroethene	ND		5.0	0.29	ug/L			07/17/13 20:13	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/17/13 20:13	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/17/13 20:13	1
Xylenes, Total	ND		10	0.85	ug/L			07/17/13 20:13	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-208-SS**

**Lab Sample ID: 160-3013-1**

**Date Collected: 07/16/13 09:25**

**Matrix: Water**

**Date Received: 07/17/13 12:16**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		82 - 132		07/17/13 20:13	1
4-Bromofluorobenzene (Surr)	86		82 - 121		07/17/13 20:13	1
Dibromofluoromethane (Surr)	95		85 - 119		07/17/13 20:13	1
Toluene-d8 (Surr)	96		85 - 115		07/17/13 20:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	530		200	80	ug/L		07/18/13 15:33	07/23/13 14:43	1
Antimony	4.0	J	10	4.0	ug/L		07/18/13 15:33	07/23/13 14:43	1
Arsenic	ND		10	2.0	ug/L		07/18/13 15:33	07/23/13 14:43	1
Barium	150		50	4.0	ug/L		07/18/13 15:33	07/23/13 14:43	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:33	07/23/13 14:43	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:33	07/23/13 14:43	1
Calcium	94000	E	1000	110	ug/L		07/18/13 15:33	07/23/13 14:43	1
Calcium	100000		10000	1100	ug/L		07/18/13 15:33	07/23/13 16:06	10
Chromium	ND		10	3.1	ug/L		07/18/13 15:33	07/23/13 14:43	1
Cobalt	ND		50	4.0	ug/L		07/18/13 15:33	07/23/13 14:43	1
Copper	ND		25	4.6	ug/L		07/18/13 15:33	07/23/13 14:43	1
Iron	1000		100	28	ug/L		07/18/13 15:33	07/23/13 14:43	1
Lead	2.6	J	10	1.5	ug/L		07/18/13 15:33	07/23/13 14:43	1
Magnesium	46000		1000	130	ug/L		07/18/13 15:33	07/23/13 14:43	1
Manganese	26		15	3.3	ug/L		07/18/13 15:33	07/23/13 14:43	1
Nickel	ND		40	13	ug/L		07/18/13 15:33	07/23/13 14:43	1
Potassium	ND		5000	1700	ug/L		07/18/13 15:33	07/23/13 14:43	1
Selenium	6.4	J	15	2.7	ug/L		07/18/13 15:33	07/23/13 14:43	1
Silver	ND		10	6.0	ug/L		07/18/13 15:33	07/23/13 14:43	1
Sodium	39000		1000	320	ug/L		07/18/13 15:33	07/23/13 14:43	1
Thallium	ND	^	20	4.0	ug/L		07/18/13 15:33	07/23/13 14:43	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:33	07/23/13 14:43	1
Zinc	9.9	J	20	5.2	ug/L		07/18/13 15:33	07/23/13 14:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	740		200	80	ug/L		07/18/13 15:26	07/19/13 19:24	1
Antimony	ND		10	4.0	ug/L		07/18/13 15:26	07/19/13 19:24	1
Arsenic	ND		10	2.0	ug/L		07/18/13 15:26	07/19/13 19:24	1
Barium	150		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:24	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:26	07/19/13 19:24	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:26	07/19/13 19:24	1
Calcium	97000	E	1000	110	ug/L		07/18/13 15:26	07/19/13 19:24	1
Calcium	110000		10000	1100	ug/L		07/18/13 15:26	07/19/13 20:52	10
Chromium	3.7	J	10	3.1	ug/L		07/18/13 15:26	07/19/13 19:24	1
Cobalt	ND		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:24	1
Copper	ND		25	4.6	ug/L		07/18/13 15:26	07/19/13 19:24	1
Iron	720		100	28	ug/L		07/18/13 15:26	07/19/13 19:24	1
Lead	2.4	J	10	1.5	ug/L		07/18/13 15:26	07/19/13 19:24	1
Magnesium	45000		1000	130	ug/L		07/18/13 15:26	07/19/13 19:24	1
Manganese	20		15	3.3	ug/L		07/18/13 15:26	07/19/13 19:24	1
Nickel	ND		40	13	ug/L		07/18/13 15:26	07/19/13 19:24	1
Potassium	1700	J	5000	1700	ug/L		07/18/13 15:26	07/19/13 19:24	1

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## Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-208-SS**

**Lab Sample ID: 160-3013-1**

Date Collected: 07/16/13 09:25

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	6.9	J	15	2.7	ug/L		07/18/13 15:26	07/19/13 19:24	1
Silver	ND		10	6.0	ug/L		07/18/13 15:26	07/19/13 19:24	1
Sodium	43000		1000	320	ug/L		07/18/13 15:26	07/19/13 19:24	1
Thallium	ND		20	4.0	ug/L		07/18/13 15:26	07/19/13 19:24	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:26	07/19/13 19:24	1
Zinc	6.7	J	20	5.2	ug/L		07/18/13 15:26	07/19/13 19:24	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/18/13 19:59	07/18/13 23:54	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		07/18/13 20:01	07/19/13 00:58	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.61		0.020	0.0040	mg/L			07/17/13 13:18	1
Bromide	0.069	J	0.25	0.025	mg/L			07/17/13 13:18	1
Iodide	ND		1.0	0.10	mg/L			07/17/13 13:10	1
Alkalinity	370		5.0	0.54	mg/L			07/29/13 13:43	1

**General Chemistry - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	89		4.0	0.40	mg/L			07/17/13 13:35	20
Sulfate	32		10	1.0	mg/L			07/17/13 13:35	20

**Client Sample ID: PZ-303-AI**

**Lab Sample ID: 160-3013-2**

Date Collected: 07/16/13 12:05

Matrix: Water

Date Received: 07/17/13 12:16

**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			07/17/13 21:52	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/17/13 21:52	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/17/13 21:52	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/17/13 21:52	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/17/13 21:52	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/17/13 21:52	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/17/13 21:52	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/17/13 21:52	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/17/13 21:52	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/17/13 21:52	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/17/13 21:52	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/17/13 21:52	1
1,4-Dichlorobenzene	2.0	J	5.0	0.35	ug/L			07/17/13 21:52	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/17/13 21:52	1
2-Hexanone	ND		20	0.59	ug/L			07/17/13 21:52	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/17/13 21:52	1
Acetone	ND		20	6.7	ug/L			07/17/13 21:52	1
Benzene	1.6	J	5.0	0.25	ug/L			07/17/13 21:52	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-303-AI**

**Lab Sample ID: 160-3013-2**

**Date Collected: 07/16/13 12:05**

**Matrix: Water**

**Date Received: 07/17/13 12:16**

**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			07/17/13 21:52	1
Bromoform	ND		5.0	0.37	ug/L			07/17/13 21:52	1
Bromomethane	ND		10	0.40	ug/L			07/17/13 21:52	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/17/13 21:52	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/17/13 21:52	1
<b>Chlorobenzene</b>	<b>14</b>		5.0	0.38	ug/L			07/17/13 21:52	1
Chloroethane	ND	*	10	0.38	ug/L			07/17/13 21:52	1
Chloroform	ND		5.0	0.15	ug/L			07/17/13 21:52	1
Chloromethane	ND		10	0.55	ug/L			07/17/13 21:52	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/17/13 21:52	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/17/13 21:52	1
Cyclohexane	ND		10	0.36	ug/L			07/17/13 21:52	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/17/13 21:52	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/17/13 21:52	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/17/13 21:52	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/17/13 21:52	1
Methyl acetate	ND		25	2.3	ug/L			07/17/13 21:52	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/17/13 21:52	1
Methylcyclohexane	ND		10	0.26	ug/L			07/17/13 21:52	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/17/13 21:52	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/17/13 21:52	1
o-Xylene	ND		5.0	0.32	ug/L			07/17/13 21:52	1
Styrene	ND		5.0	0.35	ug/L			07/17/13 21:52	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/17/13 21:52	1
Toluene	ND		5.0	1.0	ug/L			07/17/13 21:52	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/17/13 21:52	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/17/13 21:52	1
Trichloroethene	ND		5.0	0.29	ug/L			07/17/13 21:52	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/17/13 21:52	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/17/13 21:52	1
Xylenes, Total	ND		10	0.85	ug/L			07/17/13 21:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		82 - 132		07/17/13 21:52	1
4-Bromofluorobenzene (Surr)	86		82 - 121		07/17/13 21:52	1
Dibromofluoromethane (Surr)	98		85 - 119		07/17/13 21:52	1
Toluene-d8 (Surr)	97		85 - 115		07/17/13 21:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Antimony</b>	<b>4.8</b>	<b>J</b>	10	4.0	ug/L		07/18/13 15:33	07/23/13 14:57	1
Arsenic	ND		10	2.0	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Barium</b>	<b>1300</b>		50	4.0	ug/L		07/18/13 15:33	07/23/13 14:57	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:33	07/23/13 14:57	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Calcium</b>	<b>180000</b>	<b>E</b>	1000	110	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Calcium</b>	<b>220000</b>		10000	1100	ug/L		07/18/13 15:33	07/23/13 16:21	10
Chromium	ND		10	3.1	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Cobalt</b>	<b>4.0</b>	<b>J B</b>	50	4.0	ug/L		07/18/13 15:33	07/23/13 14:57	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-303-AI**

**Lab Sample ID: 160-3013-2**

Date Collected: 07/16/13 12:05

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		25	4.6	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Iron</b>	<b>16000</b>		100	28	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Iron</b>	<b>16000</b>		1000	280	ug/L		07/18/13 15:33	07/23/13 16:21	10
<b>Lead</b>	<b>3.2</b>	<b>J</b>	10	1.5	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Magnesium</b>	<b>62000</b>	<b>E</b>	1000	130	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Magnesium</b>	<b>64000</b>		10000	1300	ug/L		07/18/13 15:33	07/23/13 16:21	10
<b>Manganese</b>	<b>1000</b>		15	3.3	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Nickel</b>	<b>22</b>	<b>J</b>	40	13	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Potassium</b>	<b>15000</b>		5000	1700	ug/L		07/18/13 15:33	07/23/13 14:57	1
Selenium	ND		15	2.7	ug/L		07/18/13 15:33	07/23/13 14:57	1
Silver	ND		10	6.0	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Sodium</b>	<b>170000</b>	<b>E</b>	1000	320	ug/L		07/18/13 15:33	07/23/13 14:57	1
<b>Sodium</b>	<b>170000</b>		10000	3200	ug/L		07/18/13 15:33	07/23/13 16:21	10
Thallium	ND	^	20	4.0	ug/L		07/18/13 15:33	07/23/13 14:57	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:33	07/23/13 14:57	1
Zinc	ND		20	5.2	ug/L		07/18/13 15:33	07/23/13 14:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Antimony</b>	<b>4.4</b>	<b>J</b>	10	4.0	ug/L		07/18/13 15:26	07/19/13 19:28	1
Arsenic	ND		10	2.0	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Barium</b>	<b>1300</b>		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:28	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:26	07/19/13 19:28	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Calcium</b>	<b>180000</b>	<b>E</b>	1000	110	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Calcium</b>	<b>210000</b>		10000	1100	ug/L		07/18/13 15:26	07/19/13 20:56	10
Chromium	ND		10	3.1	ug/L		07/18/13 15:26	07/19/13 19:28	1
Cobalt	ND		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:28	1
Copper	ND		25	4.6	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Iron</b>	<b>15000</b>		100	28	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Iron</b>	<b>15000</b>		1000	280	ug/L		07/18/13 15:26	07/19/13 20:56	10
<b>Lead</b>	<b>2.6</b>	<b>J</b>	10	1.5	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Magnesium</b>	<b>58000</b>	<b>E</b>	1000	130	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Magnesium</b>	<b>59000</b>		10000	1300	ug/L		07/18/13 15:26	07/19/13 20:56	10
<b>Manganese</b>	<b>990</b>		15	3.3	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Nickel</b>	<b>22</b>	<b>J</b>	40	13	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Potassium</b>	<b>16000</b>		5000	1700	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Selenium</b>	<b>2.7</b>	<b>J</b>	15	2.7	ug/L		07/18/13 15:26	07/19/13 19:28	1
Silver	ND		10	6.0	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Sodium</b>	<b>170000</b>	<b>E</b>	1000	320	ug/L		07/18/13 15:26	07/19/13 19:28	1
<b>Sodium</b>	<b>180000</b>		10000	3200	ug/L		07/18/13 15:26	07/19/13 20:56	10
Thallium	ND		20	4.0	ug/L		07/18/13 15:26	07/19/13 19:28	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:26	07/19/13 19:28	1
Zinc	ND		20	5.2	ug/L		07/18/13 15:26	07/19/13 19:28	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/18/13 19:59	07/18/13 23:56	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-303-AI**

**Lab Sample ID: 160-3013-2**

Date Collected: 07/16/13 12:05

Matrix: Water

Date Received: 07/17/13 12:16

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/18/13 20:01	07/19/13 01:08	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.033		0.020	0.0040	mg/L			07/17/13 15:33	1
Bromide	2.3		0.25	0.025	mg/L			07/17/13 15:33	1
Sulfate	0.81		0.50	0.050	mg/L			07/17/13 15:33	1
Iodide	0.44	J	1.0	0.10	mg/L			07/17/13 13:55	1
Alkalinity	840		5.0	0.54	mg/L			07/29/13 13:43	1

**General Chemistry - DL2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		20	2.0	mg/L			07/17/13 16:07	100

**Client Sample ID: PZ-304-AS**

**Lab Sample ID: 160-3013-3**

Date Collected: 07/16/13 12:34

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			07/17/13 22:17	1
Benzene	7.1		5.0	0.25	ug/L			07/17/13 22:17	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/17/13 22:17	1
Bromoform	ND		5.0	0.37	ug/L			07/17/13 22:17	1
Bromomethane	ND		10	0.40	ug/L			07/17/13 22:17	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/17/13 22:17	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/17/13 22:17	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/17/13 22:17	1
Chlorobenzene	58		5.0	0.38	ug/L			07/17/13 22:17	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/17/13 22:17	1
Chloroethane	ND	*	10	0.38	ug/L			07/17/13 22:17	1
Chloroform	ND		5.0	0.15	ug/L			07/17/13 22:17	1
Chloromethane	ND		10	0.55	ug/L			07/17/13 22:17	1
Cyclohexane	ND		10	0.36	ug/L			07/17/13 22:17	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/17/13 22:17	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/17/13 22:17	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/17/13 22:17	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/17/13 22:17	1
1,4-Dichlorobenzene	13		5.0	0.35	ug/L			07/17/13 22:17	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/17/13 22:17	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/17/13 22:17	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/17/13 22:17	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/17/13 22:17	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/17/13 22:17	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/17/13 22:17	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/17/13 22:17	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/17/13 22:17	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/17/13 22:17	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/17/13 22:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.25	ug/L			07/17/13 22:17	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-304-AS**

**Lab Sample ID: 160-3013-3**

**Date Collected: 07/16/13 12:34**

**Matrix: Water**

**Date Received: 07/17/13 12:16**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		20	0.59	ug/L			07/17/13 22:17	1
<b>Isopropylbenzene</b>	<b>0.53</b>	<b>J</b>	5.0	0.26	ug/L			07/17/13 22:17	1
Methyl acetate	ND		25	2.3	ug/L			07/17/13 22:17	1
Methylcyclohexane	ND		10	0.26	ug/L			07/17/13 22:17	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/17/13 22:17	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/17/13 22:17	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/17/13 22:17	1
Styrene	ND		5.0	0.35	ug/L			07/17/13 22:17	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/17/13 22:17	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/17/13 22:17	1
<b>Toluene</b>	<b>1.1</b>	<b>J</b>	5.0	1.0	ug/L			07/17/13 22:17	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/17/13 22:17	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			07/17/13 22:17	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/17/13 22:17	1
Trichloroethene	ND		5.0	0.29	ug/L			07/17/13 22:17	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/17/13 22:17	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/17/13 22:17	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/17/13 22:17	1
o-Xylene	ND		5.0	0.32	ug/L			07/17/13 22:17	1
Xylenes, Total	ND		10	0.85	ug/L			07/17/13 22:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		82 - 121		07/17/13 22:17	1
1,2-Dichloroethane-d4 (Surr)	98		82 - 132		07/17/13 22:17	1
Toluene-d8 (Surr)	101		85 - 115		07/17/13 22:17	1
Dibromofluoromethane (Surr)	100		85 - 119		07/17/13 22:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Aluminum</b>	<b>280</b>		200	80	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Antimony</b>	<b>4.7</b>	<b>J</b>	10	4.0	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Arsenic</b>	<b>220</b>		10	2.0	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Barium</b>	<b>2000</b>		50	4.0	ug/L		07/18/13 15:33	07/23/13 15:01	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:33	07/23/13 15:01	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Calcium</b>	<b>100000</b>	<b>E</b>	1000	110	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Calcium</b>	<b>110000</b>		10000	1100	ug/L		07/18/13 15:33	07/23/13 16:25	10
<b>Chromium</b>	<b>4.9</b>	<b>J</b>	10	3.1	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Cobalt</b>	<b>6.3</b>	<b>J B</b>	50	4.0	ug/L		07/18/13 15:33	07/23/13 15:01	1
Copper	ND		25	4.6	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Iron</b>	<b>26000</b>		100	28	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Iron</b>	<b>27000</b>		1000	280	ug/L		07/18/13 15:33	07/23/13 16:25	10
<b>Lead</b>	<b>6.6</b>	<b>J</b>	10	1.5	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Magnesium</b>	<b>74000</b>	<b>E</b>	1000	130	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Magnesium</b>	<b>74000</b>		10000	1300	ug/L		07/18/13 15:33	07/23/13 16:25	10
<b>Manganese</b>	<b>130</b>		15	3.3	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Nickel</b>	<b>62</b>		40	13	ug/L		07/18/13 15:33	07/23/13 15:01	1
<b>Potassium</b>	<b>82000</b>		5000	1700	ug/L		07/18/13 15:33	07/23/13 15:01	1
Selenium	ND		15	2.7	ug/L		07/18/13 15:33	07/23/13 15:01	1
Silver	ND		10	6.0	ug/L		07/18/13 15:33	07/23/13 15:01	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-304-AS**

**Lab Sample ID: 160-3013-3**

Date Collected: 07/16/13 12:34

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	390000	E	1000	320	ug/L		07/18/13 15:33	07/23/13 15:01	1
Sodium	390000		10000	3200	ug/L		07/18/13 15:33	07/23/13 16:25	10
Thallium	ND	^	20	4.0	ug/L		07/18/13 15:33	07/23/13 15:01	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:33	07/23/13 15:01	1
Zinc	8.6	J	20	5.2	ug/L		07/18/13 15:33	07/23/13 15:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/18/13 15:26	07/19/13 19:31	1
Antimony	4.3	J	10	4.0	ug/L		07/18/13 15:26	07/19/13 19:31	1
Arsenic	210		10	2.0	ug/L		07/18/13 15:26	07/19/13 19:31	1
Barium	2000		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:31	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:26	07/19/13 19:31	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:26	07/19/13 19:31	1
Calcium	98000	E	1000	110	ug/L		07/18/13 15:26	07/19/13 19:31	1
Calcium	120000		10000	1100	ug/L		07/18/13 15:26	07/19/13 21:00	10
Chromium	3.2	J	10	3.1	ug/L		07/18/13 15:26	07/19/13 19:31	1
Cobalt	4.9	J	50	4.0	ug/L		07/18/13 15:26	07/19/13 19:31	1
Copper	ND		25	4.6	ug/L		07/18/13 15:26	07/19/13 19:31	1
Iron	24000		100	28	ug/L		07/18/13 15:26	07/19/13 19:31	1
Iron	25000		1000	280	ug/L		07/18/13 15:26	07/19/13 21:00	10
Lead	3.1	J	10	1.5	ug/L		07/18/13 15:26	07/19/13 19:31	1
Magnesium	70000	E	1000	130	ug/L		07/18/13 15:26	07/19/13 19:31	1
Magnesium	71000		10000	1300	ug/L		07/18/13 15:26	07/19/13 21:00	10
Manganese	110		15	3.3	ug/L		07/18/13 15:26	07/19/13 19:31	1
Nickel	54		40	13	ug/L		07/18/13 15:26	07/19/13 19:31	1
Potassium	83000		5000	1700	ug/L		07/18/13 15:26	07/19/13 19:31	1
Selenium	ND		15	2.7	ug/L		07/18/13 15:26	07/19/13 19:31	1
Silver	ND		10	6.0	ug/L		07/18/13 15:26	07/19/13 19:31	1
Sodium	400000	E	1000	320	ug/L		07/18/13 15:26	07/19/13 19:31	1
Sodium	410000		10000	3200	ug/L		07/18/13 15:26	07/19/13 21:00	10
Thallium	ND		20	4.0	ug/L		07/18/13 15:26	07/19/13 19:31	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:26	07/19/13 19:31	1
Zinc	6.9	J	20	5.2	ug/L		07/18/13 15:26	07/19/13 19:31	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/18/13 19:59	07/19/13 00:03	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		07/18/13 20:01	07/19/13 01:10	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.020	0.0040	mg/L			07/17/13 16:24	1
Bromide	3.3		0.25	0.025	mg/L			07/17/13 16:24	1
Sulfate	0.21	J	0.50	0.050	mg/L			07/17/13 16:24	1
Iodide	0.83	J	1.0	0.10	mg/L			07/17/13 14:25	1
Alkalinity	1300		25	2.7	mg/L			07/29/13 13:43	5

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## Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PZ-304-AS**

**Lab Sample ID: 160-3013-3**

Date Collected: 07/16/13 12:34

Matrix: Water

Date Received: 07/17/13 12:16

**General Chemistry - DL2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	360		40	4.0	mg/L			07/17/13 16:58	200

**Client Sample ID: MW-104**

**Lab Sample ID: 160-3013-4**

Date Collected: 07/16/13 13:25

Matrix: Water

Date Received: 07/17/13 12:16

**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			07/17/13 22:42	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/17/13 22:42	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/17/13 22:42	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/17/13 22:42	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/17/13 22:42	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/17/13 22:42	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/17/13 22:42	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/17/13 22:42	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/17/13 22:42	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/17/13 22:42	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/17/13 22:42	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/17/13 22:42	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			07/17/13 22:42	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/17/13 22:42	1
2-Hexanone	ND		20	0.59	ug/L			07/17/13 22:42	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/17/13 22:42	1
Acetone	ND		20	6.7	ug/L			07/17/13 22:42	1
Benzene	ND		5.0	0.25	ug/L			07/17/13 22:42	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/17/13 22:42	1
Bromoform	ND		5.0	0.37	ug/L			07/17/13 22:42	1
Bromomethane	ND		10	0.40	ug/L			07/17/13 22:42	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/17/13 22:42	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/17/13 22:42	1
Chlorobenzene	ND		5.0	0.38	ug/L			07/17/13 22:42	1
Chloroethane	ND *		10	0.38	ug/L			07/17/13 22:42	1
Chloroform	ND		5.0	0.15	ug/L			07/17/13 22:42	1
Chloromethane	ND		10	0.55	ug/L			07/17/13 22:42	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/17/13 22:42	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/17/13 22:42	1
Cyclohexane	ND		10	0.36	ug/L			07/17/13 22:42	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/17/13 22:42	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/17/13 22:42	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/17/13 22:42	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/17/13 22:42	1
Methyl acetate	ND		25	2.3	ug/L			07/17/13 22:42	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/17/13 22:42	1
Methylcyclohexane	ND		10	0.26	ug/L			07/17/13 22:42	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/17/13 22:42	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/17/13 22:42	1
o-Xylene	ND		5.0	0.32	ug/L			07/17/13 22:42	1
Styrene	ND		5.0	0.35	ug/L			07/17/13 22:42	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/17/13 22:42	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: MW-104**

**Lab Sample ID: 160-3013-4**

Date Collected: 07/16/13 13:25

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		5.0	1.0	ug/L			07/17/13 22:42	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/17/13 22:42	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/17/13 22:42	1
Trichloroethene	ND		5.0	0.29	ug/L			07/17/13 22:42	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/17/13 22:42	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/17/13 22:42	1
Xylenes, Total	ND		10	0.85	ug/L			07/17/13 22:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		82 - 132		07/17/13 22:42	1
4-Bromofluorobenzene (Surr)	80	X	82 - 121		07/17/13 22:42	1
Dibromofluoromethane (Surr)	94		85 - 119		07/17/13 22:42	1
Toluene-d8 (Surr)	98		85 - 115		07/17/13 22:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	33000		200	80	ug/L		07/18/13 15:33	07/23/13 15:05	1
Antimony	9.3	J	10	4.0	ug/L		07/18/13 15:33	07/23/13 15:05	1
Arsenic	39		10	2.0	ug/L		07/18/13 15:33	07/23/13 15:05	1
Barium	810		50	4.0	ug/L		07/18/13 15:33	07/23/13 15:05	1
Beryllium	1.7	J	5.0	0.61	ug/L		07/18/13 15:33	07/23/13 15:05	1
Cadmium	1.1	J	5.0	0.91	ug/L		07/18/13 15:33	07/23/13 15:05	1
Calcium	190000	E	1000	110	ug/L		07/18/13 15:33	07/23/13 15:05	1
Calcium	230000		10000	1100	ug/L		07/18/13 15:33	07/23/13 16:29	10
Chromium	37		10	3.1	ug/L		07/18/13 15:33	07/23/13 15:05	1
Cobalt	20	J B	50	4.0	ug/L		07/18/13 15:33	07/23/13 15:05	1
Copper	45		25	4.6	ug/L		07/18/13 15:33	07/23/13 15:05	1
Iron	52000		100	28	ug/L		07/18/13 15:33	07/23/13 15:05	1
Iron	58000		1000	280	ug/L		07/18/13 15:33	07/23/13 16:29	10
Lead	59		10	1.5	ug/L		07/18/13 15:33	07/23/13 15:05	1
Magnesium	73000	E	1000	130	ug/L		07/18/13 15:33	07/23/13 15:05	1
Magnesium	79000		10000	1300	ug/L		07/18/13 15:33	07/23/13 16:29	10
Manganese	3000		15	3.3	ug/L		07/18/13 15:33	07/23/13 15:05	1
Nickel	72		40	13	ug/L		07/18/13 15:33	07/23/13 15:05	1
Potassium	11000		5000	1700	ug/L		07/18/13 15:33	07/23/13 15:05	1
Selenium	6.2	J	15	2.7	ug/L		07/18/13 15:33	07/23/13 15:05	1
Silver	ND		10	6.0	ug/L		07/18/13 15:33	07/23/13 15:05	1
Sodium	11000		1000	320	ug/L		07/18/13 15:33	07/23/13 15:05	1
Thallium	ND	^	20	4.0	ug/L		07/18/13 15:33	07/23/13 15:05	1
Vanadium	82		50	4.1	ug/L		07/18/13 15:33	07/23/13 15:05	1
Zinc	230		20	5.2	ug/L		07/18/13 15:33	07/23/13 15:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/18/13 15:26	07/19/13 19:35	1
Antimony	4.0	J	10	4.0	ug/L		07/18/13 15:26	07/19/13 19:35	1
Arsenic	17		10	2.0	ug/L		07/18/13 15:26	07/19/13 19:35	1
Barium	410		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:35	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:26	07/19/13 19:35	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:26	07/19/13 19:35	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: MW-104**

**Lab Sample ID: 160-3013-4**

Date Collected: 07/16/13 13:25

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	180000	E	1000	110	ug/L		07/18/13 15:26	07/19/13 19:35	1
Calcium	210000		10000	1100	ug/L		07/18/13 15:26	07/19/13 21:03	10
Chromium	ND		10	3.1	ug/L		07/18/13 15:26	07/19/13 19:35	1
Cobalt	ND		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:35	1
Copper	ND		25	4.6	ug/L		07/18/13 15:26	07/19/13 19:35	1
Iron	16000		100	28	ug/L		07/18/13 15:26	07/19/13 19:35	1
Iron	16000		1000	280	ug/L		07/18/13 15:26	07/19/13 21:03	10
Lead	1.7	J	10	1.5	ug/L		07/18/13 15:26	07/19/13 19:35	1
Magnesium	60000	E	1000	130	ug/L		07/18/13 15:26	07/19/13 19:35	1
Magnesium	62000		10000	1300	ug/L		07/18/13 15:26	07/19/13 21:03	10
Manganese	2400		15	3.3	ug/L		07/18/13 15:26	07/19/13 19:35	1
Nickel	ND		40	13	ug/L		07/18/13 15:26	07/19/13 19:35	1
Potassium	4300	J	5000	1700	ug/L		07/18/13 15:26	07/19/13 19:35	1
Selenium	2.9	J	15	2.7	ug/L		07/18/13 15:26	07/19/13 19:35	1
Silver	ND		10	6.0	ug/L		07/18/13 15:26	07/19/13 19:35	1
Sodium	11000		1000	320	ug/L		07/18/13 15:26	07/19/13 19:35	1
Thallium	ND		20	4.0	ug/L		07/18/13 15:26	07/19/13 19:35	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:26	07/19/13 19:35	1
Zinc	16	J	20	5.2	ug/L		07/18/13 15:26	07/19/13 19:35	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.086	J	0.20	0.060	ug/L		07/18/13 19:59	07/19/13 00:08	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		07/18/13 20:01	07/19/13 01:12	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.020	0.0040	mg/L			07/17/13 17:15	1
Chloride	3.0		0.20	0.020	mg/L			07/17/13 17:15	1
Bromide	0.12	J	0.25	0.025	mg/L			07/17/13 17:15	1
Iodide	ND		1.0	0.10	mg/L			07/17/13 15:24	1
Alkalinity	760		5.0	0.54	mg/L			07/29/13 13:43	1

**General Chemistry - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	20		10	1.0	mg/L			07/17/13 17:32	20

**Client Sample ID: P2-204A-SS**

**Lab Sample ID: 160-3013-5**

Date Collected: 07/16/13 13:56

Matrix: Water

Date Received: 07/17/13 12:16

**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			07/17/13 23:06	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/17/13 23:06	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/17/13 23:06	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/17/13 23:06	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/17/13 23:06	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: P2-204A-SS**

**Lab Sample ID: 160-3013-5**

**Date Collected: 07/16/13 13:56**

**Matrix: Water**

**Date Received: 07/17/13 12:16**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/17/13 23:06	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/17/13 23:06	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/17/13 23:06	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/17/13 23:06	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/17/13 23:06	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/17/13 23:06	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/17/13 23:06	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			07/17/13 23:06	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/17/13 23:06	1
2-Hexanone	ND		20	0.59	ug/L			07/17/13 23:06	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/17/13 23:06	1
Acetone	ND		20	6.7	ug/L			07/17/13 23:06	1
<b>Benzene</b>	<b>7.3</b>		5.0	0.25	ug/L			07/17/13 23:06	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/17/13 23:06	1
Bromoform	ND		5.0	0.37	ug/L			07/17/13 23:06	1
Bromomethane	ND		10	0.40	ug/L			07/17/13 23:06	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/17/13 23:06	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/17/13 23:06	1
<b>Chlorobenzene</b>	<b>1.1 J</b>		5.0	0.38	ug/L			07/17/13 23:06	1
Chloroethane	ND *		10	0.38	ug/L			07/17/13 23:06	1
Chloroform	ND		5.0	0.15	ug/L			07/17/13 23:06	1
Chloromethane	ND		10	0.55	ug/L			07/17/13 23:06	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/17/13 23:06	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/17/13 23:06	1
Cyclohexane	ND		10	0.36	ug/L			07/17/13 23:06	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/17/13 23:06	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/17/13 23:06	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/17/13 23:06	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/17/13 23:06	1
Methyl acetate	ND		25	2.3	ug/L			07/17/13 23:06	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/17/13 23:06	1
Methylcyclohexane	ND		10	0.26	ug/L			07/17/13 23:06	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/17/13 23:06	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/17/13 23:06	1
o-Xylene	ND		5.0	0.32	ug/L			07/17/13 23:06	1
Styrene	ND		5.0	0.35	ug/L			07/17/13 23:06	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/17/13 23:06	1
Toluene	ND		5.0	1.0	ug/L			07/17/13 23:06	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/17/13 23:06	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/17/13 23:06	1
Trichloroethene	ND		5.0	0.29	ug/L			07/17/13 23:06	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/17/13 23:06	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/17/13 23:06	1
Xylenes, Total	ND		10	0.85	ug/L			07/17/13 23:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		82 - 132		07/17/13 23:06	1
4-Bromofluorobenzene (Surr)	85		82 - 121		07/17/13 23:06	1
Dibromofluoromethane (Surr)	99		85 - 119		07/17/13 23:06	1
Toluene-d8 (Surr)	93		85 - 115		07/17/13 23:06	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: P2-204A-SS**

**Lab Sample ID: 160-3013-5**

Date Collected: 07/16/13 13:56

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2600		200	80	ug/L		07/18/13 15:33	07/23/13 15:09	1
Antimony	4.1	J	10	4.0	ug/L		07/18/13 15:33	07/23/13 15:09	1
Arsenic	15		10	2.0	ug/L		07/18/13 15:33	07/23/13 15:09	1
Barium	440		50	4.0	ug/L		07/18/13 15:33	07/23/13 15:09	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:33	07/23/13 15:09	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:33	07/23/13 15:09	1
Calcium	220000	E	1000	110	ug/L		07/18/13 15:33	07/23/13 15:09	1
Calcium	280000		10000	1100	ug/L		07/18/13 15:33	07/23/13 16:33	10
Chromium	4.3	J	10	3.1	ug/L		07/18/13 15:33	07/23/13 15:09	1
Cobalt	8.4	J B	50	4.0	ug/L		07/18/13 15:33	07/23/13 15:09	1
Copper	ND		25	4.6	ug/L		07/18/13 15:33	07/23/13 15:09	1
Iron	9500		100	28	ug/L		07/18/13 15:33	07/23/13 15:09	1
Iron	9900		1000	280	ug/L		07/18/13 15:33	07/23/13 16:33	10
Lead	5.6	J	10	1.5	ug/L		07/18/13 15:33	07/23/13 15:09	1
Magnesium	69000	E	1000	130	ug/L		07/18/13 15:33	07/23/13 15:09	1
Magnesium	73000		10000	1300	ug/L		07/18/13 15:33	07/23/13 16:33	10
Manganese	2300		15	3.3	ug/L		07/18/13 15:33	07/23/13 15:09	1
Nickel	20	J	40	13	ug/L		07/18/13 15:33	07/23/13 15:09	1
Potassium	19000		5000	1700	ug/L		07/18/13 15:33	07/23/13 15:09	1
Selenium	ND		15	2.7	ug/L		07/18/13 15:33	07/23/13 15:09	1
Silver	ND		10	6.0	ug/L		07/18/13 15:33	07/23/13 15:09	1
Sodium	200000	E	1000	320	ug/L		07/18/13 15:33	07/23/13 15:09	1
Sodium	200000		10000	3200	ug/L		07/18/13 15:33	07/23/13 16:33	10
Thallium	ND	^	20	4.0	ug/L		07/18/13 15:33	07/23/13 15:09	1
Vanadium	6.4	J	50	4.1	ug/L		07/18/13 15:33	07/23/13 15:09	1
Zinc	20		20	5.2	ug/L		07/18/13 15:33	07/23/13 15:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/18/13 15:26	07/19/13 19:47	1
Antimony	4.7	J	10	4.0	ug/L		07/18/13 15:26	07/19/13 19:47	1
Arsenic	15		10	2.0	ug/L		07/18/13 15:26	07/19/13 19:47	1
Barium	350		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:47	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:26	07/19/13 19:47	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:26	07/19/13 19:47	1
Calcium	230000	E	1000	110	ug/L		07/18/13 15:26	07/19/13 19:47	1
Calcium	290000		10000	1100	ug/L		07/18/13 15:26	07/19/13 21:07	10
Chromium	4.5	J	10	3.1	ug/L		07/18/13 15:26	07/19/13 19:47	1
Cobalt	8.3	J	50	4.0	ug/L		07/18/13 15:26	07/19/13 19:47	1
Copper	ND		25	4.6	ug/L		07/18/13 15:26	07/19/13 19:47	1
Iron	6800		100	28	ug/L		07/18/13 15:26	07/19/13 19:47	1
Iron	7000		1000	280	ug/L		07/18/13 15:26	07/19/13 21:07	10
Lead	2.6	J	10	1.5	ug/L		07/18/13 15:26	07/19/13 19:47	1
Magnesium	66000	E	1000	130	ug/L		07/18/13 15:26	07/19/13 19:47	1
Magnesium	69000		10000	1300	ug/L		07/18/13 15:26	07/19/13 21:07	10
Manganese	2100		15	3.3	ug/L		07/18/13 15:26	07/19/13 19:47	1
Nickel	17	J	40	13	ug/L		07/18/13 15:26	07/19/13 19:47	1
Potassium	19000		5000	1700	ug/L		07/18/13 15:26	07/19/13 19:47	1
Selenium	ND		15	2.7	ug/L		07/18/13 15:26	07/19/13 19:47	1
Silver	ND		10	6.0	ug/L		07/18/13 15:26	07/19/13 19:47	1

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## Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: P2-204A-SS**

**Lab Sample ID: 160-3013-5**

Date Collected: 07/16/13 13:56

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	210000	E	1000	320	ug/L		07/18/13 15:26	07/19/13 19:47	1
Sodium	210000		10000	3200	ug/L		07/18/13 15:26	07/19/13 21:07	10
Thallium	ND		20	4.0	ug/L		07/18/13 15:26	07/19/13 19:47	1
Vanadium	4.1	J	50	4.1	ug/L		07/18/13 15:26	07/19/13 19:47	1
Zinc	ND		20	5.2	ug/L		07/18/13 15:26	07/19/13 19:47	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/18/13 19:59	07/19/13 00:09	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		07/18/13 20:01	07/19/13 01:13	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.018	J	0.020	0.0040	mg/L			07/17/13 18:40	1
Bromide	0.87		0.25	0.025	mg/L			07/17/13 18:40	1
Iodide	0.42	J	1.0	0.10	mg/L			07/17/13 15:39	1
Alkalinity	510		5.0	0.54	mg/L			07/29/13 13:43	1

### General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	340		10	1.0	mg/L			07/17/13 18:57	20

### General Chemistry - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	410		20	2.0	mg/L			07/17/13 19:13	100

**Client Sample ID: PS-302-AI**

**Lab Sample ID: 160-3013-6**

Date Collected: 07/16/13 15:18

Matrix: Water

Date Received: 07/17/13 12:16

### 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			07/17/13 23:31	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/17/13 23:31	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/17/13 23:31	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/17/13 23:31	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/17/13 23:31	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/17/13 23:31	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/17/13 23:31	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/17/13 23:31	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/17/13 23:31	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/17/13 23:31	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/17/13 23:31	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/17/13 23:31	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			07/17/13 23:31	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/17/13 23:31	1
2-Hexanone	ND		20	0.59	ug/L			07/17/13 23:31	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/17/13 23:31	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PS-302-AI**

**Lab Sample ID: 160-3013-6**

**Date Collected: 07/16/13 15:18**

**Matrix: Water**

**Date Received: 07/17/13 12:16**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	6.7	ug/L			07/17/13 23:31	1
Benzene	ND		5.0	0.25	ug/L			07/17/13 23:31	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/17/13 23:31	1
Bromoform	ND		5.0	0.37	ug/L			07/17/13 23:31	1
Bromomethane	ND		10	0.40	ug/L			07/17/13 23:31	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/17/13 23:31	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/17/13 23:31	1
Chlorobenzene	ND		5.0	0.38	ug/L			07/17/13 23:31	1
Chloroethane	ND	*	10	0.38	ug/L			07/17/13 23:31	1
Chloroform	ND		5.0	0.15	ug/L			07/17/13 23:31	1
Chloromethane	ND		10	0.55	ug/L			07/17/13 23:31	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/17/13 23:31	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/17/13 23:31	1
Cyclohexane	ND		10	0.36	ug/L			07/17/13 23:31	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/17/13 23:31	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/17/13 23:31	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/17/13 23:31	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/17/13 23:31	1
Methyl acetate	ND		25	2.3	ug/L			07/17/13 23:31	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/17/13 23:31	1
Methylcyclohexane	ND		10	0.26	ug/L			07/17/13 23:31	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/17/13 23:31	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/17/13 23:31	1
o-Xylene	ND		5.0	0.32	ug/L			07/17/13 23:31	1
Styrene	ND		5.0	0.35	ug/L			07/17/13 23:31	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/17/13 23:31	1
Toluene	ND		5.0	1.0	ug/L			07/17/13 23:31	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/17/13 23:31	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/17/13 23:31	1
Trichloroethene	ND		5.0	0.29	ug/L			07/17/13 23:31	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/17/13 23:31	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/17/13 23:31	1
Xylenes, Total	ND		10	0.85	ug/L			07/17/13 23:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		82 - 132		07/17/13 23:31	1
4-Bromofluorobenzene (Surr)	89		82 - 121		07/17/13 23:31	1
Dibromofluoromethane (Surr)	99		85 - 119		07/17/13 23:31	1
Toluene-d8 (Surr)	95		85 - 115		07/17/13 23:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	320		200	80	ug/L		07/18/13 15:33	07/23/13 15:20	1
Antimony	ND		10	4.0	ug/L		07/18/13 15:33	07/23/13 15:20	1
Arsenic	2.8	J	10	2.0	ug/L		07/18/13 15:33	07/23/13 15:20	1
Barium	350		50	4.0	ug/L		07/18/13 15:33	07/23/13 15:20	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:33	07/23/13 15:20	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:33	07/23/13 15:20	1
Calcium	170000	E	1000	110	ug/L		07/18/13 15:33	07/23/13 15:20	1
Calcium	190000		10000	1100	ug/L		07/18/13 15:33	07/23/13 16:37	10

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PS-302-AI**

**Lab Sample ID: 160-3013-6**

Date Collected: 07/16/13 15:18

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.0	J	10	3.1	ug/L		07/18/13 15:33	07/23/13 15:20	1
Cobalt	6.7	J B	50	4.0	ug/L		07/18/13 15:33	07/23/13 15:20	1
Copper	ND		25	4.6	ug/L		07/18/13 15:33	07/23/13 15:20	1
Iron	2000		100	28	ug/L		07/18/13 15:33	07/23/13 15:20	1
Iron	2000		1000	280	ug/L		07/18/13 15:33	07/23/13 16:37	10
Lead	2.4	J	10	1.5	ug/L		07/18/13 15:33	07/23/13 15:20	1
Magnesium	52000	E	1000	130	ug/L		07/18/13 15:33	07/23/13 15:20	1
Magnesium	53000		10000	1300	ug/L		07/18/13 15:33	07/23/13 16:37	10
Manganese	230		15	3.3	ug/L		07/18/13 15:33	07/23/13 15:20	1
Nickel	22	J	40	13	ug/L		07/18/13 15:33	07/23/13 15:20	1
Potassium	7400		5000	1700	ug/L		07/18/13 15:33	07/23/13 15:20	1
Selenium	ND		15	2.7	ug/L		07/18/13 15:33	07/23/13 15:20	1
Silver	ND		10	6.0	ug/L		07/18/13 15:33	07/23/13 15:20	1
Sodium	67000		1000	320	ug/L		07/18/13 15:33	07/23/13 15:20	1
Thallium	ND	^	20	4.0	ug/L		07/18/13 15:33	07/23/13 15:20	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:33	07/23/13 15:20	1
Zinc	8.0	J	20	5.2	ug/L		07/18/13 15:33	07/23/13 15:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/18/13 15:26	07/19/13 19:51	1
Antimony	4.1	J	10	4.0	ug/L		07/18/13 15:26	07/19/13 19:51	1
Arsenic	2.2	J	10	2.0	ug/L		07/18/13 15:26	07/19/13 19:51	1
Barium	350		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:51	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:26	07/19/13 19:51	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:26	07/19/13 19:51	1
Calcium	170000	E	1000	110	ug/L		07/18/13 15:26	07/19/13 19:51	1
Calcium	210000		10000	1100	ug/L		07/18/13 15:26	07/19/13 21:19	10
Chromium	ND		10	3.1	ug/L		07/18/13 15:26	07/19/13 19:51	1
Cobalt	5.7	J	50	4.0	ug/L		07/18/13 15:26	07/19/13 19:51	1
Copper	ND		25	4.6	ug/L		07/18/13 15:26	07/19/13 19:51	1
Iron	1500		100	28	ug/L		07/18/13 15:26	07/19/13 19:51	1
Iron	1500		1000	280	ug/L		07/18/13 15:26	07/19/13 21:19	10
Lead	1.8	J	10	1.5	ug/L		07/18/13 15:26	07/19/13 19:51	1
Magnesium	51000	E	1000	130	ug/L		07/18/13 15:26	07/19/13 19:51	1
Magnesium	52000		10000	1300	ug/L		07/18/13 15:26	07/19/13 21:19	10
Manganese	210		15	3.3	ug/L		07/18/13 15:26	07/19/13 19:51	1
Nickel	21	J	40	13	ug/L		07/18/13 15:26	07/19/13 19:51	1
Potassium	7600		5000	1700	ug/L		07/18/13 15:26	07/19/13 19:51	1
Selenium	ND		15	2.7	ug/L		07/18/13 15:26	07/19/13 19:51	1
Silver	ND		10	6.0	ug/L		07/18/13 15:26	07/19/13 19:51	1
Sodium	70000		1000	320	ug/L		07/18/13 15:26	07/19/13 19:51	1
Thallium	ND		20	4.0	ug/L		07/18/13 15:26	07/19/13 19:51	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:26	07/19/13 19:51	1
Zinc	7.7	J	20	5.2	ug/L		07/18/13 15:26	07/19/13 19:51	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/18/13 19:59	07/19/13 00:11	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PS-302-AI**

**Lab Sample ID: 160-3013-6**

Date Collected: 07/16/13 15:18

Matrix: Water

Date Received: 07/17/13 12:16

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/18/13 20:01	07/19/13 01:15	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0085	J	0.020	0.0040	mg/L			07/17/13 19:30	1
Bromide	0.39		0.25	0.025	mg/L			07/17/13 19:30	1
Iodide	0.10	J	1.0	0.10	mg/L			07/17/13 16:09	1
Alkalinity	680		5.0	0.54	mg/L			07/29/13 13:43	1

**General Chemistry - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	71		4.0	0.40	mg/L			07/17/13 19:47	20
Sulfate	71		10	1.0	mg/L			07/17/13 19:47	20

**Client Sample ID: PS-302-AS**

**Lab Sample ID: 160-3013-7**

Date Collected: 07/16/13 15:30

Matrix: Water

Date Received: 07/17/13 12:16

**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			07/17/13 23:55	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/17/13 23:55	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/17/13 23:55	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/17/13 23:55	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/17/13 23:55	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/17/13 23:55	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/17/13 23:55	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/17/13 23:55	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/17/13 23:55	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/17/13 23:55	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/17/13 23:55	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/17/13 23:55	1
<b>1,4-Dichlorobenzene</b>	<b>14</b>		5.0	0.35	ug/L			07/17/13 23:55	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/17/13 23:55	1
2-Hexanone	ND		20	0.59	ug/L			07/17/13 23:55	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/17/13 23:55	1
Acetone	ND		20	6.7	ug/L			07/17/13 23:55	1
<b>Benzene</b>	<b>10</b>		5.0	0.25	ug/L			07/17/13 23:55	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/17/13 23:55	1
Bromoform	ND		5.0	0.37	ug/L			07/17/13 23:55	1
Bromomethane	ND		10	0.40	ug/L			07/17/13 23:55	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/17/13 23:55	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/17/13 23:55	1
<b>Chlorobenzene</b>	<b>48</b>		5.0	0.38	ug/L			07/17/13 23:55	1
Chloroethane	ND	*	10	0.38	ug/L			07/17/13 23:55	1
Chloroform	ND		5.0	0.15	ug/L			07/17/13 23:55	1
Chloromethane	ND		10	0.55	ug/L			07/17/13 23:55	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/17/13 23:55	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/17/13 23:55	1
Cyclohexane	ND		10	0.36	ug/L			07/17/13 23:55	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PS-302-AS**

**Lab Sample ID: 160-3013-7**

**Date Collected: 07/16/13 15:30**

**Matrix: Water**

**Date Received: 07/17/13 12:16**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		5.0	0.33	ug/L			07/17/13 23:55	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/17/13 23:55	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/17/13 23:55	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/17/13 23:55	1
Methyl acetate	ND		25	2.3	ug/L			07/17/13 23:55	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/17/13 23:55	1
Methylcyclohexane	ND		10	0.26	ug/L			07/17/13 23:55	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/17/13 23:55	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/17/13 23:55	1
o-Xylene	ND		5.0	0.32	ug/L			07/17/13 23:55	1
Styrene	ND		5.0	0.35	ug/L			07/17/13 23:55	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/17/13 23:55	1
Toluene	ND		5.0	1.0	ug/L			07/17/13 23:55	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/17/13 23:55	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/17/13 23:55	1
Trichloroethene	ND		5.0	0.29	ug/L			07/17/13 23:55	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/17/13 23:55	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/17/13 23:55	1
Xylenes, Total	ND		10	0.85	ug/L			07/17/13 23:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		82 - 132		07/17/13 23:55	1
4-Bromofluorobenzene (Surr)	85		82 - 121		07/17/13 23:55	1
Dibromofluoromethane (Surr)	97		85 - 119		07/17/13 23:55	1
Toluene-d8 (Surr)	101		85 - 115		07/17/13 23:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1400		200	80	ug/L		07/18/13 15:33	07/23/13 15:24	1
Antimony	12		10	4.0	ug/L		07/18/13 15:33	07/23/13 15:24	1
Arsenic	390		10	2.0	ug/L		07/18/13 15:33	07/23/13 15:24	1
Arsenic	390		100	20	ug/L		07/18/13 15:33	07/23/13 16:41	10
Barium	550		50	4.0	ug/L		07/18/13 15:33	07/23/13 15:24	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:33	07/23/13 15:24	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:33	07/23/13 15:24	1
Calcium	210000	E	1000	110	ug/L		07/18/13 15:33	07/23/13 15:24	1
Calcium	250000		10000	1100	ug/L		07/18/13 15:33	07/23/13 16:41	10
Chromium	ND		10	3.1	ug/L		07/18/13 15:33	07/23/13 15:24	1
Chromium	ND		100	31	ug/L		07/18/13 15:33	07/23/13 16:41	10
Cobalt	21	J B	50	4.0	ug/L		07/18/13 15:33	07/23/13 15:24	1
Copper	5.6	J	25	4.6	ug/L		07/18/13 15:33	07/23/13 15:24	1
Iron	140000	E	100	28	ug/L		07/18/13 15:33	07/23/13 15:24	1
Iron	150000		1000	280	ug/L		07/18/13 15:33	07/23/13 16:41	10
Lead	11		10	1.5	ug/L		07/18/13 15:33	07/23/13 15:24	1
Magnesium	86000	E	1000	130	ug/L		07/18/13 15:33	07/23/13 15:24	1
Magnesium	88000		10000	1300	ug/L		07/18/13 15:33	07/23/13 16:41	10
Manganese	14000	E	15	3.3	ug/L		07/18/13 15:33	07/23/13 15:24	1
Manganese	14000		150	33	ug/L		07/18/13 15:33	07/23/13 16:41	10
Nickel	72		40	13	ug/L		07/18/13 15:33	07/23/13 15:24	1
Potassium	6700		5000	1700	ug/L		07/18/13 15:33	07/23/13 15:24	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: PS-302-AS**

**Lab Sample ID: 160-3013-7**

Date Collected: 07/16/13 15:30

Matrix: Water

Date Received: 07/17/13 12:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Selenium</b>	<b>11</b>	<b>J</b>	15	2.7	ug/L		07/18/13 15:33	07/23/13 15:24	1
Selenium	ND		150	27	ug/L		07/18/13 15:33	07/23/13 16:41	10
Silver	ND		10	6.0	ug/L		07/18/13 15:33	07/23/13 15:24	1
<b>Sodium</b>	<b>56000</b>		1000	320	ug/L		07/18/13 15:33	07/23/13 15:24	1
<b>Thallium</b>	<b>17</b>	<b>J ^</b>	20	4.0	ug/L		07/18/13 15:33	07/23/13 15:24	1
<b>Vanadium</b>	<b>7.9</b>	<b>J</b>	50	4.1	ug/L		07/18/13 15:33	07/23/13 15:24	1
<b>Zinc</b>	<b>80</b>		20	5.2	ug/L		07/18/13 15:33	07/23/13 15:24	1
<b>Zinc</b>	<b>80</b>	<b>J</b>	200	52	ug/L		07/18/13 15:33	07/23/13 16:41	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Antimony</b>	<b>12</b>		10	4.0	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Arsenic</b>	<b>340</b>		10	2.0	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Arsenic</b>	<b>330</b>		100	20	ug/L		07/18/13 15:26	07/19/13 21:23	10
<b>Barium</b>	<b>390</b>		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:55	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:26	07/19/13 19:55	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Calcium</b>	<b>220000</b>	<b>E</b>	1000	110	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Calcium</b>	<b>260000</b>		10000	1100	ug/L		07/18/13 15:26	07/19/13 21:23	10
Chromium	ND		10	3.1	ug/L		07/18/13 15:26	07/19/13 19:55	1
Chromium	ND		100	31	ug/L		07/18/13 15:26	07/19/13 21:23	10
<b>Cobalt</b>	<b>5.9</b>	<b>J</b>	50	4.0	ug/L		07/18/13 15:26	07/19/13 19:55	1
Copper	ND		25	4.6	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Iron</b>	<b>130000</b>	<b>E</b>	100	28	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Iron</b>	<b>130000</b>		1000	280	ug/L		07/18/13 15:26	07/19/13 21:23	10
<b>Lead</b>	<b>7.1</b>	<b>J</b>	10	1.5	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Magnesium</b>	<b>85000</b>	<b>E</b>	1000	130	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Magnesium</b>	<b>84000</b>		10000	1300	ug/L		07/18/13 15:26	07/19/13 21:23	10
<b>Manganese</b>	<b>13000</b>	<b>E</b>	15	3.3	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Manganese</b>	<b>13000</b>		150	33	ug/L		07/18/13 15:26	07/19/13 21:23	10
<b>Nickel</b>	<b>19</b>	<b>J</b>	40	13	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Potassium</b>	<b>6800</b>		5000	1700	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Selenium</b>	<b>12</b>	<b>J</b>	15	2.7	ug/L		07/18/13 15:26	07/19/13 19:55	1
Selenium	ND		150	27	ug/L		07/18/13 15:26	07/19/13 21:23	10
Silver	ND		10	6.0	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Sodium</b>	<b>60000</b>		1000	320	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Thallium</b>	<b>16</b>	<b>J</b>	20	4.0	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Vanadium</b>	<b>4.3</b>	<b>J</b>	50	4.1	ug/L		07/18/13 15:26	07/19/13 19:55	1
<b>Zinc</b>	<b>7.2</b>	<b>J</b>	20	5.2	ug/L		07/18/13 15:26	07/19/13 19:55	1
Zinc	ND		200	52	ug/L		07/18/13 15:26	07/19/13 21:23	10

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/18/13 19:59	07/19/13 00:13	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		07/18/13 20:01	07/19/13 01:16	1

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## Client Sample Results

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

TestAmerica Job ID: 160-3013-1

### Client Sample ID: PS-302-AS

Lab Sample ID: 160-3013-7

Date Collected: 07/16/13 15:30

Matrix: Water

Date Received: 07/17/13 12:16

#### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.037		0.020	0.0040	mg/L			07/17/13 20:21	1
Bromide	0.95		0.25	0.025	mg/L			07/17/13 20:21	1
Iodide	0.16	J	1.0	0.10	mg/L			07/17/13 16:24	1
Alkalinity	1200		25	2.7	mg/L			07/29/13 13:43	5

#### General Chemistry - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53		4.0	0.40	mg/L			07/17/13 20:38	20
Sulfate	47		10	1.0	mg/L			07/17/13 20:38	20

### Client Sample ID: TRIP BLANK

Lab Sample ID: 160-3013-8

Date Collected: 07/16/13 00:00

Matrix: Water

Date Received: 07/17/13 12:16

#### 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			07/17/13 19:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/17/13 19:24	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/17/13 19:24	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/17/13 19:24	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/17/13 19:24	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/17/13 19:24	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/17/13 19:24	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/17/13 19:24	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/17/13 19:24	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/17/13 19:24	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/17/13 19:24	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/17/13 19:24	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			07/17/13 19:24	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/17/13 19:24	1
2-Hexanone	ND		20	0.59	ug/L			07/17/13 19:24	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/17/13 19:24	1
Acetone	ND		20	6.7	ug/L			07/17/13 19:24	1
Benzene	ND		5.0	0.25	ug/L			07/17/13 19:24	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/17/13 19:24	1
Bromoform	ND		5.0	0.37	ug/L			07/17/13 19:24	1
Bromomethane	ND		10	0.40	ug/L			07/17/13 19:24	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/17/13 19:24	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/17/13 19:24	1
Chlorobenzene	ND		5.0	0.38	ug/L			07/17/13 19:24	1
Chloroethane	ND	*	10	0.38	ug/L			07/17/13 19:24	1
Chloroform	ND		5.0	0.15	ug/L			07/17/13 19:24	1
Chloromethane	ND		10	0.55	ug/L			07/17/13 19:24	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/17/13 19:24	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/17/13 19:24	1
Cyclohexane	ND		10	0.36	ug/L			07/17/13 19:24	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/17/13 19:24	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/17/13 19:24	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/17/13 19:24	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/17/13 19:24	1

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# Client Sample Results

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

TestAmerica Job ID: 160-3013-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 160-3013-8**

**Date Collected: 07/16/13 00:00**

**Matrix: Water**

**Date Received: 07/17/13 12:16**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	ND		25	2.3	ug/L			07/17/13 19:24	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/17/13 19:24	1
Methylcyclohexane	ND		10	0.26	ug/L			07/17/13 19:24	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/17/13 19:24	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/17/13 19:24	1
o-Xylene	ND		5.0	0.32	ug/L			07/17/13 19:24	1
Styrene	ND		5.0	0.35	ug/L			07/17/13 19:24	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/17/13 19:24	1
Toluene	ND		5.0	1.0	ug/L			07/17/13 19:24	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/17/13 19:24	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/17/13 19:24	1
Trichloroethene	ND		5.0	0.29	ug/L			07/17/13 19:24	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/17/13 19:24	1
Vinyl chloride	ND		5.0	0.43	ug/L			07/17/13 19:24	1
Xylenes, Total	ND		10	0.85	ug/L			07/17/13 19:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		82 - 132		07/17/13 19:24	1
4-Bromofluorobenzene (Surr)	85		82 - 121		07/17/13 19:24	1
Dibromofluoromethane (Surr)	95		85 - 119		07/17/13 19:24	1
Toluene-d8 (Surr)	96		85 - 115		07/17/13 19:24	1

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# QC Sample Results

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

TestAmerica Job ID: 160-3013-1

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

**Lab Sample ID: MB 160-61806/3-A**

**Matrix: Water**

**Analysis Batch: 61806**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			07/17/13 18:59	1
2-Butanone (MEK)	ND		20	0.39	ug/L			07/17/13 18:59	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			07/17/13 18:59	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			07/17/13 18:59	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			07/17/13 18:59	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			07/17/13 18:59	1
Acetone	ND		20	6.7	ug/L			07/17/13 18:59	1
Benzene	ND		5.0	0.25	ug/L			07/17/13 18:59	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			07/17/13 18:59	1
Bromodichloromethane	ND		5.0	0.25	ug/L			07/17/13 18:59	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			07/17/13 18:59	1
Bromoform	ND		5.0	0.37	ug/L			07/17/13 18:59	1
Bromomethane	ND		10	0.40	ug/L			07/17/13 18:59	1
Carbon disulfide	ND		5.0	0.37	ug/L			07/17/13 18:59	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			07/17/13 18:59	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			07/17/13 18:59	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			07/17/13 18:59	1
Chlorobenzene	ND		5.0	0.38	ug/L			07/17/13 18:59	1
Chloroethane	ND		10	0.38	ug/L			07/17/13 18:59	1
Chloroform	ND		5.0	0.15	ug/L			07/17/13 18:59	1
Chloromethane	ND		10	0.55	ug/L			07/17/13 18:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.25	ug/L			07/17/13 18:59	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			07/17/13 18:59	1
2-Hexanone	ND		20	0.59	ug/L			07/17/13 18:59	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			07/17/13 18:59	1
Cyclohexane	ND		10	0.36	ug/L			07/17/13 18:59	1
Dibromochloromethane	ND		5.0	0.33	ug/L			07/17/13 18:59	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			07/17/13 18:59	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			07/17/13 18:59	1
Ethylbenzene	ND		5.0	0.30	ug/L			07/17/13 18:59	1
Isopropylbenzene	ND		5.0	0.26	ug/L			07/17/13 18:59	1
Methyl acetate	ND		25	2.3	ug/L			07/17/13 18:59	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			07/17/13 18:59	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			07/17/13 18:59	1
Methylcyclohexane	ND		10	0.26	ug/L			07/17/13 18:59	1
Methylene Chloride	ND		5.0	1.7	ug/L			07/17/13 18:59	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			07/17/13 18:59	1
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			07/17/13 18:59	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			07/17/13 18:59	1
Styrene	ND		5.0	0.35	ug/L			07/17/13 18:59	1
Tetrachloroethene	ND		5.0	0.28	ug/L			07/17/13 18:59	1
Toluene	ND		5.0	1.0	ug/L			07/17/13 18:59	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			07/17/13 18:59	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			07/17/13 18:59	1
o-Xylene	ND		5.0	0.32	ug/L			07/17/13 18:59	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			07/17/13 18:59	1
Trichloroethene	ND		5.0	0.29	ug/L			07/17/13 18:59	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			07/17/13 18:59	1

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## QC Sample Results

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

TestAmerica Job ID: 160-3013-1

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

Lab Sample ID: MB 160-61806/3-A

Matrix: Water

Analysis Batch: 61806

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		5.0	0.43	ug/L			07/17/13 18:59	1
Xylenes, Total	ND		10	0.85	ug/L			07/17/13 18:59	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		82 - 121					07/17/13 18:59	1
1,2-Dichloroethane-d4 (Surr)	100		82 - 132					07/17/13 18:59	1
Toluene-d8 (Surr)	100		85 - 115					07/17/13 18:59	1
Dibromofluoromethane (Surr)	97		85 - 119					07/17/13 18:59	1

Lab Sample ID: LCS 160-61806/4-A

Matrix: Water

Analysis Batch: 61806

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	50.0	52.0		ug/L		104	71 - 123
2-Butanone (MEK)	50.0	52.6		ug/L		105	71 - 123
1,2-Dibromoethane (EDB)	50.0	49.9		ug/L		100	85 - 115
1,2-Dichlorobenzene	50.0	50.1		ug/L		100	85 - 115
1,3-Dichlorobenzene	50.0	50.8		ug/L		102	85 - 115
1,4-Dichlorobenzene	50.0	51.0		ug/L		102	85 - 115
Acetone	50.0	47.5		ug/L		95	51 - 140
Benzene	50.0	50.2		ug/L		100	85 - 115
1,1-Dichloroethane	50.0	51.9		ug/L		104	85 - 115
Bromodichloromethane	50.0	48.2		ug/L		96	85 - 117
1,2-Dichloroethane	50.0	47.1		ug/L		94	79 - 122
Bromoform	50.0	43.5		ug/L		87	85 - 115
Bromomethane	50.0	56.2		ug/L		112	70 - 135
Carbon disulfide	50.0	47.4		ug/L		95	85 - 123
1,1-Dichloroethene	50.0	46.0		ug/L		92	85 - 118
Carbon tetrachloride	50.0	46.9		ug/L		94	85 - 118
1,2-Dichloropropane	50.0	52.8		ug/L		106	85 - 115
Chlorobenzene	50.0	52.6		ug/L		105	85 - 115
Chloroethane	50.0	75.0	*	ug/L		150	75 - 125
Chloroform	50.0	46.6		ug/L		93	85 - 115
Chloromethane	50.0	50.1		ug/L		100	73 - 132
cis-1,2-Dichloroethene	50.0	48.1		ug/L		96	85 - 115
2-Hexanone	50.0	52.9		ug/L		106	66 - 121
cis-1,3-Dichloropropene	50.0	54.0		ug/L		108	85 - 127
Cyclohexane	50.0	49.5		ug/L		99	73 - 115
Dibromochloromethane	50.0	48.4		ug/L		97	85 - 115
Dichlorodifluoromethane	50.0	44.1		ug/L		88	62 - 115
4-Methyl-2-pentanone (MIBK)	50.0	51.9		ug/L		104	74 - 123
Ethylbenzene	50.0	47.3		ug/L		95	85 - 115
Isopropylbenzene	50.0	51.4		ug/L		103	85 - 124
Methyl acetate	250	256		ug/L		103	73 - 135
1,1,2,2-Tetrachloroethane	50.0	50.7		ug/L		101	84 - 115
Methyl tert-butyl ether	50.0	48.2		ug/L		96	73 - 115
Methylcyclohexane	50.0	51.5		ug/L		103	85 - 134

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## QC Sample Results

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

TestAmerica Job ID: 160-3013-1

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

**Lab Sample ID: LCS 160-61806/4-A**

**Matrix: Water**

**Analysis Batch: 61806**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	50.0	47.3		ug/L		95	84 - 115
1,2,4-Trichlorobenzene	50.0	44.4		ug/L		89	75 - 124
1,1,1-Trichloroethane	50.0	45.5		ug/L		91	85 - 115
1,1,2-Trichloroethane	50.0	52.3		ug/L		105	85 - 115
Styrene	50.0	51.4		ug/L		103	85 - 115
Tetrachloroethene	50.0	50.8		ug/L		102	85 - 115
Toluene	50.0	52.0		ug/L		104	85 - 115
m-Xylene & p-Xylene	50.0	51.4		ug/L		103	85 - 115
trans-1,2-Dichloroethene	50.0	47.3		ug/L		95	85 - 115
o-Xylene	50.0	51.0		ug/L		102	85 - 115
trans-1,3-Dichloropropene	50.0	56.1		ug/L		112	85 - 123
Trichloroethene	50.0	49.4		ug/L		99	85 - 115
Trichlorofluoromethane	50.0	45.5		ug/L		91	85 - 116
Vinyl chloride	50.0	54.0		ug/L		108	68 - 133
Xylenes, Total	100	102		ug/L		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		82 - 121
1,2-Dichloroethane-d4 (Surr)	92		82 - 132
Toluene-d8 (Surr)	99		85 - 115
Dibromofluoromethane (Surr)	92		85 - 119

**Lab Sample ID: 160-3013-1 MS**

**Matrix: Water**

**Analysis Batch: 61806**

**Client Sample ID: PZ-208-SS**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	ND		50.0	51.0		ug/L		102	71 - 123
2-Butanone (MEK)	ND		50.0	52.9		ug/L		106	73 - 133
1,2-Dibromoethane (EDB)	ND		50.0	50.9		ug/L		102	85 - 115
1,2-Dichlorobenzene	ND		50.0	51.8		ug/L		104	84 - 115
1,3-Dichlorobenzene	ND		50.0	52.4		ug/L		105	84 - 115
1,4-Dichlorobenzene	ND		50.0	52.5		ug/L		105	85 - 115
Acetone	ND		50.0	48.0		ug/L		96	38 - 150
Benzene	ND		50.0	53.4		ug/L		107	85 - 115
1,1-Dichloroethane	ND		50.0	54.0		ug/L		108	85 - 115
Bromodichloromethane	ND		50.0	50.9		ug/L		102	56 - 119
1,2-Dichloroethane	ND		50.0	51.4		ug/L		103	80 - 125
Bromoform	ND		50.0	42.5		ug/L		85	84 - 116
Bromomethane	ND		50.0	61.7		ug/L		123	70 - 135
Carbon disulfide	ND		50.0	48.7		ug/L		97	85 - 127
1,1-Dichloroethene	ND		50.0	46.3		ug/L		93	85 - 118
Carbon tetrachloride	ND		50.0	48.4		ug/L		97	85 - 121
1,2-Dichloropropane	ND		50.0	57.3		ug/L		115	85 - 117
Chlorobenzene	ND		50.0	56.0		ug/L		112	85 - 115
Chloroethane	ND	*	50.0	86.0	F	ug/L		172	73 - 123
Chloroform	ND		50.0	48.4		ug/L		97	85 - 115
Chloromethane	ND		50.0	48.4		ug/L		97	67 - 130

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## QC Sample Results

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

TestAmerica Job ID: 160-3013-1

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

Lab Sample ID: 160-3013-1 MS

Matrix: Water

Analysis Batch: 61806

Client Sample ID: PZ-208-SS

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
cis-1,2-Dichloroethene	ND		50.0	50.1		ug/L		100	80 - 116
2-Hexanone	ND		50.0	54.1		ug/L		108	66 - 121
cis-1,3-Dichloropropene	ND		50.0	55.7		ug/L		111	85 - 124
Cyclohexane	ND		50.0	50.1		ug/L		100	73 - 115
Dibromochloromethane	ND		50.0	50.8		ug/L		102	85 - 115
Dichlorodifluoromethane	ND		50.0	44.1		ug/L		88	85 - 119
4-Methyl-2-pentanone (MIBK)	ND		50.0	54.3		ug/L		109	77 - 134
Ethylbenzene	ND		50.0	50.7		ug/L		101	85 - 115
Isopropylbenzene	ND		50.0	51.4		ug/L		103	85 - 124
Methyl acetate	ND		250	256		ug/L		102	49 - 150
1,1,2,2-Tetrachloroethane	ND		50.0	50.2		ug/L		100	85 - 116
Methyl tert-butyl ether	ND		50.0	49.6		ug/L		99	75 - 115
Methylcyclohexane	ND		50.0	55.7		ug/L		111	85 - 137
Methylene Chloride	ND		50.0	49.8		ug/L		100	85 - 115
1,2,4-Trichlorobenzene	ND		50.0	46.1		ug/L		92	75 - 124
1,1,1-Trichloroethane	ND		50.0	47.1		ug/L		94	85 - 118
1,1,2-Trichloroethane	ND		50.0	55.2		ug/L		110	85 - 115
Styrene	ND		50.0	55.4		ug/L		111	85 - 115
Tetrachloroethene	ND		50.0	53.3		ug/L		107	85 - 118
Toluene	ND		50.0	53.9		ug/L		108	85 - 118
m-Xylene & p-Xylene	ND		50.0	54.5		ug/L		109	85 - 115
trans-1,2-Dichloroethene	ND		50.0	49.0		ug/L		98	84 - 115
o-Xylene	ND		50.0	54.4		ug/L		109	85 - 118
trans-1,3-Dichloropropene	ND		50.0	58.7		ug/L		117	85 - 127
Trichloroethene	ND		50.0	52.5		ug/L		105	85 - 115
Trichlorofluoromethane	ND		50.0	49.1		ug/L		98	85 - 115
Vinyl chloride	ND		50.0	55.1		ug/L		110	63 - 129
Xylenes, Total	ND		100	109		ug/L		109	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	90		82 - 121
1,2-Dichloroethane-d4 (Surr)	99		82 - 132
Toluene-d8 (Surr)	99		85 - 115
Dibromofluoromethane (Surr)	96		85 - 119

Lab Sample ID: 160-3013-1 MSD

Matrix: Water

Analysis Batch: 61806

Client Sample ID: PZ-208-SS

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
1,2-Dibromo-3-Chloropropane	ND		50.0	49.4		ug/L		99	71 - 123	3	20
2-Butanone (MEK)	ND		50.0	51.9		ug/L		104	73 - 133	2	20
1,2-Dibromoethane (EDB)	ND		50.0	48.7		ug/L		97	85 - 115	4	20
1,2-Dichlorobenzene	ND		50.0	49.3		ug/L		99	84 - 115	5	20
1,3-Dichlorobenzene	ND		50.0	49.2		ug/L		98	84 - 115	6	20
1,4-Dichlorobenzene	ND		50.0	50.2		ug/L		100	85 - 115	5	20
Acetone	ND		50.0	46.3		ug/L		93	38 - 150	4	20
Benzene	ND		50.0	50.5		ug/L		101	85 - 115	5	20

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# QC Sample Results

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

TestAmerica Job ID: 160-3013-1

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

Lab Sample ID: 160-3013-1 MSD

Matrix: Water

Analysis Batch: 61806

Client Sample ID: PZ-208-SS

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
1,1-Dichloroethane	ND		50.0	52.5		ug/L		105	85 - 115	3	20
Bromodichloromethane	ND		50.0	50.0		ug/L		100	56 - 119	2	20
1,2-Dichloroethane	ND		50.0	48.5		ug/L		97	80 - 125	6	20
Bromoform	ND		50.0	40.8	F	ug/L		82	84 - 116	4	20
Bromomethane	ND		50.0	57.1		ug/L		114	70 - 135	8	20
Carbon disulfide	ND		50.0	46.8		ug/L		94	85 - 127	4	20
1,1-Dichloroethene	ND		50.0	44.0		ug/L		88	85 - 118	5	20
Carbon tetrachloride	ND		50.0	46.4		ug/L		93	85 - 121	4	20
1,2-Dichloropropane	ND		50.0	55.2		ug/L		110	85 - 117	4	20
Chlorobenzene	ND		50.0	53.2		ug/L		106	85 - 115	5	20
Chloroethane	ND	*	50.0	73.1	F	ug/L		146	73 - 123	16	20
Chloroform	ND		50.0	47.1		ug/L		94	85 - 115	3	20
Chloromethane	ND		50.0	48.7		ug/L		97	67 - 130	1	20
cis-1,2-Dichloroethene	ND		50.0	48.9		ug/L		98	80 - 116	2	20
2-Hexanone	ND		50.0	51.2		ug/L		102	66 - 121	5	20
cis-1,3-Dichloropropene	ND		50.0	52.9		ug/L		106	85 - 124	5	20
Cyclohexane	ND		50.0	49.0		ug/L		98	73 - 115	2	20
Dibromochloromethane	ND		50.0	48.2		ug/L		96	85 - 115	5	20
Dichlorodifluoromethane	ND		50.0	43.4		ug/L		87	85 - 119	1	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	54.7		ug/L		109	77 - 134	1	20
Ethylbenzene	ND		50.0	48.5		ug/L		97	85 - 115	4	20
Isopropylbenzene	ND		50.0	48.4		ug/L		97	85 - 124	6	20
Methyl acetate	ND		250	252		ug/L		101	49 - 150	1	20
1,1,2,2-Tetrachloroethane	ND		50.0	47.9		ug/L		96	85 - 116	5	20
Methyl tert-butyl ether	ND		50.0	48.9		ug/L		98	75 - 115	1	20
Methylcyclohexane	ND		50.0	51.9		ug/L		104	85 - 137	7	20
Methylene Chloride	ND		50.0	50.0		ug/L		100	85 - 115	0	20
1,2,4-Trichlorobenzene	ND		50.0	44.6		ug/L		89	75 - 124	3	20
1,1,1-Trichloroethane	ND		50.0	45.4		ug/L		91	85 - 118	4	20
1,1,2-Trichloroethane	ND		50.0	52.3		ug/L		105	85 - 115	5	20
Styrene	ND		50.0	55.6		ug/L		111	85 - 115	0	20
Tetrachloroethene	ND		50.0	52.3		ug/L		105	85 - 118	2	20
Toluene	ND		50.0	53.6		ug/L		107	85 - 118	0	20
m-Xylene & p-Xylene	ND		50.0	50.1		ug/L		100	85 - 115	8	20
trans-1,2-Dichloroethene	ND		50.0	47.1		ug/L		94	84 - 115	4	20
o-Xylene	ND		50.0	55.5		ug/L		111	85 - 118	2	20
trans-1,3-Dichloropropene	ND		50.0	58.9		ug/L		118	85 - 127	0	20
Trichloroethene	ND		50.0	50.1		ug/L		100	85 - 115	5	20
Trichlorofluoromethane	ND		50.0	46.6		ug/L		93	85 - 115	5	20
Vinyl chloride	ND		50.0	53.1		ug/L		106	63 - 129	4	20
Xylenes, Total	ND		100	106		ug/L		106	70 - 130	3	20

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	86		82 - 121
1,2-Dichloroethane-d4 (Surr)	95		82 - 132
Toluene-d8 (Surr)	102		85 - 115
Dibromofluoromethane (Surr)	93		85 - 119

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## QC Sample Results

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

TestAmerica Job ID: 160-3013-1

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

Lab Sample ID: MB 160-61452/1-A

Matrix: Water

Analysis Batch: 61766

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61452

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/18/13 15:26	07/19/13 19:01	1
Antimony	ND		10	4.0	ug/L		07/18/13 15:26	07/19/13 19:01	1
Arsenic	ND		10	2.0	ug/L		07/18/13 15:26	07/19/13 19:01	1
Barium	ND		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:01	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:26	07/19/13 19:01	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:26	07/19/13 19:01	1
Calcium	ND		1000	110	ug/L		07/18/13 15:26	07/19/13 19:01	1
Chromium	ND		10	3.1	ug/L		07/18/13 15:26	07/19/13 19:01	1
Cobalt	ND		50	4.0	ug/L		07/18/13 15:26	07/19/13 19:01	1
Copper	ND		25	4.6	ug/L		07/18/13 15:26	07/19/13 19:01	1
Iron	ND		100	28	ug/L		07/18/13 15:26	07/19/13 19:01	1
Lead	ND		10	1.5	ug/L		07/18/13 15:26	07/19/13 19:01	1
Magnesium	ND		1000	130	ug/L		07/18/13 15:26	07/19/13 19:01	1
Manganese	ND		15	3.3	ug/L		07/18/13 15:26	07/19/13 19:01	1
Nickel	ND		40	13	ug/L		07/18/13 15:26	07/19/13 19:01	1
Potassium	ND		5000	1700	ug/L		07/18/13 15:26	07/19/13 19:01	1
Selenium	ND		15	2.7	ug/L		07/18/13 15:26	07/19/13 19:01	1
Silver	ND		10	6.0	ug/L		07/18/13 15:26	07/19/13 19:01	1
Sodium	ND		1000	320	ug/L		07/18/13 15:26	07/19/13 19:01	1
Thallium	ND		20	4.0	ug/L		07/18/13 15:26	07/19/13 19:01	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:26	07/19/13 19:01	1
Zinc	ND		20	5.2	ug/L		07/18/13 15:26	07/19/13 19:01	1

Lab Sample ID: LCS 160-61452/2-A

Matrix: Water

Analysis Batch: 61766

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 61452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10000	9820		ug/L		98	80 - 120
Antimony	500	516		ug/L		103	80 - 120
Arsenic	1000	1010		ug/L		101	80 - 120
Barium	1000	1040		ug/L		104	80 - 120
Beryllium	1000	997		ug/L		100	80 - 120
Cadmium	1000	1020		ug/L		102	80 - 120
Calcium	10000	10700		ug/L		107	80 - 120
Chromium	1000	1060		ug/L		106	80 - 120
Cobalt	1000	1060		ug/L		106	80 - 120
Copper	1000	1030		ug/L		103	80 - 120
Iron	10000	9860		ug/L		99	80 - 120
Lead	1000	1080		ug/L		108	80 - 120
Magnesium	10000	9830		ug/L		98	80 - 120
Manganese	1000	987		ug/L		99	80 - 120
Nickel	1000	1060		ug/L		106	80 - 120
Potassium	10000	9950		ug/L		99	80 - 120
Selenium	1000	1020		ug/L		102	80 - 120
Silver	100	91.9		ug/L		92	80 - 120
Sodium	10000	10200		ug/L		102	80 - 120
Thallium	200	226		ug/L		113	80 - 120

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# QC Sample Results

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

TestAmerica Job ID: 160-3013-1

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

**Lab Sample ID: LCS 160-61452/2-A**  
**Matrix: Water**  
**Analysis Batch: 61766**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 61452**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	1000	962		ug/L		96	80 - 120
Zinc	1000	1040		ug/L		104	80 - 120

**Lab Sample ID: MB 160-61454/1-A**  
**Matrix: Water**  
**Analysis Batch: 62409**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 61454**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		200	80	ug/L		07/18/13 15:33	07/23/13 14:35	1
Antimony	ND		10	4.0	ug/L		07/18/13 15:33	07/23/13 14:35	1
Arsenic	ND		10	2.0	ug/L		07/18/13 15:33	07/23/13 14:35	1
Barium	ND		50	4.0	ug/L		07/18/13 15:33	07/23/13 14:35	1
Beryllium	ND		5.0	0.61	ug/L		07/18/13 15:33	07/23/13 14:35	1
Cadmium	ND		5.0	0.91	ug/L		07/18/13 15:33	07/23/13 14:35	1
Calcium	ND		1000	110	ug/L		07/18/13 15:33	07/23/13 14:35	1
Chromium	ND		10	3.1	ug/L		07/18/13 15:33	07/23/13 14:35	1
Cobalt	5.90	J	50	4.0	ug/L		07/18/13 15:33	07/23/13 14:35	1
Copper	ND		25	4.6	ug/L		07/18/13 15:33	07/23/13 14:35	1
Iron	ND		100	28	ug/L		07/18/13 15:33	07/23/13 14:35	1
Lead	ND		10	1.5	ug/L		07/18/13 15:33	07/23/13 14:35	1
Magnesium	ND		1000	130	ug/L		07/18/13 15:33	07/23/13 14:35	1
Manganese	ND		15	3.3	ug/L		07/18/13 15:33	07/23/13 14:35	1
Nickel	ND		40	13	ug/L		07/18/13 15:33	07/23/13 14:35	1
Potassium	ND		5000	1700	ug/L		07/18/13 15:33	07/23/13 14:35	1
Selenium	ND		15	2.7	ug/L		07/18/13 15:33	07/23/13 14:35	1
Silver	ND		10	6.0	ug/L		07/18/13 15:33	07/23/13 14:35	1
Sodium	ND		1000	320	ug/L		07/18/13 15:33	07/23/13 14:35	1
Thallium	ND	^	20	4.0	ug/L		07/18/13 15:33	07/23/13 14:35	1
Vanadium	ND		50	4.1	ug/L		07/18/13 15:33	07/23/13 14:35	1
Zinc	ND		20	5.2	ug/L		07/18/13 15:33	07/23/13 14:35	1

**Lab Sample ID: LCS 160-61454/2-A**  
**Matrix: Water**  
**Analysis Batch: 62409**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 61454**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10000	9550		ug/L		95	80 - 120
Antimony	500	506		ug/L		101	80 - 120
Arsenic	1000	990		ug/L		99	80 - 120
Barium	1000	999		ug/L		100	80 - 120
Beryllium	1000	994		ug/L		99	80 - 120
Cadmium	1000	999		ug/L		100	80 - 120
Calcium	10000	10200		ug/L		102	80 - 120
Chromium	1000	1030		ug/L		103	80 - 120
Cobalt	1000	1050		ug/L		105	80 - 120
Copper	1000	1010		ug/L		101	80 - 120
Iron	10000	9920		ug/L		99	80 - 120
Lead	1000	1050		ug/L		105	80 - 120
Magnesium	10000	9940		ug/L		99	80 - 120

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## QC Sample Results

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

TestAmerica Job ID: 160-3013-1

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

Lab Sample ID: LCS 160-61454/2-A

Matrix: Water

Analysis Batch: 62409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 61454

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	1000	999		ug/L		100	80 - 120
Nickel	1000	1040		ug/L		104	80 - 120
Potassium	10000	9650		ug/L		97	80 - 120
Selenium	1000	989		ug/L		99	80 - 120
Silver	100	99.5		ug/L		100	80 - 120
Sodium	10000	9720		ug/L		97	80 - 120
Thallium	200	224	^	ug/L		112	80 - 120
Vanadium	1000	971		ug/L		97	80 - 120
Zinc	1000	1000		ug/L		100	80 - 120

Lab Sample ID: 160-3013-1 MS

Matrix: Water

Analysis Batch: 62409

Client Sample ID: PZ-208-SS

Prep Type: Total/NA

Prep Batch: 61454

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	530		10000	11300		ug/L		108	75 - 125
Antimony	4.0	J	500	504		ug/L		100	75 - 125
Arsenic	ND		1000	990		ug/L		99	75 - 125
Barium	150		1000	1140		ug/L		100	75 - 125
Beryllium	ND		1000	999		ug/L		100	75 - 125
Cadmium	ND		1000	993		ug/L		99	75 - 125
Calcium	94000	E	10000	101000	E 4	ug/L		68	75 - 125
Chromium	ND		1000	992		ug/L		99	75 - 125
Cobalt	ND		1000	994		ug/L		99	75 - 125
Copper	ND		1000	985		ug/L		98	75 - 125
Iron	1000		10000	11100		ug/L		101	75 - 125
Lead	2.6	J	1000	992		ug/L		99	75 - 125
Magnesium	46000		10000	55900	E 4	ug/L		98	75 - 125
Manganese	26		1000	1010		ug/L		99	75 - 125
Nickel	ND		1000	992		ug/L		99	75 - 125
Potassium	ND		10000	11400		ug/L		114	75 - 125
Selenium	6.4	J	1000	992		ug/L		99	75 - 125
Silver	ND		100	96.9		ug/L		97	75 - 125
Sodium	39000		10000	49300		ug/L		99	75 - 125
Thallium	ND	^	200	210	^	ug/L		105	75 - 125
Vanadium	ND		1000	974		ug/L		97	75 - 125
Zinc	9.9	J	1000	1000		ug/L		99	75 - 125

Lab Sample ID: 160-3013-1 MS

Matrix: Water

Analysis Batch: 62409

Client Sample ID: PZ-208-SS

Prep Type: Total/NA

Prep Batch: 61454

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	100000		10000	115000	4	ug/L		106	75 - 125

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# QC Sample Results

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

TestAmerica Job ID: 160-3013-1

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

Lab Sample ID: 160-3013-1 MSD  
Matrix: Water  
Analysis Batch: 62409

Client Sample ID: PZ-208-SS  
Prep Type: Total/NA  
Prep Batch: 61454

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Aluminum	530		10000	11500		ug/L		110	75 - 125	2	20
Antimony	4.0	J	500	523		ug/L		104	75 - 125	4	20
Arsenic	ND		1000	1030		ug/L		103	75 - 125	4	20
Barium	150		1000	1160		ug/L		101	75 - 125	1	20
Beryllium	ND		1000	1010		ug/L		101	75 - 125	1	20
Cadmium	ND		1000	1040		ug/L		104	75 - 125	4	20
Calcium	94000	E	10000	105000	E 4	ug/L		109	75 - 125	4	20
Chromium	ND		1000	1030		ug/L		103	75 - 125	4	20
Cobalt	ND		1000	1040		ug/L		104	75 - 125	5	20
Copper	ND		1000	1030		ug/L		103	75 - 125	4	20
Iron	1000		10000	11300		ug/L		103	75 - 125	2	20
Lead	2.6	J	1000	1040		ug/L		104	75 - 125	5	20
Magnesium	46000		10000	56800	E 4	ug/L		107	75 - 125	2	20
Manganese	26		1000	1030		ug/L		100	75 - 125	2	20
Nickel	ND		1000	1040		ug/L		104	75 - 125	5	20
Potassium	ND		10000	11600		ug/L		116	75 - 125	2	20
Selenium	6.4	J	1000	1030		ug/L		103	75 - 125	4	20
Silver	ND		100	102		ug/L		102	75 - 125	5	20
Sodium	39000		10000	49700		ug/L		104	75 - 125	1	20
Thallium	ND	^	200	220	^	ug/L		110	75 - 125	5	20
Vanadium	ND		1000	991		ug/L		99	75 - 125	2	20
Zinc	9.9	J	1000	1050		ug/L		104	75 - 125	4	20

Lab Sample ID: 160-3013-1 MSD  
Matrix: Water  
Analysis Batch: 62409

Client Sample ID: PZ-208-SS  
Prep Type: Total/NA  
Prep Batch: 61454

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Calcium	100000		10000	116000	4	ug/L		115	75 - 125	1	20

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-61467/1-A  
Matrix: Water  
Analysis Batch: 61580

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 61467

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil
	Result	Qualifier							
Mercury	ND		0.20	0.060	ug/L		07/18/13 19:59	07/18/13 23:51	1

Lab Sample ID: LCS 160-61467/2-A  
Matrix: Water  
Analysis Batch: 61580

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 61467

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	5.00	5.40		ug/L		108	80 - 120

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## QC Sample Results

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

TestAmerica Job ID: 160-3013-1

### Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 160-3013-2 MS

Matrix: Water

Analysis Batch: 61580

Client Sample ID: PZ-303-AI

Prep Type: Total/NA

Prep Batch: 61467

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		5.00	5.08		ug/L		102	80 - 120

Lab Sample ID: 160-3013-2 MSD

Matrix: Water

Analysis Batch: 61580

Client Sample ID: PZ-303-AI

Prep Type: Total/NA

Prep Batch: 61467

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		5.00	5.15		ug/L		103	80 - 120	1	20

Lab Sample ID: MB 160-61468/1-A

Matrix: Water

Analysis Batch: 61580

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 61468

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.060	ug/L		07/18/13 20:01	07/19/13 00:55	1

Lab Sample ID: LCS 160-61468/2-A

Matrix: Water

Analysis Batch: 61580

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 61468

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.45		ug/L		109	80 - 120

Lab Sample ID: 160-3013-1 MS

Matrix: Water

Analysis Batch: 61580

Client Sample ID: PZ-208-SS

Prep Type: Dissolved

Prep Batch: 61468

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		5.00	5.32		ug/L		106	80 - 120

Lab Sample ID: 160-3013-1 MSD

Matrix: Water

Analysis Batch: 61580

Client Sample ID: PZ-208-SS

Prep Type: Dissolved

Prep Batch: 61468

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		5.00	5.39		ug/L		108	80 - 120	1	20

### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 160-62922/3

Matrix: Water

Analysis Batch: 62922

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			07/17/13 12:40	1

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TestAmerica St. Louis



## QC Sample Results

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

TestAmerica Job ID: 160-3013-1

### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 160-62922/4

Matrix: Water

Analysis Batch: 62922

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	3.98		mg/L		100	90 - 110

Lab Sample ID: 160-3013-1 MS

Matrix: Water

Analysis Batch: 62922

Client Sample ID: PZ-208-SS

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

Lab Sample ID: 160-3013-1 DU

Matrix: Water

Analysis Batch: 62922

Client Sample ID: PZ-208-SS

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Iodide	ND		ND		mg/L		NC	20

Lab Sample ID: MB 160-62926/3

Matrix: Water

Analysis Batch: 62926

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			07/17/13 12:44	1
Chloride	ND		0.20	0.020	mg/L			07/17/13 12:44	1
Bromide	ND		0.25	0.025	mg/L			07/17/13 12:44	1
Sulfate	ND		0.50	0.050	mg/L			07/17/13 12:44	1

Lab Sample ID: LCS 160-62926/4

Matrix: Water

Analysis Batch: 62926

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	1.88		mg/L		94	90 - 110
Bromide	2.00	1.94		mg/L		97	90 - 110
Sulfate	8.00	7.61		mg/L		95	90 - 110

Lab Sample ID: 160-3013-1 MS

Matrix: Water

Analysis Batch: 62926

Client Sample ID: PZ-208-SS

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.61		0.400	1.03		mg/L		105	90 - 110
Bromide	0.069	J	2.00	2.09		mg/L		101	90 - 110

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TestAmerica St. Louis

## QC Sample Results

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

TestAmerica Job ID: 160-3013-1

### Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 160-3013-1 DU  
Matrix: Water  
Analysis Batch: 62926

Client Sample ID: PZ-208-SS  
Prep Type: Total/NA

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Nitrate as N	0.61		0.612		mg/L		0.5	20
Bromide	0.069	J	0.0687	J	mg/L		0.06	20

### Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 160-3013-1 MS  
Matrix: Water  
Analysis Batch: 62926

Client Sample ID: PZ-208-SS  
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
Chloride - DL	89		40.0	133	F	mg/L		112	90 - 110
Sulfate - DL	32		80.0	109		mg/L		96	90 - 110

Lab Sample ID: 160-3013-1 DU  
Matrix: Water  
Analysis Batch: 62926

Client Sample ID: PZ-208-SS  
Prep Type: Total/NA

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Chloride - DL	89		88.7		mg/L		0.2	20
Sulfate - DL	32		32.2		mg/L		0.08	20

### Method: 310.1 - Alkalinity

Lab Sample ID: MB 160-63443/1  
Matrix: Water  
Analysis Batch: 63443

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

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Alkalinity	ND		1.3	0.14	mg/L			07/29/13 13:43	1

Lab Sample ID: LCS 160-63443/3  
Matrix: Water  
Analysis Batch: 63443

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

Analyte	Spike	Added	LCS		Unit	D	%Rec	%Rec.
			Result	Qualifier				
Alkalinity	400		388		mg/L		97	90 - 110

Lab Sample ID: LLCS 160-63443/2  
Matrix: Water  
Analysis Batch: 63443

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

Analyte	Spike	Added	LLCS		Unit	D	%Rec	%Rec.
			Result	Qualifier				
Alkalinity	200		196		mg/L		98	90 - 110

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## QC Sample Results

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

TestAmerica Job ID: 160-3013-1

### Method: 310.1 - Alkalinity (Continued)

Lab Sample ID: 160-3013-2 MS

Matrix: Water

Analysis Batch: 63443

Client Sample ID: PZ-303-AI

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	840		20.0	857	4	mg/L		85	80 - 120

Lab Sample ID: 160-3013-2 DU

Matrix: Water

Analysis Batch: 63443

Client Sample ID: PZ-303-AI

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	840		841		mg/L		0.1	20

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# QC Association Summary

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

TestAmerica Job ID: 160-3013-1

## GC/MS VOA

### Analysis Batch: 61806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Total/NA	Water	8260C	
160-3013-1 MS	PZ-208-SS	Total/NA	Water	8260C	
160-3013-1 MSD	PZ-208-SS	Total/NA	Water	8260C	
160-3013-2	PZ-303-AI	Total/NA	Water	8260C	
160-3013-3	PZ-304-AS	Total/NA	Water	8260C	
160-3013-4	MW-104	Total/NA	Water	8260C	
160-3013-5	P2-204A-SS	Total/NA	Water	8260C	
160-3013-6	PS-302-AI	Total/NA	Water	8260C	
160-3013-7	PS-302-AS	Total/NA	Water	8260C	
160-3013-8	TRIP BLANK	Total/NA	Water	8260C	
LCS 160-61806/4-A	Lab Control Sample	Total/NA	Water	8260C	
MB 160-61806/3-A	Method Blank	Total/NA	Water	8260C	

## Metals

### Prep Batch: 61452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Dissolved	Water	3010A	
160-3013-2	PZ-303-AI	Dissolved	Water	3010A	
160-3013-3	PZ-304-AS	Dissolved	Water	3010A	
160-3013-4	MW-104	Dissolved	Water	3010A	
160-3013-5	P2-204A-SS	Dissolved	Water	3010A	
160-3013-6	PS-302-AI	Dissolved	Water	3010A	
160-3013-7	PS-302-AS	Dissolved	Water	3010A	
LCS 160-61452/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-61452/1-A	Method Blank	Total/NA	Water	3010A	

### Prep Batch: 61454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Total/NA	Water	3010A	
160-3013-1 MS	PZ-208-SS	Total/NA	Water	3010A	
160-3013-1 MSD	PZ-208-SS	Total/NA	Water	3010A	
160-3013-2	PZ-303-AI	Total/NA	Water	3010A	
160-3013-3	PZ-304-AS	Total/NA	Water	3010A	
160-3013-4	MW-104	Total/NA	Water	3010A	
160-3013-5	P2-204A-SS	Total/NA	Water	3010A	
160-3013-6	PS-302-AI	Total/NA	Water	3010A	
160-3013-7	PS-302-AS	Total/NA	Water	3010A	
LCS 160-61454/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-61454/1-A	Method Blank	Total/NA	Water	3010A	

### Prep Batch: 61467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Total/NA	Water	7470A	
160-3013-2	PZ-303-AI	Total/NA	Water	7470A	
160-3013-2 MS	PZ-303-AI	Total/NA	Water	7470A	
160-3013-2 MSD	PZ-303-AI	Total/NA	Water	7470A	
160-3013-3	PZ-304-AS	Total/NA	Water	7470A	
160-3013-4	MW-104	Total/NA	Water	7470A	
160-3013-5	P2-204A-SS	Total/NA	Water	7470A	

TestAmerica St. Louis

# QC Association Summary

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

TestAmerica Job ID: 160-3013-1

## Metals (Continued)

### Prep Batch: 61467 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-6	PS-302-AI	Total/NA	Water	7470A	
160-3013-7	PS-302-AS	Total/NA	Water	7470A	
LCS 160-61467/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-61467/1-A	Method Blank	Total/NA	Water	7470A	

### Prep Batch: 61468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Dissolved	Water	7470A	
160-3013-1 MS	PZ-208-SS	Dissolved	Water	7470A	
160-3013-1 MSD	PZ-208-SS	Dissolved	Water	7470A	
160-3013-2	PZ-303-AI	Dissolved	Water	7470A	
160-3013-3	PZ-304-AS	Dissolved	Water	7470A	
160-3013-4	MW-104	Dissolved	Water	7470A	
160-3013-5	P2-204A-SS	Dissolved	Water	7470A	
160-3013-6	PS-302-AI	Dissolved	Water	7470A	
160-3013-7	PS-302-AS	Dissolved	Water	7470A	
LCS 160-61468/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 160-61468/1-A	Method Blank	Total/NA	Water	7470A	

### Analysis Batch: 61580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Dissolved	Water	7470A	61468
160-3013-1	PZ-208-SS	Total/NA	Water	7470A	61467
160-3013-1 MS	PZ-208-SS	Dissolved	Water	7470A	61468
160-3013-1 MSD	PZ-208-SS	Dissolved	Water	7470A	61468
160-3013-2	PZ-303-AI	Dissolved	Water	7470A	61468
160-3013-2	PZ-303-AI	Total/NA	Water	7470A	61467
160-3013-2 MS	PZ-303-AI	Total/NA	Water	7470A	61467
160-3013-2 MSD	PZ-303-AI	Total/NA	Water	7470A	61467
160-3013-3	PZ-304-AS	Dissolved	Water	7470A	61468
160-3013-3	PZ-304-AS	Total/NA	Water	7470A	61467
160-3013-4	MW-104	Dissolved	Water	7470A	61468
160-3013-4	MW-104	Total/NA	Water	7470A	61467
160-3013-5	P2-204A-SS	Dissolved	Water	7470A	61468
160-3013-5	P2-204A-SS	Total/NA	Water	7470A	61467
160-3013-6	PS-302-AI	Dissolved	Water	7470A	61468
160-3013-6	PS-302-AI	Total/NA	Water	7470A	61467
160-3013-7	PS-302-AS	Dissolved	Water	7470A	61468
160-3013-7	PS-302-AS	Total/NA	Water	7470A	61467
LCS 160-61467/2-A	Lab Control Sample	Total/NA	Water	7470A	61467
LCS 160-61468/2-A	Lab Control Sample	Total/NA	Water	7470A	61468
MB 160-61467/1-A	Method Blank	Total/NA	Water	7470A	61467
MB 160-61468/1-A	Method Blank	Total/NA	Water	7470A	61468

### Analysis Batch: 61766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Dissolved	Water	6010C	61452
160-3013-1	PZ-208-SS	Dissolved	Water	6010C	61452
160-3013-2	PZ-303-AI	Dissolved	Water	6010C	61452
160-3013-2	PZ-303-AI	Dissolved	Water	6010C	61452
160-3013-3	PZ-304-AS	Dissolved	Water	6010C	61452

TestAmerica St. Louis

# QC Association Summary

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

TestAmerica Job ID: 160-3013-1

## Metals (Continued)

### Analysis Batch: 61766 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-3	PZ-304-AS	Dissolved	Water	6010C	61452
160-3013-4	MW-104	Dissolved	Water	6010C	61452
160-3013-4	MW-104	Dissolved	Water	6010C	61452
160-3013-5	P2-204A-SS	Dissolved	Water	6010C	61452
160-3013-5	P2-204A-SS	Dissolved	Water	6010C	61452
160-3013-6	PS-302-AI	Dissolved	Water	6010C	61452
160-3013-6	PS-302-AI	Dissolved	Water	6010C	61452
160-3013-7	PS-302-AS	Dissolved	Water	6010C	61452
160-3013-7	PS-302-AS	Dissolved	Water	6010C	61452
LCS 160-61452/2-A	Lab Control Sample	Total/NA	Water	6010C	61452
MB 160-61452/1-A	Method Blank	Total/NA	Water	6010C	61452

### Analysis Batch: 62409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Total/NA	Water	6010C	61454
160-3013-1	PZ-208-SS	Total/NA	Water	6010C	61454
160-3013-1 MS	PZ-208-SS	Total/NA	Water	6010C	61454
160-3013-1 MS	PZ-208-SS	Total/NA	Water	6010C	61454
160-3013-1 MSD	PZ-208-SS	Total/NA	Water	6010C	61454
160-3013-1 MSD	PZ-208-SS	Total/NA	Water	6010C	61454
160-3013-2	PZ-303-AI	Total/NA	Water	6010C	61454
160-3013-2	PZ-303-AI	Total/NA	Water	6010C	61454
160-3013-3	PZ-304-AS	Total/NA	Water	6010C	61454
160-3013-3	PZ-304-AS	Total/NA	Water	6010C	61454
160-3013-4	MW-104	Total/NA	Water	6010C	61454
160-3013-4	MW-104	Total/NA	Water	6010C	61454
160-3013-5	P2-204A-SS	Total/NA	Water	6010C	61454
160-3013-5	P2-204A-SS	Total/NA	Water	6010C	61454
160-3013-6	PS-302-AI	Total/NA	Water	6010C	61454
160-3013-6	PS-302-AI	Total/NA	Water	6010C	61454
160-3013-7	PS-302-AS	Total/NA	Water	6010C	61454
160-3013-7	PS-302-AS	Total/NA	Water	6010C	61454
LCS 160-61454/2-A	Lab Control Sample	Total/NA	Water	6010C	61454
MB 160-61454/1-A	Method Blank	Total/NA	Water	6010C	61454

## General Chemistry

### Analysis Batch: 62922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Total/NA	Water	300.0	
160-3013-1 DU	PZ-208-SS	Total/NA	Water	300.0	
160-3013-1 MS	PZ-208-SS	Total/NA	Water	300.0	
160-3013-2	PZ-303-AI	Total/NA	Water	300.0	
160-3013-3	PZ-304-AS	Total/NA	Water	300.0	
160-3013-4	MW-104	Total/NA	Water	300.0	
160-3013-5	P2-204A-SS	Total/NA	Water	300.0	
160-3013-6	PS-302-AI	Total/NA	Water	300.0	
160-3013-7	PS-302-AS	Total/NA	Water	300.0	
LCS 160-62922/4	Lab Control Sample	Total/NA	Water	300.0	
MB 160-62922/3	Method Blank	Total/NA	Water	300.0	

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## QC Association Summary

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

TestAmerica Job ID: 160-3013-1

### General Chemistry (Continued)

#### Analysis Batch: 62926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Total/NA	Water	300.0	
160-3013-1 - DL	PZ-208-SS	Total/NA	Water	300.0	
160-3013-1 DU	PZ-208-SS	Total/NA	Water	300.0	
160-3013-1 DU - DL	PZ-208-SS	Total/NA	Water	300.0	
160-3013-1 MS	PZ-208-SS	Total/NA	Water	300.0	
160-3013-1 MS - DL	PZ-208-SS	Total/NA	Water	300.0	
160-3013-2	PZ-303-AI	Total/NA	Water	300.0	
160-3013-2 - DL2	PZ-303-AI	Total/NA	Water	300.0	
160-3013-3	PZ-304-AS	Total/NA	Water	300.0	
160-3013-3 - DL2	PZ-304-AS	Total/NA	Water	300.0	
160-3013-4	MW-104	Total/NA	Water	300.0	
160-3013-4 - DL	MW-104	Total/NA	Water	300.0	
160-3013-5	P2-204A-SS	Total/NA	Water	300.0	
160-3013-5 - DL	P2-204A-SS	Total/NA	Water	300.0	
160-3013-5 - DL2	P2-204A-SS	Total/NA	Water	300.0	
160-3013-6	PS-302-AI	Total/NA	Water	300.0	
160-3013-6 - DL	PS-302-AI	Total/NA	Water	300.0	
160-3013-7	PS-302-AS	Total/NA	Water	300.0	
160-3013-7 - DL	PS-302-AS	Total/NA	Water	300.0	
LCS 160-62926/4	Lab Control Sample	Total/NA	Water	300.0	
MB 160-62926/3	Method Blank	Total/NA	Water	300.0	

#### Analysis Batch: 63443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3013-1	PZ-208-SS	Total/NA	Water	310.1	
160-3013-2	PZ-303-AI	Total/NA	Water	310.1	
160-3013-2 DU	PZ-303-AI	Total/NA	Water	310.1	
160-3013-2 MS	PZ-303-AI	Total/NA	Water	310.1	
160-3013-3	PZ-304-AS	Total/NA	Water	310.1	
160-3013-4	MW-104	Total/NA	Water	310.1	
160-3013-5	P2-204A-SS	Total/NA	Water	310.1	
160-3013-6	PS-302-AI	Total/NA	Water	310.1	
160-3013-7	PS-302-AS	Total/NA	Water	310.1	
LCS 160-63443/3	Lab Control Sample	Total/NA	Water	310.1	
LLCS 160-63443/2	Lab Control Sample	Total/NA	Water	310.1	
MB 160-63443/1	Method Blank	Total/NA	Water	310.1	

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# Surrogate Summary

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

TestAmerica Job ID: 160-3013-1

## 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	BFB	DBFM	TOL
		(82-132)	(82-121)	(85-119)	(85-115)
160-3013-1	PZ-208-SS	92	86	95	96
160-3013-1 MS	PZ-208-SS	99	90	96	99
160-3013-1 MSD	PZ-208-SS	95	86	93	102
160-3013-2	PZ-303-AI	98	86	98	97
160-3013-3	PZ-304-AS	98	87	100	101
160-3013-4	MW-104	90	80 X	94	98
160-3013-5	P2-204A-SS	96	85	99	93
160-3013-6	PS-302-AI	101	89	99	95
160-3013-7	PS-302-AS	100	85	97	101
160-3013-8	TRIP BLANK	96	85	95	96
LCS 160-61806/4-A	Lab Control Sample	92	92	92	99
MB 160-61806/3-A	Method Blank	100	87	97	100

### Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)  
BFB = 4-Bromofluorobenzene (Surr)  
DBFM = Dibromofluoromethane (Surr)  
TOL = Toluene-d8 (Surr)

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