

**BASELINE SOIL
SAMPLING REPORT**

APPENDIX

H



element environmental llc
environmental · engineering · water resources

Report

Central Maui Landfill TDSR Baseline Soil Sampling

Prepared For:

County of Maui
Solid Waste Division
One Main Plaza
2200 Main St. 225
Wailuku, HI 96793

Prepared By:

Element Environmental, LLC
98-030 Hekaha St., Unit 9
Aiea, HI 96701

Purchase Order Number: 346654
Element Project Number: 160079

November 22, 2016

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1.0 INTRODUCTION

Element Environmental, LLC (E2) conducted a baseline round of surface soil sampling at the temporary debris staging and reduction (TDSR) parcel located adjacent to the north-northwest (downslope) of the Central Maui Landfill. This soil sampling was conducted as directed by the County of Maui in order to comply with the guidelines presented in the County of Maui *Disaster Debris Action Plan*, February 2009 for TDSR site setup and closeout. Sampling effort consisted of collection of Multi-Increment (MI) samples of surface soil from decision units (DUs) established at the TDSR site and analysis for contaminants specified by the *Disaster Debris Action Plan*.

This sampling event was conducted on October 24, 2016.

2.0 PROJECT OBJECTIVE

This soil sampling event was conducted in order to determine baseline conditions at the TDSR site. Upon closure of the TDSR site, another round of soil sampling will be conducted for comparison to the baseline data in order to determine TDSR activities' potential impact at the site.

3.0 COMPLETED SCOPE OF WORK

E2 collected a total of six MI surface soil samples during this sampling event. Samples were collected from areas to be used for TDSR activities and DUs were approved by County of Maui personnel prior to collection. Samples were collected from undisturbed areas in the proposed TDSR site (not from roadways or existing stockpiled cane grass/sod). Figure 1 shows the locations of the DUs.

3.1 Sample Collection Methodology and Laboratory Analyses

Each MI soil sample consisted of 30 randomly located soil aliquots collected with stainless steel trowels from each DU. Each MI sample was placed in a separate sealable plastic bag, labeled and stored in a cooler with ice until delivery to the analytical laboratory, TestAmerica Seattle located in Tacoma Washington via Federal Express (Fedex). Upon receipt the laboratory tested the soil samples on a standard turn-around time for:

- Total petroleum hydrocarbons (TPH) - diesel range organics (DRO) via EPA method 8015B;
- TPH - residual range organics (RRO) via EPA method 8015B; and
- Total Resource Conservation and Recovery Act (RCRA) - 8 metals via EPA method 6010/7471A.

Field notes are included in Appendix A.

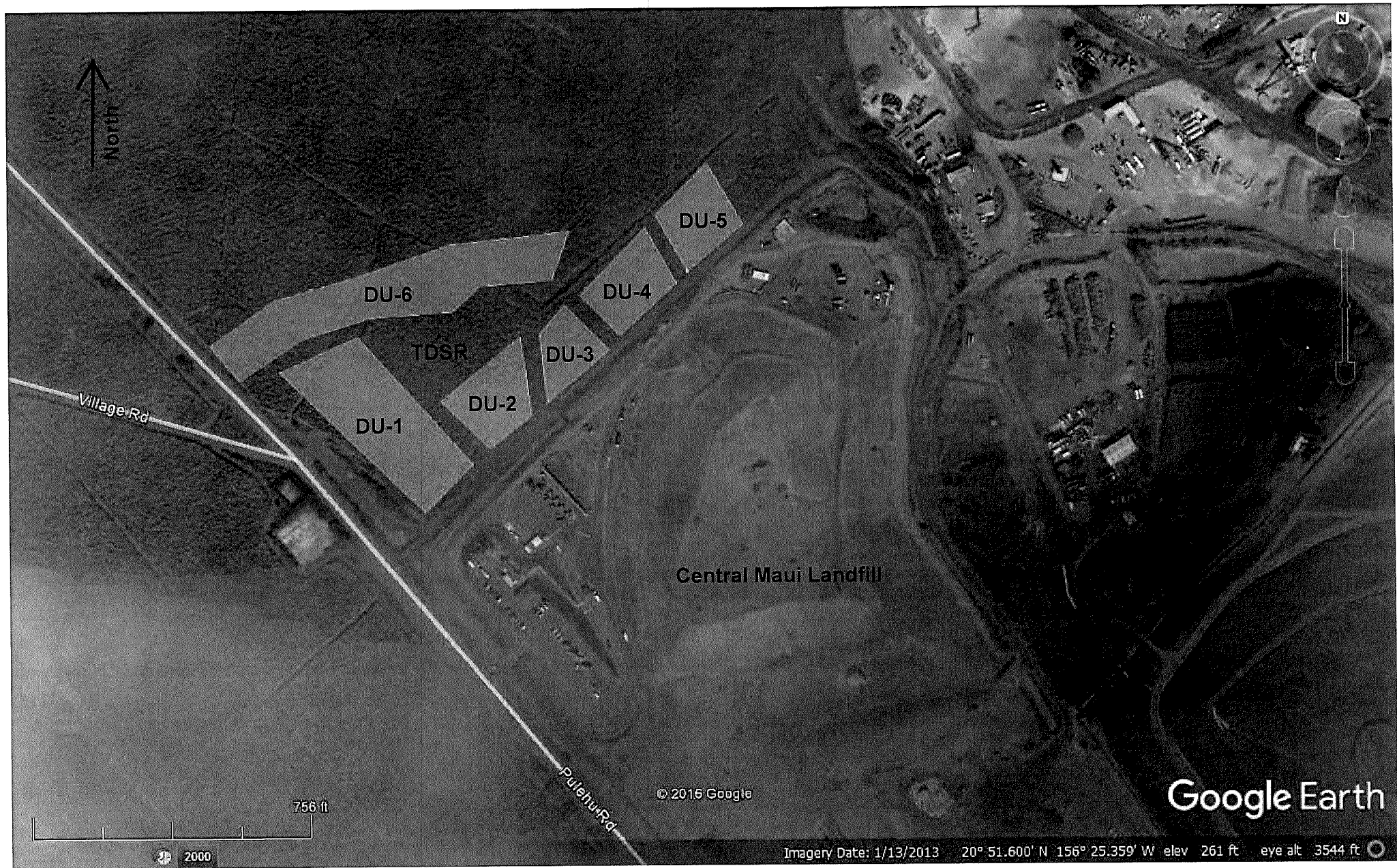
Laboratory analysis was completed on a standard turn-around time. E2 received the analytical results on Tuesday, November 12, 2016.

3.3 Laboratory Analytical Results

Analytical results from the laboratory did not indicate any significant concentrations of contaminants in the samples submitted. Please see the analytical data summary table attached

as Appendix B for further detail on the sample results. The full analytical data report, including quality assurance/quality control results is included as Appendix C.

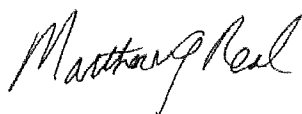
Figure 1: Central Maui Landfill, TDSR Baseline Soil Sampling, October 2016



4.0 SIGNATURES

The data presented in this report reflects the results of a limited sampling event conducted by E2 in accordance with currently acceptable industry standards. This report is based on a specific scope of work requested by the client and only those tasks specifically prescribed in that scope of work, as outlined in this report, were performed.

This report was prepared by Element Environmental, LLC.



Matthew Neal
Senior Environmental Scientist

Date: November 22, 2016

Appendix A Field Notes

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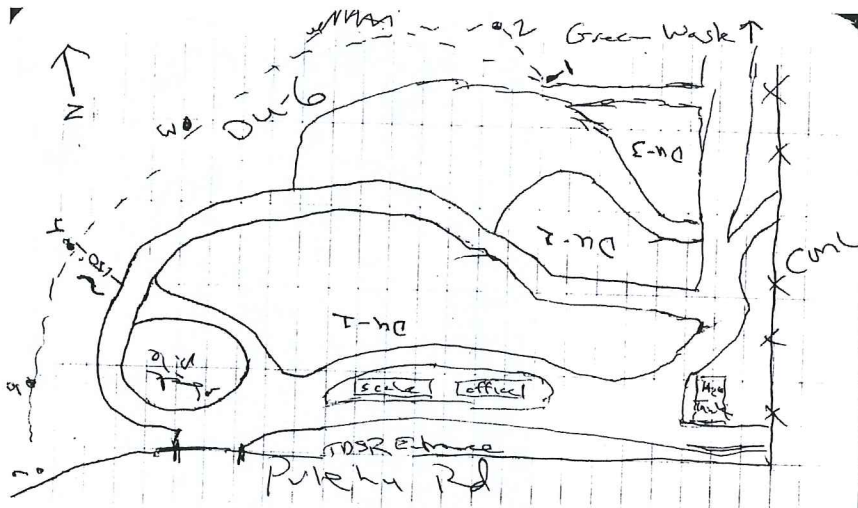
Central Maui
 10/16
 DSR

0820 - MN Arrived @ 5am - 10/29/16
 PDR site - PDR
 Soil test samples
 Soil sampling

0900 - Evinrude Outboard
 0730 - do. s. side
 Drive around the
 90' over DU Leukemia
 - Driscoll's - DU's will
 be loaded between
 roadways / gravel
 areas

0910 - Begin collection of
 wet sample from DU-1
 (30' x 18' bucket)

0935 - Complete soil - m. em. i
 Elmer Baker team site
 Protected to contain soil
 sampling (see report 10/9)

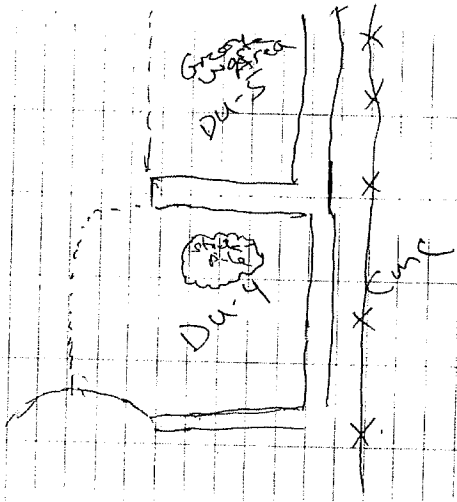


Plot #	Sample	Time	Log	Altitude	DU
1	cmL1	0910	30	DU-1	
2	cmL2	0945	30	DU-2	
3	cmL3	1000	30	DU-3	
4	cmL4	1025	30	DU-4	
5	cmL5	1055	30	DU-5	
6	cmL6	1115	30	DU-6	

GPS	Log	Lat	Long
1	20.86117°	-156.42383°	
2	20.86154°	-156.42369°	
3	20.86146°	-156.42468°	
4	20.86121°	-156.42574°	
5	20.86104°	-156.42692°	
6	20.8607°	-156.4276°	

10/24/15

N →



10/24/16

2.5 - GPS location of Duck
(Perimeter boundary)

1.5 - Complete GPS readings

+ soil, water, leaf

temp, sample storage

cooler, water (GAD)

samples, soil, water

+ Total water for

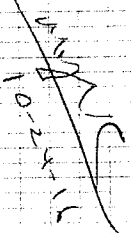
- Total RNA index

- TPT, oil

- TPT - diesel

site, dead TPT

lean site



Appendix B Analytical Data Summary Table

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Analytical Data Results Table - Central Maui Landfill TDSR, October 2016

E2 Project Sample ID: Laboratory ID: Date Collected:	Regulatory Limits Final Industrial/ Commercial Land Use EAL	MI-CML1		MI-CML2		MI-CML3		MI-CML4		MI-CML5		MI-CML6	
		580-63680-1 10/24/2016	580-63680-2 10/24/2016	580-63680-3 10/24/2016	580-63680-4 10/24/2016	580-63680-5 10/24/2016	580-63680-6 10/24/2016	Result	Qualifier	Result	Qualifier	Result	Qualifier
Analyte		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Total Petroleum Hydrocarbons (mg/kg)													
TPH-DRO	500	8.3	J	6.2	J	10		24		17.9		8.8	J
TPH-RRO	2,500	71		45		38		43		59		46	
Total Metals (SW-846 6010B/7470A (mg/kg))													
Arsenic (As)	2,500	1.9	J F1	2.9	J	3.6	J	3.3	J	4.4	J	3.3	J
Barium (Ba)	2,500	240		220		250		230		190		250	
Cadmium (Cd)	2,500	1.6	J	2.4		3		2.6		2.6		2.5	
Chromium, Total (Cr)	2,500	30		39		46		37		39		49	
Lead (Pb)	2,500	11	B	9.1	B	9.2	B	8.4	B	9.5	B	9.8	B
Selenium (Se)	2,500	2.9	J F1	4.3	J	4.1	J	3.1	J	4.2	J	3.9	J
Silver (Ag)	2,500	1.2	J	1.8	J	1.7	J	1.3	J	1.8	J	1.9	J
Mercury (Hg)	1000	0.025		0.04		0.037		0.04		0.037		0.039	

State of Hawaii Department of Health Environmental Action Levels, 2016 Update

Red font indicates an exceedance of the regulatory limits.

J Result is less than RL but greater than or equal to the MDL and the concentration is an approximate value.

F1 MS and/or MSD recovery is outside acceptance limits

B Compound was found in the blank and the sample

Appendix C Laboratory Analytical Reports

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-63680-1
Client Project/Site: Central Maui landfill TDSR Sampling

For:
Element Environmental, LLC
98-030 Hekaha Street, Unit 9
Aiea, Hawaii 96701

Attn: Matt Neal



Authorized for release by:
11/9/2016 12:56:26 PM

David Alltucker, Project Manager I
(916)374-4383
david.alltucker@testamericainc.com

LINKS

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results through
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The
Expert**

Visit us at:
www.testamericainc.com

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: Element Environmental, LLC
Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Job ID: 580-63680-1

Laboratory: TestAmerica Seattle

Narrative

**Job Narrative
580-63680-1**

Receipt

The samples were received on 10/26/2016 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

Samples were processed for ISM prior to extraction. Methods 7471 and 8015 (DRO only) were processed prior to drying.

GC Semi VOA

Method(s) 8015B: Surrogate o-Terphenyl recovery for the following sample was outside control limits: MI-CML6 (580-63680-6). Evidence of matrix interference is present; therefore, re-extraction or re-analysis was not performed.

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

Metals

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

General Chemistry

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

Organic Prep

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

Definitions/Glossary

Client: Element Environmental, LLC
Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Qualifiers

GC Semi VOA

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.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

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

Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML1

Lab Sample ID: 580-63680-1

Date Collected: 10/24/16 09:15

Matrix: Solid

Date Received: 10/26/16 10:00

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	71		16	4.6	mg/Kg		11/04/16 12:12	11/07/16 13:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	69		37 - 127				11/04/16 12:12	11/07/16 13:35	1

Method: 6010C - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9	J F1	5.8	0.62	mg/Kg		11/05/16 16:02	11/08/16 18:30	4
Barium	240		0.97	0.087	mg/Kg		11/05/16 16:02	11/08/16 18:30	4
Cadmium	1.6	J	1.9	0.095	mg/Kg		11/05/16 16:02	11/08/16 18:30	4
Chromium	30		2.5	0.36	mg/Kg		11/05/16 16:02	11/08/16 18:30	4
Lead	11	B	2.9	0.19	mg/Kg		11/05/16 16:02	11/08/16 18:30	4
Selenium	2.9	J F1	9.7	0.39	mg/Kg		11/05/16 16:02	11/08/16 18:30	4
Silver	1.2	J	4.9	1.1	mg/Kg		11/05/16 16:02	11/08/16 18:30	4

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.3		0.1	0.1	%			11/01/16 11:48	1
Percent Moisture	11.7		0.1	0.1	%			11/01/16 11:48	1

5

Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML1

Lab Sample ID: 580-63680-1

Date Collected: 10/24/16 09:15

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 88.3

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Diesel Range Organics (>C12-C24)	8.3	J	9.2	4.6	mg/Kg	☼	11/04/16 12:12	11/07/16 21:10	1
HI Residual Range Organics (>C24-C32)	31		18	5.2	mg/Kg	☼	11/04/16 12:12	11/07/16 21:10	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>o-Terphenyl</i>	49		37 - 127				11/04/16 12:12	11/07/16 21:10	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.025		0.013	0.0040	mg/Kg	☼	11/07/16 18:12	11/08/16 06:19	1



Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML2

Lab Sample ID: 580-63680-2

Date Collected: 10/24/16 09:45

Matrix: Solid

Date Received: 10/26/16 10:00

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	45		16	4.6	mg/Kg		11/04/16 12:12	11/07/16 19:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	62		37 - 127				11/04/16 12:12	11/07/16 19:08	1

Method: 6010C - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9	J	5.8	0.62	mg/Kg		11/05/16 16:02	11/08/16 18:52	4
Barium	220		0.97	0.087	mg/Kg		11/05/16 16:02	11/08/16 18:52	4
Cadmium	2.4		1.9	0.095	mg/Kg		11/05/16 16:02	11/08/16 18:52	4
Chromium	39		2.5	0.36	mg/Kg		11/05/16 16:02	11/08/16 18:52	4
Lead	9.1	B	2.9	0.19	mg/Kg		11/05/16 16:02	11/08/16 18:52	4
Selenium	4.3	J	9.7	0.39	mg/Kg		11/05/16 16:02	11/08/16 18:52	4
Silver	1.8	J	4.9	1.1	mg/Kg		11/05/16 16:02	11/08/16 18:52	4

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.9		0.1	0.1	%			11/01/16 11:48	1
Percent Moisture	12.1		0.1	0.1	%			11/01/16 11:48	1

5

Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML2

Lab Sample ID: 580-63680-2

Date Collected: 10/24/16 09:45

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 87.9

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Diesel Range Organics (>C12-C24)	6.2	J	9.4	4.7	mg/Kg	☼	11/04/16 12:12	11/07/16 21:30	1
HI Residual Range Organics (>C24-C32)	20		19	5.3	mg/Kg	☼	11/04/16 12:12	11/07/16 21:30	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>o-Terphenyl</i>	43		37 - 127				11/04/16 12:12	11/07/16 21:30	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.040		0.014	0.0041	mg/Kg	☼	11/07/16 18:12	11/08/16 06:26	1



Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML3

Lab Sample ID: 580-63680-3

Date Collected: 10/24/16 10:00

Matrix: Solid

Date Received: 10/26/16 10:00

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	38		16	4.6	mg/Kg		11/04/16 12:12	11/07/16 19:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	59		37 - 127				11/04/16 12:12	11/07/16 19:28	1

Method: 6010C - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.6	J	5.9	0.63	mg/Kg		11/05/16 16:02	11/08/16 18:56	4
Barium	250		0.99	0.089	mg/Kg		11/05/16 16:02	11/08/16 18:56	4
Cadmium	3.0		2.0	0.097	mg/Kg		11/05/16 16:02	11/08/16 18:56	4
Chromium	46		2.6	0.36	mg/Kg		11/05/16 16:02	11/08/16 18:56	4
Lead	9.2	B	3.0	0.19	mg/Kg		11/05/16 16:02	11/08/16 18:56	4
Selenium	4.1	J	9.9	0.39	mg/Kg		11/05/16 16:02	11/08/16 18:56	4
Silver	1.7	J	4.9	1.1	mg/Kg		11/05/16 16:02	11/08/16 18:56	4

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.5		0.1	0.1	%			11/01/16 11:48	1
Percent Moisture	12.5		0.1	0.1	%			11/01/16 11:48	1

5

Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML3

Lab Sample ID: 580-63680-3

Date Collected: 10/24/16 10:00

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 87.5

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Diesel Range Organics (>C12-C24)	10		9.3	4.6	mg/Kg	☒	11/04/16 12:12	11/07/16 21:51	1
HI Residual Range Organics (>C24-C32)	22		19	5.2	mg/Kg	☒	11/04/16 12:12	11/07/16 21:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	43		37 - 127				11/04/16 12:12	11/07/16 21:51	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.037		0.013	0.0040	mg/Kg	☒	11/07/16 18:12	11/08/16 06:29	1



Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML4

Lab Sample ID: 580-63680-4

Date Collected: 10/24/16 10:25

Matrix: Solid

Date Received: 10/26/16 10:00

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	43		16	4.5	mg/Kg		11/04/16 12:12	11/07/16 20:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	72		37 - 127				11/04/16 12:12	11/07/16 20:09	1

Method: 6010C - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3	J	5.8	0.62	mg/Kg		11/05/16 16:02	11/08/16 19:00	4
Barium	230		0.97	0.088	mg/Kg		11/05/16 16:02	11/08/16 19:00	4
Cadmium	2.6		1.9	0.095	mg/Kg		11/05/16 16:02	11/08/16 19:00	4
Chromium	37		2.5	0.36	mg/Kg		11/05/16 16:02	11/08/16 19:00	4
Lead	8.4	B	2.9	0.19	mg/Kg		11/05/16 16:02	11/08/16 19:00	4
Selenium	3.1	J	9.7	0.39	mg/Kg		11/05/16 16:02	11/08/16 19:00	4
Silver	1.3	J	4.9	1.1	mg/Kg		11/05/16 16:02	11/08/16 19:00	4

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.2		0.1	0.1	%			11/01/16 11:48	1
Percent Moisture	13.8		0.1	0.1	%			11/01/16 11:48	1

5

Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML4

Lab Sample ID: 580-63680-4

Date Collected: 10/24/16 10:25

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 86.2

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Diesel Range Organics (>C12-C24)	24		9.6	4.8	mg/Kg	☒	11/04/16 12:12	11/07/16 22:11	1
HI Residual Range Organics (>C24-C32)	26		19	5.4	mg/Kg	☒	11/04/16 12:12	11/07/16 22:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	37		37 - 127				11/04/16 12:12	11/07/16 22:11	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.040		0.014	0.0041	mg/Kg	☒	11/07/16 18:12	11/08/16 06:31	1



Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML5

Lab Sample ID: 580-63680-5

Date Collected: 10/24/16 10:55

Matrix: Solid

Date Received: 10/26/16 10:00

Method: 8015B - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	59		16	4.6	mg/Kg		11/04/16 12:12	11/07/16 20:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	74		37 - 127				11/04/16 12:12	11/07/16 20:29	1

Method: 6010C - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.4	J	5.8	0.62	mg/Kg		11/05/16 16:02	11/08/16 19:03	4
Barium	190		0.97	0.088	mg/Kg		11/05/16 16:02	11/08/16 19:03	4
Cadmium	2.6		1.9	0.095	mg/Kg		11/05/16 16:02	11/08/16 19:03	4
Chromium	39		2.5	0.36	mg/Kg		11/05/16 16:02	11/08/16 19:03	4
Lead	9.5	B	2.9	0.19	mg/Kg		11/05/16 16:02	11/08/16 19:03	4
Selenium	4.2	J	9.7	0.39	mg/Kg		11/05/16 16:02	11/08/16 19:03	4
Silver	1.8	J	4.9	1.1	mg/Kg		11/05/16 16:02	11/08/16 19:03	4

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.9		0.1	0.1	%			11/01/16 11:48	1
Percent Moisture	14.1		0.1	0.1	%			11/01/16 11:48	1

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Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML5

Lab Sample ID: 580-63680-5

Date Collected: 10/24/16 10:55

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 85.9

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Diesel Range Organics (>C12-C24)	11		9.0	4.5	mg/Kg	☼	11/04/16 12:12	11/07/16 22:31	1
HI Residual Range Organics (>C24-C32)	16	J	18	5.1	mg/Kg	☼	11/04/16 12:12	11/07/16 22:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	40		37 - 127	11/04/16 12:12	11/07/16 22:31	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.037		0.013	0.0040	mg/Kg	☼	11/07/16 18:12	11/08/16 06:33	1



Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML6

Lab Sample ID: 580-63680-6

Date Collected: 10/24/16 11:15

Matrix: Solid

Date Received: 10/26/16 10:00

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Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Residual Range Organics (>C24-C32)	46		16	4.5	mg/Kg		11/04/16 12:12	11/07/16 20:50	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>o-Terphenyl</i>	70		37 - 127				11/04/16 12:12	11/07/16 20:50	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3	J	5.8	0.62	mg/Kg		11/05/16 16:02	11/08/16 19:07	4
Barium	250		0.96	0.086	mg/Kg		11/05/16 16:02	11/08/16 19:07	4
Cadmium	2.5		1.9	0.094	mg/Kg		11/05/16 16:02	11/08/16 19:07	4
Chromium	49		2.5	0.35	mg/Kg		11/05/16 16:02	11/08/16 19:07	4
Lead	9.8	B	2.9	0.18	mg/Kg		11/05/16 16:02	11/08/16 19:07	4
Selenium	3.9	J	9.6	0.38	mg/Kg		11/05/16 16:02	11/08/16 19:07	4
Silver	1.9	J	4.8	1.1	mg/Kg		11/05/16 16:02	11/08/16 19:07	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.1		0.1	0.1	%			11/01/16 11:48	1
Percent Moisture	12.9		0.1	0.1	%			11/01/16 11:48	1

Client Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML6

Lab Sample ID: 580-63680-6

Date Collected: 10/24/16 11:15

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 87.1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HI Diesel Range Organics (>C12-C24)	8.8	J	9.0	4.5	mg/Kg	☼	11/04/16 12:12	11/07/16 22:51	1
HI Residual Range Organics (>C24-C32)	9.0	J	18	5.1	mg/Kg	☼	11/04/16 12:12	11/07/16 22:51	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>o-Terphenyl</i>	36	X	37 - 127				11/04/16 12:12	11/07/16 22:51	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.039		0.013	0.0040	mg/Kg	☼	11/07/16 18:12	11/08/16 06:40	1



QC Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 580-231604/1-A						Client Sample ID: Method Blank				
Matrix: Solid						Prep Type: Total/NA				
Analysis Batch: 231755						Prep Batch: 231604				
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
HI Diesel Range Organics (>C12-C24)	ND		8.3	4.1	mg/Kg		11/04/16 12:12	11/07/16 12:34	1	
HI Residual Range Organics (>C24-C32)	ND		17	4.7	mg/Kg		11/04/16 12:12	11/07/16 12:34	1	
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac	
<i>o</i> -Terphenyl	85		37 - 127				11/04/16 12:12	11/07/16 12:34	1	

Lab Sample ID: LCS 580-231604/2-A						Client Sample ID: Lab Control Sample				
Matrix: Solid						Prep Type: Total/NA				
Analysis Batch: 231755						Prep Batch: 231604				
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.		
HI Diesel Range Organics (>C12-C24)	168	161		mg/Kg		96	62 - 118			
HI Residual Range Organics (>C24-C32)	168	187		mg/Kg		112	77 - 144			
Surrogate	LCS %Recovery	LCS Qualifier	Limits							
<i>o</i> -Terphenyl	98		37 - 127							

Lab Sample ID: LCSD 580-231604/3-A						Client Sample ID: Lab Control Sample Dup				
Matrix: Solid						Prep Type: Total/NA				
Analysis Batch: 231755						Prep Batch: 231604				
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
HI Diesel Range Organics (>C12-C24)	168	150		mg/Kg		89	62 - 118	7	16	
HI Residual Range Organics (>C24-C32)	168	176		mg/Kg		105	77 - 144	6	16	
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits							
<i>o</i> -Terphenyl	94		37 - 127							

Lab Sample ID: 580-63680-1 MS						Client Sample ID: MI-CML1				
Matrix: Solid						Prep Type: Total/NA				
Analysis Batch: 231755						Prep Batch: 231604				
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
HI Diesel Range Organics (>C12-C24)	8.3	J	164	133		mg/Kg		76	62 - 118	
HI Residual Range Organics (>C24-C32)	31		164	190		mg/Kg		97	77 - 144	
Surrogate	MS %Recovery	MS Qualifier	Limits							
<i>o</i> -Terphenyl	77		37 - 127							

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 580-63680-1 MSD Matrix: Solid Analysis Batch: 231755							Client Sample ID: MI-CML1 Prep Type: Total/NA Prep Batch: 231604					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit	
HI Diesel Range Organics (>C12-C24)	8.3	J	165	146		mg/Kg		84	62 - 118	10	16	
HI Residual Range Organics (>C24-C32)	31		165	214		mg/Kg		111	77 - 144	12	16	
Surrogate	MSD %Recovery	MSD Qualifier	Limits									
<i>o</i> -Terphenyl	82		37 - 127									

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 580-231701/9-A Matrix: Solid Analysis Batch: 231916				Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 231701							
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Arsenic	ND		3.0	0.32	mg/Kg		11/05/16 16:02	11/08/16 18:21	1		
Barium	ND		0.50	0.045	mg/Kg		11/05/16 16:02	11/08/16 18:21	1		
Cadmium	ND		1.0	0.049	mg/Kg		11/05/16 16:02	11/08/16 18:21	1		
Chromium	ND		1.3	0.18	mg/Kg		11/05/16 16:02	11/08/16 18:21	1		
Lead	0.105	J	1.5	0.096	mg/Kg		11/05/16 16:02	11/08/16 18:21	1		
Selenium	ND		5.0	0.20	mg/Kg		11/05/16 16:02	11/08/16 18:21	1		
Silver	ND		2.5	0.56	mg/Kg		11/05/16 16:02	11/08/16 18:21	1		

Lab Sample ID: LCS 580-231701/10-A Matrix: Solid Analysis Batch: 231916				Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: 231701							
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits				
Arsenic	200	198		mg/Kg		99	80 - 120				
Barium	200	216		mg/Kg		108	80 - 120				
Cadmium	5.00	4.96		mg/Kg		99	80 - 120				
Chromium	20.0	18.9		mg/Kg		94	80 - 120				
Lead	50.0	50.4		mg/Kg		101	80 - 120				
Selenium	200	198		mg/Kg		99	80 - 120				
Silver	30.0	27.9		mg/Kg		93	80 - 120				

Lab Sample ID: LCSD 580-231701/11-A Matrix: Solid Analysis Batch: 231916				Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA Prep Batch: 231701							
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit		
Arsenic	200	200		mg/Kg		100	80 - 120	1	20		
Barium	200	218		mg/Kg		109	80 - 120	1	20		
Cadmium	5.00	5.01		mg/Kg		100	80 - 120	1	20		
Chromium	20.0	19.1		mg/Kg		95	80 - 120	1	20		
Lead	50.0	50.6		mg/Kg		101	80 - 120	0	20		
Selenium	200	200		mg/Kg		100	80 - 120	1	20		
Silver	30.0	28.1		mg/Kg		94	80 - 120	1	20		

TestAmerica Seattle

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

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

Lab Sample ID: 580-63680-1 MS
Matrix: Solid
Analysis Batch: 231916

Client Sample ID: MI-CML1
Prep Type: Total/NA
Prep Batch: 231701
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	1.9	J F1	97.2	72.8	F1	mg/Kg		73	80 - 120
Barium	240		97.2	356		mg/Kg		114	80 - 120
Cadmium	1.6	J	2.43	3.90		mg/Kg		94	80 - 120
Chromium	30		9.72	38.7		mg/Kg		92	80 - 120
Lead	11	B	24.3	34.4		mg/Kg		95	80 - 120
Selenium	2.9	J F1	97.2	59.9	F1	mg/Kg		59	80 - 120
Silver	1.2	J	14.6	14.5		mg/Kg		92	80 - 120

Lab Sample ID: 580-63680-1 MSD
Matrix: Solid
Analysis Batch: 231916

Client Sample ID: MI-CML1
Prep Type: Total/NA
Prep Batch: 231701
 %Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	1.9	J F1	97.6	73.3	F1	mg/Kg		73	80 - 120	1	20
Barium	240		97.6	350		mg/Kg		108	80 - 120	2	20
Cadmium	1.6	J	2.44	3.98		mg/Kg		98	80 - 120	2	20
Chromium	30		9.76	38.8		mg/Kg		93	80 - 120	0	20
Lead	11	B	24.4	34.5		mg/Kg		96	80 - 120	0	20
Selenium	2.9	J F1	97.6	57.8	F1	mg/Kg		56	80 - 120	4	20
Silver	1.2	J	14.6	14.4		mg/Kg		90	80 - 120	1	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-231807/9-A
Matrix: Solid
Analysis Batch: 231825

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 231807

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.012	0.0036	mg/Kg		11/07/16 18:12	11/08/16 06:13	1

Lab Sample ID: LCS 580-231807/10-A
Matrix: Solid
Analysis Batch: 231825

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 231807
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.100	0.0937		mg/Kg		94	80 - 120

Lab Sample ID: LCSD 580-231807/11-A
Matrix: Solid
Analysis Batch: 231825

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 231807
 %Rec. RPD

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.100	0.0948		mg/Kg		95	80 - 120	1	20

TestAmerica Seattle

QC Sample Results

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

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

Lab Sample ID: 580-63680-1 MS								Client Sample ID: MI-CML1			
Matrix: Solid								Prep Type: Total/NA			
Analysis Batch: 231825								Prep Batch: 231807			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	%Rec.	
Mercury	0.025		0.109	0.135		mg/Kg	☒	101	80 - 120		

Lab Sample ID: 580-63680-1 MSD								Client Sample ID: MI-CML1			
Matrix: Solid								Prep Type: Total/NA			
Analysis Batch: 231825								Prep Batch: 231807			
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.025		0.110	0.140		mg/Kg	☒	105	80 - 120	4	20



Lab Chronicle

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML1

Lab Sample ID: 580-63680-1

Date Collected: 10/24/16 09:15

Matrix: Solid

Date Received: 10/26/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 13:35	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3050B			231701	11/05/16 16:02	PAB	TAL SEA
Total/NA	Analysis	6010C		4	231916	11/08/16 18:30	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	231250	11/01/16 11:48	DCV	TAL SEA

Client Sample ID: MI-CML1

Lab Sample ID: 580-63680-1

Date Collected: 10/24/16 09:15

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 21:10	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	7471A			231807	11/07/16 18:12	PAB	TAL SEA
Total/NA	Analysis	7471A		1	231825	11/08/16 06:19	FCW	TAL SEA

Client Sample ID: MI-CML2

Lab Sample ID: 580-63680-2

Date Collected: 10/24/16 09:45

Matrix: Solid

Date Received: 10/26/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 19:08	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3050B			231701	11/05/16 16:02	PAB	TAL SEA
Total/NA	Analysis	6010C		4	231916	11/08/16 18:52	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	231250	11/01/16 11:48	DCV	TAL SEA

Client Sample ID: MI-CML2

Lab Sample ID: 580-63680-2

Date Collected: 10/24/16 09:45

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 21:30	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	7471A			231807	11/07/16 18:12	PAB	TAL SEA
Total/NA	Analysis	7471A		1	231825	11/08/16 06:26	FCW	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML3

Lab Sample ID: 580-63680-3

Date Collected: 10/24/16 10:00

Matrix: Solid

Date Received: 10/26/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 19:28	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3050B			231701	11/05/16 16:02	PAB	TAL SEA
Total/NA	Analysis	6010C		4	231916	11/08/16 18:56	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	231250	11/01/16 11:48	DCV	TAL SEA

Client Sample ID: MI-CML3

Lab Sample ID: 580-63680-3

Date Collected: 10/24/16 10:00

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 21:51	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	7471A			231807	11/07/16 18:12	PAB	TAL SEA
Total/NA	Analysis	7471A		1	231825	11/08/16 06:29	FCW	TAL SEA

Client Sample ID: MI-CML4

Lab Sample ID: 580-63680-4

Date Collected: 10/24/16 10:25

Matrix: Solid

Date Received: 10/26/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 20:09	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3050B			231701	11/05/16 16:02	PAB	TAL SEA
Total/NA	Analysis	6010C		4	231916	11/08/16 19:00	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	231250	11/01/16 11:48	DCV	TAL SEA

Client Sample ID: MI-CML4

Lab Sample ID: 580-63680-4

Date Collected: 10/24/16 10:25

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 86.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 22:11	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	7471A			231807	11/07/16 18:12	PAB	TAL SEA
Total/NA	Analysis	7471A		1	231825	11/08/16 06:31	FCW	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: Element Environmental, LLC
 Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Client Sample ID: MI-CML5

Lab Sample ID: 580-63680-5

Date Collected: 10/24/16 10:55

Matrix: Solid

Date Received: 10/26/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 20:29	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3050B			231701	11/05/16 16:02	PAB	TAL SEA
Total/NA	Analysis	6010C		4	231916	11/08/16 19:03	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	231250	11/01/16 11:48	DCV	TAL SEA

Client Sample ID: MI-CML5

Lab Sample ID: 580-63680-5

Date Collected: 10/24/16 10:55

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 85.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 22:31	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	7471A			231807	11/07/16 18:12	PAB	TAL SEA
Total/NA	Analysis	7471A		1	231825	11/08/16 06:33	FCW	TAL SEA

Client Sample ID: MI-CML6

Lab Sample ID: 580-63680-6

Date Collected: 10/24/16 11:15

Matrix: Solid

Date Received: 10/26/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 20:50	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3050B			231701	11/05/16 16:02	PAB	TAL SEA
Total/NA	Analysis	6010C		4	231916	11/08/16 19:07	HJM	TAL SEA
Total/NA	Analysis	D 2216		1	231250	11/01/16 11:48	DCV	TAL SEA

Client Sample ID: MI-CML6

Lab Sample ID: 580-63680-6

Date Collected: 10/24/16 11:15

Matrix: Solid

Date Received: 10/26/16 10:00

Percent Solids: 87.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	3546			231604	11/04/16 12:12	MMM	TAL SEA
Total/NA	Analysis	8015B		1	231755	11/07/16 22:51	KZ1	TAL SEA
Total/NA	ISM Prep	Increment,Prep			231260	11/01/16 12:35	HJM	TAL SEA
Total/NA	Prep	7471A			231807	11/07/16 18:12	PAB	TAL SEA
Total/NA	Analysis	7471A		1	231825	11/08/16 06:40	FCW	TAL SEA

TestAmerica Seattle

Lab Chronicle

Client: Element Environmental, LLC
Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Certification Summary

Client: Element Environmental, LLC
Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Laboratory: TestAmerica Seattle

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-17
California	State Program	9	2901	01-31-18
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-17

Sample Summary

Client: Element Environmental, LLC
Project/Site: Central Maui landfill TDSR Sampling

TestAmerica Job ID: 580-63680-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-63680-1	MI-CML1	Solid	10/24/16 09:15	10/26/16 10:00
580-63680-2	MI-CML2	Solid	10/24/16 09:45	10/26/16 10:00
580-63680-3	MI-CML3	Solid	10/24/16 10:00	10/26/16 10:00
580-63680-4	MI-CML4	Solid	10/24/16 10:25	10/26/16 10:00
580-63680-5	MI-CML5	Solid	10/24/16 10:55	10/26/16 10:00
580-63680-6	MI-CML6	Solid	10/24/16 11:15	10/26/16 10:00



TA Quote # 158010443
Honolulu
4429 Malaai Street, #104 • Honolulu, HI 96818
808-486-LABS (5227) • Fax 808-486-2456

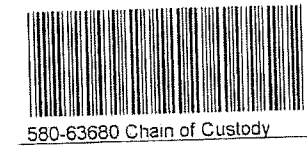
LABORATORY USE ONLY
LAB JOB NO. _____

DOD QSM Required?
 Report to MDL with J Flag values?

Chain of Custody / Analysis Request Form

Report to: <u>Element Env</u>	Project identification		Indicate analyses requested			
Company name: <u>Matt Neal</u>	Job name: <u>Central Maui Landfill TDSR</u>	Job number:	PCRA metals - Total	TPH - oil	TPH - diesel	
Address: <u>98-030 Hekaha Street</u>	PO number:					
City: <u>Area HI 96701</u>	Contact email address: <u>mneal@ezh.com</u>	Date results needed: <u>std TAT</u>				
Phone: <u>808 479-6073</u>	Fax:					
Sampler: <u>M. Neal</u>	# samples in shipment: <u>6</u>					

Item no.	Client sample ID	Multi Incremental Composite	Grab	Matrix							Preservation method	Sampling		No. of containers	Laboratory ID no.			
				Water	Soil	Wastewater	Drinking water	Liquid	Solid	Oil		Other	Date			Time		
1	MI-CML1	X		X								10/24/10	0915	1	X	X	X	
2	MI-CML2	X		X									0945	1	X	X	X	
3	MI-CML3	X		X									1000	1	X	X	X	
4	MI-CML4	X		X									1025	1	X	X	X	
5	MI-CML5	X		X									1055	1	X	X	X	
6	MI-CML6	X		X									1115	1	X	X	X	
7																		
8																		
9																		
10																		



TB Cooler SW Corl. 7 Uncl. 0
Cooler Dsc 1g 61W @ Lab
Wet/Packs Packing Other
2 Fed P.O. w/c/s

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Company / Agency affiliation	Date / time received	Condition noted
<u>Matt Neal</u>	<u>10/25/10 0708</u>	<u>Hand</u>	<u>Reed B. Idemans</u>	<u>TA Hon</u>	<u>10/25/10 0708</u>	<u>no ice 11.1°c / 11.8°c</u>
<u>Reed B. Idemans</u>	<u>10/25/10 1400</u>	<u>Feet Ex</u>	<u>B. Stahl / B. Gull</u>	<u>SEA TA</u>	<u>10.26.16 / 1000</u>	<u>IR-81</u>

Comments:

Please check one:
 Dispose by lab
 Return to client
 Archive (fee may apply)

Login Sample Receipt Checklist

Client: Element Environmental, LLC

Job Number: 580-63680-1

Login Number: 63680

List Number: 1

Creator: Torres, Terri L

List Source: TestAmerica Seattle

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

