TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Austin
14050 Summit Drive, Suite A100
Austin, TX 78728
Tel: 512-244-0855

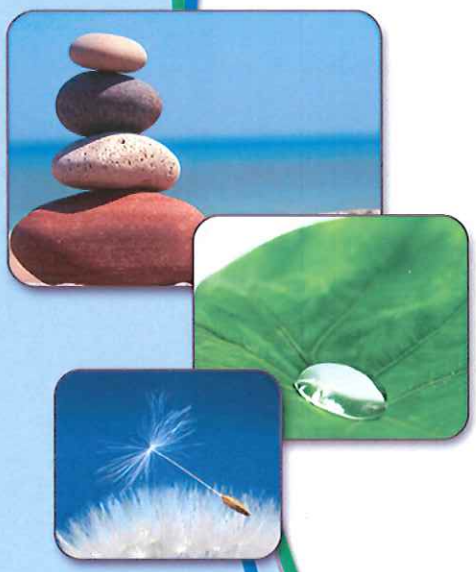
TestAmerica Job ID: AVF0053
Client Project/Site: 583-01
Client Project Description: Al-Kel

For:
TITAN Engineering, Inc.
2801 Network Blvd., Suite 200
Frisco, TX 75304

Attn: Brian Sims

Authorized for release by:
6/22/2012 7:08:09 AM

Neal Salcher
Project Manager
Neal.Salcher@testamericainc.com



LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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

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b ID: AVF0053

Laboratory: TestAmerica Austin

Narrative

583-01

This report contains results for the samples received under chain-of-custody by TestAmerica Laboratories, Inc. 5/18/2012 8:45:00 AM .

These samples are associated with your **Al-Kel** project.

All samples were received in good condition and within temperature requirements.

All applicable quality control procedures met method specified acceptance criteria except where flagged on the result pages, noted on the C-O-C Addendum, and/or detailed in the case narrative.

If you should have any questions, please feel free to contact me at neal.salcher@testamericainc.com or (512) 310-5215.

Note that if this report contains tests performed for the following methods, the associated method deviations are applicable.
EPA 410.4, COD: Laboratory uses different analytical wavelength as specified by instrument manufacturer.
EPA 340.2, Fluoride: Preliminary Bellack distillation not performed.
EPA 624: The laboratory uses a different desorb time and purge volume than stated in the method.
Iowa OA1: Benzene, toluene, ethylbenzene and xylenes (BTEX) are not analyzed along with the Gasoline Range Organics if client does not require BTEX.
EPA TO-12: Samples not analyzed in duplicate.
A TO-14A and TO-15: Zero humidified nitrogen is used in place of air for method blanks.
583-01

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Client Sample ID: SB-6 1 — Lab Sample ID: AVF0053-01

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Lead	0.00390		0.00300		mg/L	1.00		6010B	SPLP

Client Sample ID: SB-7 1 — Lab Sample ID: AVF0053-02

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Lead	0.00350		0.00300		mg/L	1.00		6010B	SPLP

Client Sample ID: TMW-3 - 1 — Lab Sample ID: AVF0053-03

No Detections

Sample Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
AVF0053-01	SB-6 1	Solid	05/17/12 11:15	05/18/12 08:4
AVF0053-02	SB-7 1	Solid	05/17/12 11:50	05/18/12 08:45
AVF0053-03	TMW-3 - 1	Solid	05/17/12 11:50	05/18/12 08:45

Client Sample Results

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Client Sample ID: SB-6 1

Lab Sample ID: AVF0053-01

Date Collected: 05/17/12 11:15

Matrix: Solid

Date Received: 05/18/12 08:45

Method: 6010B - SPLP Metals by SW846 - SPLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100	mg/L		06/11/12 09:46	06/14/12 14:53	1.00
Cadmium	ND		0.00200	mg/L		06/11/12 09:46	06/14/12 14:53	1.00
Lead	**0.00390**		0.00300	mg/L		06/11/12 09:46	06/14/12 14:53	1.00

Client Sample Results

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Client Sample ID: SB-7 1

Date Collected: 05/17/12 11:50
Date Received: 05/18/12 08:45

Lab Sample ID: AVF0053-02

Matrix: So

Method: 6010B - SPLP Metals by SW846 - SPLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100	mg/L		06/11/12 09:46	06/14/12 15:47	1.00
Cadmium	ND		0.00200	mg/L		06/11/12 09:46	06/14/12 15:47	1.00
Lead	**0.00350**		0.00300	mg/L		06/11/12 09:46	06/14/12 15:47	1.00

Client Sample Results

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Client Sample ID: TMW-3 - 1

Lab Sample ID: AVF0053-03

Date Collected: 05/17/12 11:50

Matrix: Solid

Date Received: 05/18/12 08:45

Method: 6010B - SPLP Metals by SW846 - SPLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100	mg/L		06/18/12 17:52	06/19/12 21:25	1.00
Cadmium	ND		0.00200	mg/L		06/18/12 17:52	06/19/12 21:25	1.00
Lead	ND		0.00300	mg/L		06/18/12 17:52	06/19/12 21:25	1.00

QC Association Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Metals

Pre prep Batch: 12F0084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AVF0053-01	SB-6 1	SPLP	Solid	1312 SPLP	
AVF0053-02	SB-7 1	SPLP	Solid	1312 SPLP	

Pre prep Batch: 12F0169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AVF0053-03	TMW-3 - 1	SPLP	Solid	1312 SPLP	

Analysis Batch: V000373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12F0108-BLK1	Method Blank	SPLP	Solid	6010B	12F0108_P
12F0108-BS1	Lab Control Sample	SPLP	Solid	6010B	12F0108_P
12F0108-MS1	SB-6 1	SPLP	Solid	6010B	12F0108_P
12F0108-MSD1	SB-6 1	SPLP	Solid	6010B	12F0108_P
12F0108-PS1	SB-6 1	SPLP	Solid	6010B	12F0108_P
AVF0053-01	SB-6 1	SPLP	Solid	6010B	12F0108_P
AVF0053-02	SB-7 1	SPLP	Solid	6010B	12F0108_P

Analysis Batch: V000389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12F0185-BLK1	Method Blank	SPLP	Solid	6010B	12F0185_P
12F0185-BS1	Lab Control Sample	SPLP	Solid	6010B	12F0185_P
12F0185-MS1	TMW-3 - 1	SPLP	Solid	6010B	12F0185_P
12F0185-MSD1	TMW-3 - 1	SPLP	Solid	6010B	12F0185_P
12F0185-PS1	TMW-3 - 1	SPLP	Solid	6010B	12F0185
AVF0053-03	TMW-3 - 1	SPLP	Solid	6010B	12F0185_P

Prep Batch: 12F0108_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12F0108-BLK1	Method Blank	SPLP	Solid	1311/3010	
12F0108-BS1	Lab Control Sample	SPLP	Solid	1311/3010	
12F0108-MS1	SB-6 1	SPLP	Solid	1311/3010	
12F0108-MSD1	SB-6 1	SPLP	Solid	1311/3010	
12F0108-PS1	SB-6 1	SPLP	Solid	1311/3010	
AVF0053-01	SB-6 1	SPLP	Solid	1311/3010	12F0084
AVF0053-02	SB-7 1	SPLP	Solid	1311/3010	12F0084

Prep Batch: 12F0185_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12F0185-BLK1	Method Blank	SPLP	Solid	1312 SPLP	
12F0185-BS1	Lab Control Sample	SPLP	Solid	1312 SPLP	
12F0185-MS1	TMW-3 - 1	SPLP	Solid	1312 SPLP	
12F0185-MSD1	TMW-3 - 1	SPLP	Solid	1312 SPLP	
12F0185-PS1	TMW-3 - 1	SPLP	Solid	1312 SPLP	
AVF0053-03	TMW-3 - 1	SPLP	Solid	1312 SPLP	12F0169

QC Sample Results

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Method: 6010B - SPLP Metals by SW846

Lab Sample ID: 12F0108-BLK1
Matrix: Solid
Analysis Batch: V000373

Client Sample ID: Method Blank
Prep Type: SPLP
Prep Batch: 12F0108_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100	mg/L		06/11/12 09:46	06/14/12 14:38	1.00
Cadmium	ND		0.00200	mg/L		06/11/12 09:46	06/14/12 14:38	1.00
Lead	ND		0.00300	mg/L		06/11/12 09:46	06/14/12 14:38	1.00

Lab Sample ID: 12F0108-BS1
Matrix: Solid
Analysis Batch: V000373

Client Sample ID: Lab Control Sample
Prep Type: SPLP
Prep Batch: 12F0108_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.5000	0.527		mg/L		105	80 - 120
Cadmium	0.5000	0.515		mg/L		103	80 - 120
Lead	0.5000	0.529		mg/L		106	80 - 120

Lab Sample ID: 12F0108-MS1
Matrix: Solid
Analysis Batch: V000373

Client Sample ID: SB-6 1
Prep Type: SPLP
Prep Batch: 12F0108_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		0.5000	0.526		mg/L		104	75 - 125
Cadmium	ND		0.5000	0.504		mg/L		101	75 - 125
Lead	0.00390		0.5000	0.520		mg/L		103	75 - 125

Lab Sample ID: 12F0108-MSD1
Matrix: Solid
Analysis Batch: V000373

Client Sample ID: SB-6 1
Prep Type: SPLP
Prep Batch: 12F0108_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		0.5000	0.526		mg/L		104	75 - 125	0.1	20
Cadmium	ND		0.5000	0.506		mg/L		101	75 - 125	0.3	20
Lead	0.00390		0.5000	0.521		mg/L		104	75 - 125	0.3	20

Lab Sample ID: 12F0185-BLK1
Matrix: Solid
Analysis Batch: V000389

Client Sample ID: Method Blank
Prep Type: SPLP
Prep Batch: 12F0185_P

Analyte	Blank Result	Blank Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0100	mg/L		06/18/12 17:52	06/19/12 21:10	1.00
Cadmium	ND		0.00200	mg/L		06/18/12 17:52	06/19/12 21:10	1.00
Lead	ND		0.00300	mg/L		06/18/12 17:52	06/19/12 21:10	1.00

Lab Sample ID: 12F0185-BS1
Matrix: Solid
Analysis Batch: V000389

Client Sample ID: Lab Control Sample
Prep Type: SPLP
Prep Batch: 12F0185_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.5000	0.516		mg/L		103	80 - 120
Cadmium	0.5000	0.524		mg/L		105	80 - 120
Lead	0.5000	0.527		mg/L		105	80 - 120

Method: 6010B - SPLP Metals by SW846 (Continued)

Lab Sample ID: 12F0185-MS1
Matrix: Solid
Analysis Batch: V000389

Client Sample ID: TMW-3 - 1
Prep Type: SPLP
Prep Batch: 12F0185_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	ND		0.5000	0.525		mg/L		105	75 - 125		
Cadmium	ND		0.5000	0.527		mg/L		105	75 - 125		
Lead	ND		0.5000	0.531		mg/L		106	75 - 125		

Lab Sample ID: 12F0185-MSD1
Matrix: Solid
Analysis Batch: V000389

Client Sample ID: TMW-3 - 1
Prep Type: SPLP
Prep Batch: 12F0185_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		0.5000	0.530		mg/L		106	75 - 125	1	20
Cadmium	ND		0.5000	0.534		mg/L		107	75 - 125	1	20
Lead	ND		0.5000	0.539		mg/L		108	75 - 125	1	20

Lab Chronicle

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Client Sample ID: SB-6 1

Lab Sample ID: AVF0053-01

Date Collected: 05/17/12 11:15
Matrix: Solid
Date Received: 05/18/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP	Pre prep	1312 SPLP		1.00	12F0084	06/08/12 14:14	SFP	TAL AUS
SPLP	Prep	1311/3010		1.00	12F0108_P	06/11/12 09:46	GWS	TAL AUS
SPLP	Analysis	6010B		1.00	V000373	06/14/12 14:53	SFP	TAL AUS

Client Sample ID: SB-7 1

Lab Sample ID: AVF0053-02

Date Collected: 05/17/12 11:50
Matrix: Solid
Date Received: 05/18/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP	Pre prep	1312 SPLP		1.00	12F0084	06/08/12 14:14	SFP	TAL AUS
SPLP	Prep	1311/3010		1.00	12F0108_P	06/11/12 09:46	GWS	TAL AUS
SPLP	Analysis	6010B		1.00	V000373	06/14/12 15:47	SFP	TAL AUS

Client Sample ID: TMW-3 - 1

Lab Sample ID: AVF0053-03

Date Collected: 05/17/12 11:50
Matrix: Solid
Date Received: 05/18/12 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP	Pre prep	1312 SPLP		1.00	12F0169	06/16/12 09:44	SFP	TAL AUS
SPLP	Prep	1312 SPLP		1.00	12F0185_P	06/18/12 17:52	GWS	TAL AUS
SPLP	Analysis	6010B		1.00	V000389	06/19/12 21:25	SFP	TAL AUS

Laboratory References:

TAL AUS = TestAmerica Austin, 14050 Summit Drive, Suite A100, Austin, TX 78728, TEL 512-244-0855

Method Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Method	Method Description	Protocol	Laboratory
6010B	SPLP Metals by SW846		TAL AUS

Protocol References:

Laboratory References:

TAL AUS = TestAmerica Austin, 14050 Summit Drive, Suite A100, Austin, TX 78728, TEL 512-244-0855

Certification Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVF0053

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Austin	Arkansas DEQ	State Program	6	88-0685
TestAmerica Austin	California	State Program	9	2411
TestAmerica Austin	Kansas	NELAC	7	E-10165
TestAmerica Austin	Louisiana	NELAC	6	30736
TestAmerica Austin	North Carolina DENR	State Program	4	302
TestAmerica Austin	Oklahoma	State Program	6	8720
TestAmerica Austin	Pennsylvania	NELAC	3	68-04085
TestAmerica Austin	South Carolina	State Program	4	82003
TestAmerica Austin	Texas	NELAC	6	T104704217
TestAmerica Austin	USDA	Federal		P330-08-00046
TestAmerica Austin	Virginia	NELAC	3	460219

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

AUF0053

TestAmerica – Austin Laboratory Chain of Custody Addendum **Work Order Number** ~~AUE0225~~

RECEIVED BY: LT CLIENT: TITAN Eng.

DATE/TIME RECEIVED: 5-18-12 / 0845 PROJECT: ~~TITAN~~ Al-Kel

UNPACKED DATE/TIME: 5-18-12 / 1020 LOGIN BY: LOGIN REVIEWED BY:

Number of Shipping Containers Received with COC: 2

VOC SAMPLES: ☐ YES **(IF YES, GO TO SECTIONS 1.0, 2.0, 6.0, & 7.0)**

1.0 CONTAINERS EXAMINED UPON RECEIPT: LT

Container Sealed: ☑ YES ☐ NO Custody Seal Present: ☑ YES ☐ NO Custody Seal Signed/Dated: ☑ YES ☐ NO

If seal not intact list air bill number of that container(s):

2.0 VOC CANISTERS EXAMINED UPON RECEIPT:

Canister Valves Closed: ☐ YES ☐ NO Canister Valves Capped: ☐ YES ☐ NO

Sample IDs match COC: ☐ YES ☐ NO Other Equipment Received: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO Can Size: ☐ 6L ☐ 1L Other:

Packing Material Used: (circle) None / Absorbent / Paper / Bubble Wrap

Samples received in Tedlar bags ☐ N/A ☐ YES ☐ NO

3.0 CONDITION OF BOTTLES/CONTAINERS **VERIFIED BY:** LT

Sample IDs match COC: ☑ YES ☐ NO Bottles received intact: ☑ YES ☐ NO

See additional discrepancies/comments section: ☐ YES ☑ NO Samples received from USDA restricted area: ☐ YES ☑ NO

Chain-of-Custody form properly maintained: ☑ YES ☐ NO VOA trip blanks included: 4 ☐ N/A ☑ YES ☐ NO

4.0 SAMPLE TEMPERATURE UPON RECEIPT BY: LT **IR THERMOMETER #:** ☑ P5 ☐ P7

Container(s) temperature: TB = Temp. Blank and/or SC = Sample Container CF = Correction Factor *[acceptable tolerance ≤6°C]*

TB ☑ SC ☐ Initial 4.6°C CF -0.3	TB ☐ SC ☑ Initial 5.2°C CF -0.3	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF
Final 4.3°C	Final 4.9°C	Final	Final	Final	Final	Final	Final

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____ OK to analyze samples: ☐ YES ☐ NO

5.0 PRESERVATION CHECKS

PRESERVATION OF SAMPLES REQUIRED: ☑ N/A ☐ YES ☑ VOA Samples **VERIFIED BY:** LT

NOTE: pH CHECK OF SAMPLES PERFORMED AT TIME OF ANALYSIS BY BENCH ANALYST

pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Cyanide samples checked for sulfides: ☐ YES ☐ NO

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Chlorine checked per specification (EPA 335.x & N.C.) ☐ YES ☐ NO Free chlorine present: ☐ YES ☐ NO

If preservation is outside acceptable limit, PM notified (_____PM) Date/Time: _____

Volatile samples filled completely: ☑ YES ☐ NO [if no, list ID and approx. amt. of headspace (>6mm) in Comments Section 7.0]

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #:

Hand-delivered Carrier: Date: Time:

7.0 OTHER COMMENTS:

8.0 CORRECTIVE ACTION:

Client's Name: Informed verbally on: By:

Client's Name: Informed verbally on: By:

Sample(s) processed "as is" comments:

Samples(s) on hold until: If released, notify:

Project Management Login Review: Date: 5/21/12

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE Revised 07/26/11

59910

Chain of Custody Record

Color - 2 of 2 AUF0053 ~~AUE0225~~

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

6/22/2012

TAL-4149 (1007)

Client: TITAN Eng	Project Manager: Brian Sims	Date: 5-17-11	Page 1 of 2
Address: 2801 Network Blvd Ste 200	Telephone Number (Area Code)/Fax Number: 469 365 1134	Lab Location	Analysis
City: Frisco; State: TX; Zip Code: 75034	Site Contact: Brian Sims		
Project Number/Name: Al-kel Alliance	Carrier/Waybill Number		
Contract/Purchase Order/Quote Number: PO 583-01 Quote 26000183			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	VOC 8260	SVOC 8270	SVOC Extract	Metals (6020/7000)	Metals extract	pH 9045
TB 20120517	5-17-12	700	Water	40 ml	VOA	2	HCl	4.3°C/25/5-18-12	X					
SB-2 1		810	Soil	4 oz	CG	2	4°C			X	X		X	
SB-2 4		815								X	X		X	
SB-2 9.5		830									X	X		
SB-3 1		905								X	X		X	
SB3 4.5		910								X	X		X	
SB-4 1		940								X	X		X	
SB-4 4		945								X	X		X	
SB-5 1		1015								X	X		X	
SB-5 5		1020								X	X		X	
SB-5 9		1030									X	X		
EB-20120517		1050	Water	40 ml	VOA	3	HCl		X					
* SB-6 1		1115	Soil	4 oz	CG	2	4°C		X	X	X		X	
SB-6 2.5		1120								X	X		X	
* SB-7 1		1150								X	X		X	
SB-7 5		1155								X	X		X	

Special Instructions: TRRP Reporting. Herbicides sent directly to Houston

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☑ Normal ☐ Rush ☐ Other ____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	5-17-12	1500	1. Received By	5-18-12	0845
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Cooler 1 of 2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

6/22/2012

TAL-4149 (1007)

Client: TITAN Engineering, Inc
Address: 2501 Network Blvd Ste 200
City: Frisco | State: TX | Zip Code: 75034
Project Number/Name: Al-Kel Alliance
Contract/Purchase Order/Quote Number: PO # 583-01 Quote 26000183

Project Manager: Brian Sims
Telephone Number (Area Code)/Fax Number: (469) 365-1134
Site Contact: Brian Sims
Carrier/Waybill Number:

Date: 5-16-12
Lab Location:
Page 1 of 2

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	VOC 8260	SVOC 8270	SVOC Extract	Metals (ICP/TOD)	Metals Extract	pH 9045
TB-20120516	5/16/12	700	Water	40 ml	VOA	2	HCl	4.9°C / LT / 5-18-12	X					
TMW-1 1		825	Soil	4 oz	CG	2	4°C			X		X		X
TMW-1 4.5		830								X		X		X
TMW-2 0.5		1000								X		X		X
TMW-2 4.5		1005								X		X		X
* TMW-3 1		1100								X		X		X
TMW-3 4.5		1105								X		X		X
TMW-3 6.5		1115									X		X	
EB-20120516		1200	Water	40 ml	VOA	3	HCl		X					
TMW-4 1		1245	Soil	4 oz	CG	2	4°C		X	X		X		X
TMW-4 4.5		1250								X		X		X
TMW-5 1		1355								X		X		X
TMW-5 4.5		1400								X		X		X
TMW-5 6		1405									X		X	
SB-1 1		1445								X		X		X
SB-1 4.5		1450								X		X		X

Special Instructions: TRRP Reporting, Herbicides sent directly to Houston

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other ____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	5-17-12	1500	1. Received By	5-18-12	0845
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Appendix A Laboratory Data Package Cover Page

This data package is for Job No. and laboratory batch no(s): and consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- ☑ R1 Field chain-of-custody documentation;
- ☑ R2 Sample identification cross-reference;
- ☑ R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC Chapter 5,
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- ☑ R4 Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- ☑ R5 Test reports/summary forms for blank samples;
- ☑ R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- ☑ R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- ☑ R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- ☑ R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- ☑ R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement:I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection)**. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name (Printed)	Signature	Official Title (Printed)	Date
			Friday, June 22, 2012

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	LRC Date:
Project Name:	Laboratory Job Number:
Reviewer Name:	Prep Batch Number(s):

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	LRC Date:
Project Name:	Laboratory Job Number:
Reviewer Name:	Prep Batch Number(s):

R[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

RG-366/TRRP-13 December 2002

DATA USABILITY SUMMARY

Property: Al-Kel Alliance
Reviewer: Greg Rainwater, TITAN Engineering, Inc.
Date: June 22, 2012

Laboratory: Test America
Laboratory Job No(s): AVF0053, dated June 22, 2012

Intended use of data:
- ☒ Soil investigation
- ☐ Groundwater investigation
- ☐ Other: _____

Samples analyzed: 3

Analyses requested:
- ☐ TX-1005 (TPH)
- ☐ EPA-8021 (BTEX/MTBE)
- ☐ EPA-8270 (PAHs)
- ☐ EPA-8260 (VOCs)
- ☐ E160.3 (% Moisture)
- ☒ Other: TCLP Ba/Cd/Pb

Data reviewed:
- ☒ Laboratory reportable data
- ☒ Laboratory review checklists (LRCs)
- ☒ Laboratory exception reports (ERs)
- ☒ Chain-of-custody (CoC) forms
- ☒ Field notes
- ☐ Other: _____

Project Objectives:

Type of Chemical	Recovery (%)		RPD (%)
	Low	High	
Organics	60	140	40
Inorganics	70	130	30

Level of Performance:	
Do SQLs and MQLs meet project objectives?	YES
According to the LRCs:	
Are soil sample concentrations corrected for moisture content?	NA
Does sample information agree with the CoC forms?	YES
Were the sample containers made of appropriate materials?	YES
Were the samples received by the laboratory in good condition?	YES
Were sample temperatures 4°C ± 2°C?	YES
Were samples prepared and analyzed within the holding times specified in SW-846, Table 2-40?	YES
Did the initial/continuing calibrations (ICCV/CCV) meet SW-846 requirements for the analyses performed?	YES
Do the LRCs document instrument performance calibrations (GC/MS tunes) for analyses performed?	YES

Environmental Sample Surrogates:	
Were surrogate recoveries within project objectives?	NA
Field QA/QC:	
Were target analytes detected in any trip blanks?	NA
Were target analytes detected in field blanks?	NA
Were target analytes detected in any equipment blanks?	NA
Did field duplicate precision meet project objectives?	NA
Laboratory QA/QC:	
Were target COCs detected in any laboratory blanks?	NO
Were surrogate recoveries for laboratory blanks within project objectives?	YES
Were LCS/LCSD recoveries and/or RPD values within project objectives	YES
Were surrogate recoveries for LCS/LCSD within project objectives?	YES
Were MS/MSD recoveries and/or RPD values within project objectives?	YES
Were surrogate recoveries for MS/MSD within project objectives?	YES
According to Field Records:	
Were the chain-of-custody forms completed and signed?	YES
Were samples collected according to documented SOPs?	YES
Were the samples preserved in the field according to SW-846, Table 2-40?	YES
Were groundwater samples filtered?	NA
Were field instruments used during sampling properly calibrated?	YES

Qualifiers	
U	Not detected above the SDL
J	Estimated concentration (detected below quantitation limits)
R	Rejected
B	Detected in associated method blank
S	Spike recovery outside accepted recovery limits
Bias Codes	
H	Bias likely to be high
L	Bias likely to be low

Attachments:

- ☒ Laboratory reportable data
- ☒ Laboratory ERs
- ☐ Field notes
- ☒ Laboratory LRCs
- ☒ CoC forms
- ☐ Table 1: Field Precision

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Austin
14050 Summit Drive, Suite A100
Austin, TX 78728
Tel: 512-244-0855

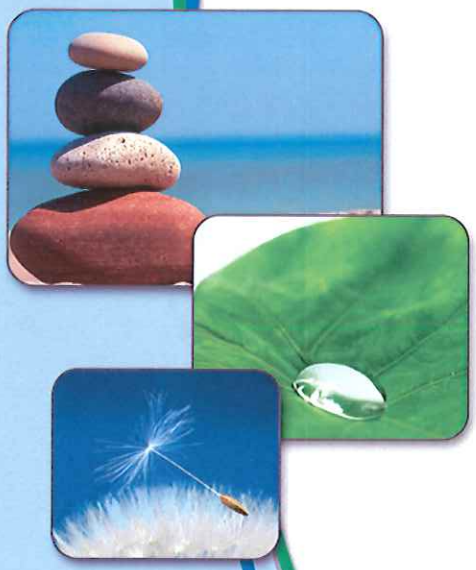
TestAmerica Job ID: AVE0237
Client Project/Site: 583-01
Client Project Description: Al-Kel

For:
TITAN Engineering, Inc.
2801 Network Blvd., Suite 200
Frisco, TX 75304

Attn: Brian Sims

Authorized for release by:
6/4/2012 7:08:03 AM

Neal Salcher
Project Manager
Neal.Salcher@testamericainc.com



LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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

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Job ID: AVE0237

Laboratory: TestAmerica Austin

NELAC Certification

NELAC certifications are not held for the following analytes included in this report:

Method	Matrix	Analyte
8270C	Water	Diphenylamine

Qualifiers

GCMS Volatiles

Qualifier	Qualifier Description
L	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
M7	The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GCMS Semivolatiles

Qualifier	Qualifier Description
L	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
L4	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below the acceptance limits. A low bias to sample results is indicated.
M7	The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Analyte was detected in the associated Method Blank.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

Client Sample ID: TB-20120518 — Lab Sample ID: AVE0237-01

No Detections

Client Sample ID: TMW-1 — Lab Sample ID: AVE0237-02

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.00494	J	0.00500	0.00154	mg/L	1.00		8260B	Total
Di-n-butyl phthalate	0.00385	J	0.0100	0.00113	mg/L	1.00		8270C	Total
Arsenic	0.00138	J	0.00500	0.000224	mg/L	5.00		6020	Total
Barium	0.0715	B	0.00500	0.000117	mg/L	5.00		6020	Total
Chromium	0.00116	J	0.00500	0.00100	mg/L	5.00		6020	Total
Selenium	0.00114	J	0.00500	0.000778	mg/L	5.00		6020	Total

Client Sample ID: DUP-20120518 — Lab Sample ID: AVE0237-03

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.00519		0.00500	0.00154	mg/L	1.00		8260B	Total
Arsenic	0.00162	J	0.00500	0.000224	mg/L	5.00		6020	Total
Barium	0.0712	B	0.00500	0.000117	mg/L	5.00		6020	Total
Lead	0.0000700	J B	0.00500	0.0000525	mg/L	5.00		6020	Total
Selenium	0.00146	J	0.00500	0.000778	mg/L	5.00		6020	Total

Sample Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
AVE0237-01	TB-20120518	Water	05/18/12 07:00	05/19/12 08:3
AVE0237-02	TMW-1	Water	05/18/12 10:15	05/19/12 08:30
AVE0237-03	DUP-20120518	Water	05/18/12 11:15	05/19/12 08:30

Client Sample Results

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

Client Sample ID: TB-20120518

Lab Sample ID: AVE0237-01

Date Collected: 05/18/12 07:00

Matrix: Water

Date Received: 05/19/12 08:30

Method: 8260B - Volatile Organic Compounds by SW846 8260B

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00100	0.000332	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,1,1-Trichloroethane	ND		0.00100	0.000360	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,1,2,2-Tetrachloroethane	ND		0.00100	0.000310	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,1,2-Trichloroethane	ND		0.00100	0.000352	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,1-Dichloroethane	ND		0.00100	0.000374	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,1-Dichloroethene	ND		0.00100	0.000427	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,2,4-Trimethylbenzene	ND		0.00100	0.000598	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,2-Dibromoethane (EDB)	ND		0.00100	0.000500	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,2-Dichlorobenzene	ND		0.00100	0.000434	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,2-Dichloroethane	ND		0.00100	0.000392	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,2-Dichloropropane	ND		0.00100	0.000373	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,3-Dichlorobenzene	ND		0.00100	0.000386	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
1,4-Dichlorobenzene	ND		0.00100	0.000293	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
2-Butanone (MEK)	ND		0.00500	0.00110	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
2-Hexanone	ND		0.0100	0.00500	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
4-Isopropyltoluene	ND		0.00100	0.000633	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
4-Methyl-2-pentanone (MIBK)	ND		0.00500	0.00108	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Acetone	ND		0.00500	0.00154	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Benzene	ND		0.00100	0.000339	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Bromobenzene	ND		0.00100	0.000394	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Bromochloromethane	ND		0.00100	0.000368	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
omodichloromethane	ND		0.00100	0.000369	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Bromoethane	ND		0.0100	0.000381	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Bromoform	ND		0.00200	0.000684	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Bromomethane	ND		0.00200	0.00116	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Carbon disulfide	ND		0.00100	0.000383	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Carbon tetrachloride	ND		0.00100	0.000335	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Chlorobenzene	ND		0.00100	0.000333	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Chlorodibromomethane	ND		0.00100	0.000278	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Chloroethane	ND		0.00200	0.00134	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Chloroform	ND		0.00100	0.000349	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Chloromethane	ND		0.00200	0.000546	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
cis-1,2-Dichloroethene	ND		0.00100	0.000367	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
cis-1,3-Dichloropropene	ND		0.00100	0.000500	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Dibromomethane	ND		0.00100	0.000407	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Dichlorodifluoromethane	ND		0.00200	0.000581	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Ethylbenzene	ND		0.00100	0.000416	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Hexachlorobutadiene	ND		0.00100	0.000567	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Isopropylbenzene	ND		0.00100	0.000332	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Methyl tert-Butyl Ether	ND		0.00100	0.000336	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Methylene chloride	ND		0.00200	0.000422	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
n-Butylbenzene	ND		0.00100	0.000878	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
n-Propylbenzene	ND		0.00100	0.000441	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
sec-Butylbenzene	ND		0.00100	0.000609	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Styrene	ND		0.00100	0.000269	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
tert-Butylbenzene	ND		0.00100	0.000310	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Tetrachloroethene	ND		0.00100	0.000640	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
luene	ND		0.00100	0.000288	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
trans-1,2-Dichloroethene	ND		0.00100	0.000372	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
trans-1,3-Dichloropropene	ND		0.00100	0.000220	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Trichloroethene	ND		0.00100	0.000449	mg/L		05/24/12 08:47	05/24/12 14:42	1.00

Client Sample ID: TB-20120518

Lab Sample ID: AVE0237-01

Date Collected: 05/18/12 07:00

Matrix: Wat

Date Received: 05/19/12 08:30

Method: 8260B - Volatile Organic Compounds by SW846 8260B (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.00200	0.000573	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Vinyl chloride	ND		0.00200	0.000537	mg/L		05/24/12 08:47	05/24/12 14:42	1.00
Xylenes, total	ND		0.00300	0.00120	mg/L		05/24/12 08:47	05/24/12 14:42	1.00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4	*109*		*69 - 133*	*05/24/12 08:47*	*05/24/12 14:42*	*1.00*
4-Bromofluorobenzene	*100*		*66 - 124*	*05/24/12 08:47*	*05/24/12 14:42*	*1.00*
Dibromofluoromethane	*112*		*81 - 127*	*05/24/12 08:47*	*05/24/12 14:42*	*1.00*
Toluene-d8	*102*		*87 - 121*	*05/24/12 08:47*	*05/24/12 14:42*	*1.00*

Client Sample Results

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

Client Sample ID: TMW-1

Date Collected: 05/18/12 10:15
Date Received: 05/19/12 08:30

Lab Sample ID: AVE0237-02

Matrix: Water

Method: 8260B - Volatile Organic Compounds by SW846 8260B

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00100	0.000332	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,1,1-Trichloroethane	ND		0.00100	0.000360	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,1,2,2-Tetrachloroethane	ND		0.00100	0.000310	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,1,2-Trichloroethane	ND		0.00100	0.000352	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,1-Dichloroethane	ND		0.00100	0.000374	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,1-Dichloroethene	ND		0.00100	0.000427	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,2,4-Trimethylbenzene	ND		0.00100	0.000598	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,2-Dibromoethane (EDB)	ND		0.00100	0.000500	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,2-Dichlorobenzene	ND		0.00100	0.000434	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,2-Dichloroethane	ND		0.00100	0.000392	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,2-Dichloropropane	ND		0.00100	0.000373	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,3-Dichlorobenzene	ND		0.00100	0.000386	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
1,4-Dichlorobenzene	ND		0.00100	0.000293	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
2-Butanone (MEK)	ND		0.00500	0.00110	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
2-Hexanone	ND		0.0100	0.00500	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
4-Isopropyltoluene	ND		0.00100	0.000633	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
4-Methyl-2-pentanone (MIBK)	ND		0.00500	0.00108	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Acetone	**0.00494**	**J**	0.00500	0.00154	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Benzene	ND		0.00100	0.000339	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Bromobenzene	ND		0.00100	0.000394	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Bromochloromethane	ND		0.00100	0.000368	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Bromodichloromethane	ND		0.00100	0.000369	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Bromoethane	ND		0.0100	0.000381	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Bromoform	ND		0.00200	0.000684	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Bromomethane	ND		0.00200	0.00116	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Carbon disulfide	ND		0.00100	0.000383	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Carbon tetrachloride	ND		0.00100	0.000335	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Chlorobenzene	ND		0.00100	0.000333	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Chlorodibromomethane	ND		0.00100	0.000278	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Chloroethane	ND		0.00200	0.00134	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Chloroform	ND		0.00100	0.000349	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Chloromethane	ND		0.00200	0.000546	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
cis-1,2-Dichloroethene	ND		0.00100	0.000367	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
cis-1,3-Dichloropropene	ND		0.00100	0.000500	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Dibromomethane	ND		0.00100	0.000407	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Dichlorodifluoromethane	ND		0.00200	0.000581	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Ethylbenzene	ND		0.00100	0.000416	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Hexachlorobutadiene	ND		0.00100	0.000567	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Isopropylbenzene	ND		0.00100	0.000332	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Methyl tert-Butyl Ether	ND		0.00100	0.000336	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Methylene chloride	ND		0.00200	0.000422	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
n-Butylbenzene	ND		0.00100	0.000878	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
n-Propylbenzene	ND		0.00100	0.000441	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
sec-Butylbenzene	ND		0.00100	0.000609	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Styrene	ND		0.00100	0.000269	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
tert-Butylbenzene	ND		0.00100	0.000310	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Tetrachloroethene	ND		0.00100	0.000640	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Toluene	ND		0.00100	0.000288	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
trans-1,2-Dichloroethene	ND		0.00100	0.000372	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
trans-1,3-Dichloropropene	ND		0.00100	0.000220	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Trichloroethene	ND		0.00100	0.000449	mg/L		05/24/12 08:47	05/24/12 15:09	1.00

Client Sample ID: TMW-1

Date Collected: 05/18/12 10:15
Date Received: 05/19/12 08:30

Lab Sample ID: AVE0237-02

Matrix: Wat

Method: 8260B - Volatile Organic Compounds by SW846 8260B (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.00200	0.000573	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Vinyl chloride	ND		0.00200	0.000537	mg/L		05/24/12 08:47	05/24/12 15:09	1.00
Xylenes, total	ND		0.00300	0.00120	mg/L		05/24/12 08:47	05/24/12 15:09	1.00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4	*114*		*69 - 133*	*05/24/12 08:47*	*05/24/12 15:09*	*1.00*
4-Bromofluorobenzene	*100*		*66 - 124*	*05/24/12 08:47*	*05/24/12 15:09*	*1.00*
Dibromofluoromethane	*115*		*81 - 127*	*05/24/12 08:47*	*05/24/12 15:09*	*1.00*
Toluene-d8	*103*		*87 - 121*	*05/24/12 08:47*	*05/24/12 15:09*	*1.00*

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0100	0.000840	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
1,2-Diphenylhydrazine	ND		0.0100	0.000978	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2,4,5-Trichlorophenol	ND		0.0100	0.00115	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2,4,6-Trichlorophenol	ND		0.0100	0.00109	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2,4-Dichlorophenol	ND		0.0100	0.00103	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2,4-Dimethylphenol	ND		0.0100	0.00190	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2,4-Dinitrophenol	ND		0.0500	0.00374	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2,4-Dinitrotoluene	ND		0.0100	0.00288	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2,6-Dinitrotoluene	ND		0.0100	0.00103	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2-Chloronaphthalene	ND		0.0100	0.00146	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2-Chlorophenol	ND		0.0100	0.00149	mg/L		05/24/12 17:00	05/30/12 13:40	1
2-Methylnaphthalene	ND		0.0100	0.000969	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2-Methylphenol	ND		0.0100	0.00182	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2-Nitroaniline	ND		0.0500	0.00119	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
2-Nitrophenol	ND		0.0100	0.00105	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
3 & 4 Methylphenol	ND		0.0200	0.00258	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
3,3'-Dichlorobenzidine	ND		0.0500	0.0100	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
3-Nitroaniline	ND		0.0500	0.00122	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
4,6-Dinitro-2-methylphenol	ND		0.0500	0.00356	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
4-Bromophenyl phenyl ether	ND		0.0100	0.000933	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
4-Chloro-3-methylphenol	ND		0.0100	0.00107	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
4-Chloroaniline	ND		0.0100	0.00600	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
4-Chlorophenyl phenyl ether	ND		0.0100	0.00144	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
4-Nitroaniline	ND		0.0500	0.00109	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
4-Nitrophenol	ND		0.0500	0.00410	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Acenaphthene	ND		0.0100	0.00110	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Acenaphthylene	ND		0.0100	0.000905	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Anthracene	ND		0.0100	0.00113	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Benzo[a]anthracene	ND		0.0100	0.00112	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Benzo[a]pyrene	ND		0.0100	0.00111	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Benzo[b]fluoranthene	ND		0.0100	0.000788	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Benzo[g,h,i]perylene	ND		0.0100	0.000762	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Benzo[k]fluoranthene	ND		0.0100	0.00123	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Bis(2-chloroethoxy)methane	ND		0.0100	0.00113	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Bis(2-chloroethyl)ether	ND		0.0100	0.000544	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Bis(2-chloroisopropyl) ether	ND		0.0100	0.00122	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Bis(2-ethylhexyl) phthalate	ND		0.0100	0.00274	mg/L		05/24/12 17:00	05/30/12 13:40	1
Butyl benzyl phthalate	ND		0.0100	0.000987	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Chrysene	ND		0.0100	0.00183	mg/L		05/24/12 17:00	05/30/12 13:40	1.00

Client Sample Results

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

Client Sample ID: TMW-1

Lab Sample ID: AVE0237-02

Date Collected: 05/18/12 10:15
Date Received: 05/19/12 08:30

Matrix: Water

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz[a,h]anthracene	ND		0.0100	0.00139	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Dibenzofuran	ND		0.0100	0.00105	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Diethyl phthalate	ND		0.0100	0.00147	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Dimethyl phthalate	ND		0.0100	0.00126	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Di-n-butyl phthalate	**0.00385**	**J**	0.0100	0.00113	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Di-n-octyl phthalate	ND		0.0100	0.00180	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Diphenylamine	ND		0.0100	0.000936	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Fluoranthene	ND		0.0100	0.000921	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Fluorene	ND		0.0100	0.00101	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Hexachlorobenzene	ND		0.0100	0.00147	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Hexachlorobutadiene	ND		0.0100	0.00128	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Hexachlorocyclopentadiene	ND		0.0500	0.00600	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Hexachloroethane	ND		0.0100	0.000940	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Isophorone	ND		0.0100	0.00109	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Naphthalene	ND		0.0100	0.000876	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Nitrobenzene	ND		0.0100	0.00112	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
N-Nitrosodi-n-propylamine	ND		0.0100	0.00104	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
N-Nitrosodiphenylamine	ND		0.0100	0.000936	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Pentachloroethane	ND		0.0100	0.000672	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Pentachlorophenol	ND		0.0500	0.00544	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Phenanthrene	ND		0.0100	0.000998	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Phenol	ND		0.0100	0.00214	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Pyrene	ND		0.0100	0.000917	mg/L		05/24/12 17:00	05/30/12 13:40	1.00
Pyridine	ND	JL	0.0100	0.00238	mg/L		05/24/12 17:00	05/30/12 13:40	1.00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*98*		*45 - 116*	*05/24/12 17:00*	*05/30/12 13:40*	*1.00*
2,4,6-Tribromophenol	*103*		*51 - 130*	*05/24/12 17:00*	*05/30/12 13:40*	*1.00*
2-Fluorobiphenyl	*99*		*58 - 116*	*05/24/12 17:00*	*05/30/12 13:40*	*1.00*
2-Fluorophenol	*95*		*44 - 114*	*05/24/12 17:00*	*05/30/12 13:40*	*1.00*
Nitrobenzene-d5	*93*		*52 - 114*	*05/24/12 17:00*	*05/30/12 13:40*	*1.00*
Terphenyl-d14	*99*		*64 - 126*	*05/24/12 17:00*	*05/30/12 13:40*	*1.00*

Method: 6020 - Total Metals by SW846 Series Methods

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00138**	**J**	0.00500	0.000224	mg/L		05/29/12 15:21	05/30/12 15:24	5.00
Barium	**0.0715**	**B**	0.00500	0.000117	mg/L		05/29/12 15:21	05/30/12 15:24	5.00
Cadmium	ND		0.00500	0.0000600	mg/L		05/29/12 15:21	05/30/12 15:24	5.00
Chromium	**0.00116**	**J**	0.00500	0.00100	mg/L		05/29/12 15:21	05/30/12 15:24	5.00
Lead	ND		0.00500	0.0000525	mg/L		05/29/12 15:21	05/30/12 15:24	5.00
Selenium	**0.00114**	**J**	0.00500	0.000778	mg/L		05/29/12 15:21	05/30/12 15:24	5.00
Silver	ND		0.00500	0.000108	mg/L		05/29/12 15:21	05/30/12 15:24	5.00

Method: 7470A - Total Metals by SW846 Series Methods

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000620	mg/L		05/31/12 19:00	06/01/12 12:54	1.00

Client Sample ID: DUP-20120518

Date Collected: 05/18/12 11:15
Date Received: 05/19/12 08:30

Lab Sample ID: AVE0237-03

Matrix: Wat

Method: 8260B - Volatile Organic Compounds by SW846 8260B

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00100	0.000332	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,1,1-Trichloroethane	ND		0.00100	0.000360	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,1,2,2-Tetrachloroethane	ND		0.00100	0.000310	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,1,2-Trichloroethane	ND		0.00100	0.000352	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,1-Dichloroethane	ND		0.00100	0.000374	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,1-Dichloroethene	ND		0.00100	0.000427	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,2,4-Trimethylbenzene	ND		0.00100	0.000598	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,2-Dibromoethane (EDB)	ND		0.00100	0.000500	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,2-Dichlorobenzene	ND		0.00100	0.000434	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,2-Dichloroethane	ND		0.00100	0.000392	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,2-Dichloropropane	ND		0.00100	0.000373	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,3-Dichlorobenzene	ND		0.00100	0.000386	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
1,4-Dichlorobenzene	ND		0.00100	0.000293	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
2-Butanone (MEK)	ND		0.00500	0.00110	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
2-Hexanone	ND		0.0100	0.00500	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
4-Isopropyltoluene	ND		0.00100	0.000633	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
4-Methyl-2-pentanone (MIBK)	ND		0.00500	0.00108	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Acetone	**0.00519**		0.00500	0.00154	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Benzene	ND		0.00100	0.000339	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Bromobenzene	ND		0.00100	0.000394	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Bromochloromethane	ND		0.00100	0.000368	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Bromodichloromethane	ND		0.00100	0.000369	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Bromoethane	ND		0.0100	0.000381	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Bromoform	ND		0.00200	0.000684	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Bromomethane	ND		0.00200	0.00116	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Carbon disulfide	ND		0.00100	0.000383	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Carbon tetrachloride	ND		0.00100	0.000335	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Chlorobenzene	ND		0.00100	0.000333	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Chlorodibromomethane	ND		0.00100	0.000278	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Chloroethane	ND		0.00200	0.00134	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Chloroform	ND		0.00100	0.000349	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Chloromethane	ND		0.00200	0.000546	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
cis-1,2-Dichloroethene	ND		0.00100	0.000367	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
cis-1,3-Dichloropropene	ND		0.00100	0.000500	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Dibromomethane	ND		0.00100	0.000407	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Dichlorodifluoromethane	ND		0.00200	0.000581	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Ethylbenzene	ND		0.00100	0.000416	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Hexachlorobutadiene	ND		0.00100	0.000567	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Isopropylbenzene	ND		0.00100	0.000332	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Methyl tert-Butyl Ether	ND		0.00100	0.000336	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Methylene chloride	ND		0.00200	0.000422	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
n-Butylbenzene	ND		0.00100	0.000878	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
n-Propylbenzene	ND		0.00100	0.000441	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
sec-Butylbenzene	ND		0.00100	0.000609	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Styrene	ND		0.00100	0.000269	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
tert-Butylbenzene	ND		0.00100	0.000310	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Tetrachloroethene	ND		0.00100	0.000640	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Toluene	ND		0.00100	0.000288	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
trans-1,2-Dichloroethene	ND		0.00100	0.000372	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
trans-1,3-Dichloropropene	ND		0.00100	0.000220	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Trichloroethene	ND		0.00100	0.000449	mg/L		05/24/12 08:47	05/24/12 15:37	1.00

Client Sample ID: DUP-20120518

Lab Sample ID: AVE0237-03

Date Collected: 05/18/12 11:15

Matrix: Water

Date Received: 05/19/12 08:30

Method: 8260B - Volatile Organic Compounds by SW846 8260B (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.00200	0.000573	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Vinyl chloride	ND		0.00200	0.000537	mg/L		05/24/12 08:47	05/24/12 15:37	1.00
Xylenes, total	ND		0.00300	0.00120	mg/L		05/24/12 08:47	05/24/12 15:37	1.00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4	*114*		*69 - 133*	*05/24/12 08:47*	*05/24/12 15:37*	*1.00*
4-Bromofluorobenzene	*101*		*66 - 124*	*05/24/12 08:47*	*05/24/12 15:37*	*1.00*
Dibromofluoromethane	*114*		*81 - 127*	*05/24/12 08:47*	*05/24/12 15:37*	*1.00*
Toluene-d8	*103*		*87 - 121*	*05/24/12 08:47*	*05/24/12 15:37*	*1.00*

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0100	0.000840	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
1,2-Diphenylhydrazine	ND		0.0100	0.000978	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2,4,5-Trichlorophenol	ND		0.0100	0.00115	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2,4,6-Trichlorophenol	ND		0.0100	0.00109	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2,4-Dichlorophenol	ND		0.0100	0.00103	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2,4-Dimethylphenol	ND		0.0100	0.00190	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2,4-Dinitrophenol	ND		0.0500	0.00374	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2,4-Dinitrotoluene	ND		0.0100	0.00288	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2,6-Dinitrotoluene	ND		0.0100	0.00103	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2-Chloronaphthalene	ND		0.0100	0.00146	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2-Chlorophenol	ND		0.0100	0.00149	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2-Methylnaphthalene	ND		0.0100	0.000969	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2-Methylphenol	ND		0.0100	0.00182	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2-Nitroaniline	ND		0.0500	0.00119	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
2-Nitrophenol	ND		0.0100	0.00105	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
3 & 4 Methylphenol	ND		0.0200	0.00258	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
3,3'-Dichlorobenzidine	ND		0.0500	0.0100	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
3-Nitroaniline	ND		0.0500	0.00122	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
4,6-Dinitro-2-methylphenol	ND		0.0500	0.00356	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
4-Bromophenyl phenyl ether	ND		0.0100	0.000933	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
4-Chloro-3-methylphenol	ND		0.0100	0.00107	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
4-Chloroaniline	ND		0.0100	0.00600	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
4-Chlorophenyl phenyl ether	ND		0.0100	0.00144	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
4-Nitroaniline	ND		0.0500	0.00109	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
4-Nitrophenol	ND		0.0500	0.00410	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Acenaphthene	ND		0.0100	0.00110	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Acenaphthylene	ND		0.0100	0.000905	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Anthracene	ND		0.0100	0.00113	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Benzo[a]anthracene	ND		0.0100	0.00112	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Benzo[a]pyrene	ND		0.0100	0.00111	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Benzo[b]fluoranthene	ND		0.0100	0.000788	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Benzo[g,h,i]perylene	ND		0.0100	0.000762	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Benzo[k]fluoranthene	ND		0.0100	0.00123	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Bis(2-chloroethoxy)methane	ND		0.0100	0.00113	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Bis(2-chloroethyl)ether	ND		0.0100	0.000544	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Bis(2-chloroisopropyl) ether	ND		0.0100	0.00122	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Bis(2-ethylhexyl) phthalate	ND		0.0100	0.00274	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Butyl benzyl phthalate	ND		0.0100	0.000987	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Chrysene	ND		0.0100	0.00183	mg/L		05/24/12 17:00	05/30/12 14:02	1.00

Client Sample ID: DUP-20120518

Date Collected: 05/18/12 11:15
Date Received: 05/19/12 08:30

Lab Sample ID: AVE0237-03

Matrix: Wat

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz[a,h]anthracene	ND		0.0100	0.00139	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Dibenzofuran	ND		0.0100	0.00105	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Diethyl phthalate	ND		0.0100	0.00147	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Dimethyl phthalate	ND		0.0100	0.00126	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Di-n-butyl phthalate	ND		0.0100	0.00113	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Di-n-octyl phthalate	ND		0.0100	0.00180	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Diphenylamine	ND		0.0100	0.000936	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Fluoranthene	ND		0.0100	0.000921	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Fluorene	ND		0.0100	0.00101	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Hexachlorobenzene	ND		0.0100	0.00147	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Hexachlorobutadiene	ND		0.0100	0.00128	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Hexachlorocyclopentadiene	ND		0.0500	0.00600	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Hexachloroethane	ND		0.0100	0.000940	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Isophorone	ND		0.0100	0.00109	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Naphthalene	ND		0.0100	0.000876	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Nitrobenzene	ND		0.0100	0.00112	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
N-Nitrosodi-n-propylamine	ND		0.0100	0.00104	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
N-Nitrosodiphenylamine	ND		0.0100	0.000936	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Pentachloroethane	ND		0.0100	0.000672	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Pentachlorophenol	ND		0.0500	0.00544	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Phenanthrene	ND		0.0100	0.000998	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Phenol	ND		0.0100	0.00214	mg/L		05/24/12 17:00	05/30/12 14:02	1.00
Pyrene	ND		0.0100	0.000917	mg/L		05/24/12 17:00	05/30/12 14:02	1
Pyridine	ND	3L	0.0100	0.00238	mg/L		05/24/12 17:00	05/30/12 14:02	1.00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*86*		*45 - 116*	*05/24/12 17:00*	*05/30/12 14:02*	*1.00*
2,4,6-Tribromophenol	*88*		*51 - 130*	*05/24/12 17:00*	*05/30/12 14:02*	*1.00*
2-Fluorobiphenyl	*91*		*58 - 116*	*05/24/12 17:00*	*05/30/12 14:02*	*1.00*
2-Fluorophenol	*82*		*44 - 114*	*05/24/12 17:00*	*05/30/12 14:02*	*1.00*
Nitrobenzene-d5	*82*		*52 - 114*	*05/24/12 17:00*	*05/30/12 14:02*	*1.00*
Terphenyl-d14	*93*		*64 - 126*	*05/24/12 17:00*	*05/30/12 14:02*	*1.00*

Method: 6020 - Total Metals by SW846 Series Methods

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00162**	**J**	0.00500	0.000224	mg/L		05/29/12 15:21	05/30/12 15:49	5.00
Barium	**0.0712**	**B**	0.00500	0.000117	mg/L		05/29/12 15:21	05/30/12 15:49	5.00
Cadmium	ND		0.00500	0.0000600	mg/L		05/29/12 15:21	05/30/12 15:49	5.00
Chromium	ND		0.00500	0.00100	mg/L		05/29/12 15:21	05/30/12 15:49	5.00
Lead	**0.0000700**	**J B**	0.00500	0.0000525	mg/L		05/29/12 15:21	05/30/12 15:49	5.00
Selenium	**0.00146**	**J**	0.00500	0.000778	mg/L		05/29/12 15:21	05/30/12 15:49	5.00
Silver	ND		0.00500	0.000108	mg/L		05/29/12 15:21	05/30/12 15:49	5.00

Method: 7470A - Total Metals by SW846 Series Methods

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000620	mg/L		05/31/12 19:00	06/01/12 12:58	1.00

QC Association Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

GCMS Volatiles

Analysis Batch: 12E0312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E0312-BLK1	Method Blank	Total	Water	8260B	12E0312_P
12E0312-BS1	Lab Control Sample	Total	Water	8260B	12E0312_P
12E0312-BSD1	Lab Control Sample Dup	Total	Water	8260B	12E0312_P
12E0312-MS1	TMW-1	Total	Water	8260B	12E0312_P
12E0312-MSD1	TMW-1	Total	Water	8260B	12E0312_P
AVE0237-01	TB-20120518	Total	Water	8260B	12E0312_P
AVE0237-02	TMW-1	Total	Water	8260B	12E0312_P
AVE0237-03	DUP-20120518	Total	Water	8260B	12E0312_P

Prep Batch: 12E0312_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E0312-BLK1	Method Blank	Total	Water	5030B MS	
12E0312-BS1	Lab Control Sample	Total	Water	5030B MS	
12E0312-BSD1	Lab Control Sample Dup	Total	Water	5030B MS	
12E0312-MS1	TMW-1	Total	Water	5030B MS	
12E0312-MSD1	TMW-1	Total	Water	5030B MS	
AVE0237-01	TB-20120518	Total	Water	5030B MS	
AVE0237-02	TMW-1	Total	Water	5030B MS	
AVE0237-03	DUP-20120518	Total	Water	5030B MS	

GCMS Semivolatiles

Analysis Batch: 12E0311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E0311-BLK1	Method Blank	Total	Water	8270C	12E0311_P
12E0311-BS1	Lab Control Sample	Total	Water	8270C	12E0311_P
12E0311-MS1	TMW-1	Total	Water	8270C	12E0311_P
12E0311-MSD1	TMW-1	Total	Water	8270C	12E0311_P
AVE0237-02	TMW-1	Total	Water	8270C	12E0311_P
AVE0237-03	DUP-20120518	Total	Water	8270C	12E0311_P

Prep Batch: 12E0311_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E0311-BLK1	Method Blank	Total	Water	3520C MS	
12E0311-BS1	Lab Control Sample	Total	Water	3520C MS	
12E0311-MS1	TMW-1	Total	Water	3520C MS	
12E0311-MSD1	TMW-1	Total	Water	3520C MS	
AVE0237-02	TMW-1	Total	Water	3520C MS	
AVE0237-03	DUP-20120518	Total	Water	3520C MS	

Metals

Analysis Batch: 12F0007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12F0007-BLK1	Method Blank	Total	Water	7470A	12F0007_P
12F0007-BS1	Lab Control Sample	Total	Water	7470A	12F0007_P
12F0007-MS1	TMW-1	Total	Water	7470A	12F0007_P
12F0007-MSD1	TMW-1	Total	Water	7470A	12F0007_P
/E0237-02	TMW-1	Total	Water	7470A	12F0007_P
AVE0237-03	DUP-20120518	Total	Water	7470A	12F0007_P

Metals (Continued)

Analysis Batch: V000342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E0345-BLK1	Method Blank	Total	Water	6020	12E0345_P
12E0345-BS1	Lab Control Sample	Total	Water	6020	12E0345_P
12E0345-MS1	TMW-1	Total	Water	6020	12E0345_P
12E0345-MSD1	TMW-1	Total	Water	6020	12E0345_P
12E0345-PS1	TMW-1	Total	Water	6020	12E0345_P
AVE0237-02	TMW-1	Total	Water	6020	12E0345_P
AVE0237-03	DUP-20120518	Total	Water	6020	12E0345_P

Prep Batch: 12E0345_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12E0345-BLK1	Method Blank	Total	Water	3020A MS	
12E0345-BS1	Lab Control Sample	Total	Water	3020A MS	
12E0345-MS1	TMW-1	Total	Water	3020A MS	
12E0345-MSD1	TMW-1	Total	Water	3020A MS	
12E0345-PS1	TMW-1	Total	Water	3020A MS	
AVE0237-02	TMW-1	Total	Water	3020A MS	
AVE0237-03	DUP-20120518	Total	Water	3020A MS	

Prep Batch: 12F0007_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
12F0007-BLK1	Method Blank	Total	Water	7470A / 245.1	
12F0007-BS1	Lab Control Sample	Total	Water	7470A / 245.1	
12F0007-MS1	TMW-1	Total	Water	7470A / 245.1	
12F0007-MSD1	TMW-1	Total	Water	7470A / 245.1	
AVE0237-02	TMW-1	Total	Water	7470A / 245.1	
AVE0237-03	DUP-20120518	Total	Water	7470A / 245.1	

Method: 8260B - Volatile Organic Compounds by SW846 8260B

Lab Sample ID: 12E0312-BLK1
Matrix: Water
Analysis Batch: 12E0312

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 12E0312_P

Analyte	Blank Result	Blank Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.00100	0.000332	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,1,1-Trichloroethane	ND		0.00100	0.000360	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,1,2,2-Tetrachloroethane	ND		0.00100	0.000310	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,1,2-Trichloroethane	ND		0.00100	0.000352	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,1-Dichloroethane	ND		0.00100	0.000374	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,1-Dichloroethene	ND		0.00100	0.000427	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,2,4-Trimethylbenzene	ND		0.00100	0.000598	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,2-Dibromoethane (EDB)	ND		0.00100	0.000500	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,2-Dichlorobenzene	ND		0.00100	0.000434	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,2-Dichloroethane	ND		0.00100	0.000392	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,2-Dichloropropane	ND		0.00100	0.000373	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,3-Dichlorobenzene	ND		0.00100	0.000386	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
1,4-Dichlorobenzene	ND		0.00100	0.000293	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
2-Butanone (MEK)	ND		0.00500	0.00110	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
2-Hexanone	ND		0.0100	0.00500	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
4-Isopropyltoluene	ND		0.00100	0.000633	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
4-Methyl-2-pentanone (MIBK)	ND		0.00500	0.00108	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Acetone	ND		0.00500	0.00154	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Benzene	ND		0.00100	0.000339	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Bromobenzene	ND		0.00100	0.000394	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Bromochloromethane	ND		0.00100	0.000368	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Bromodichloromethane	ND		0.00100	0.000369	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Bromoethane	ND		0.0100	0.000381	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Bromoform	ND		0.00200	0.000684	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Bromomethane	ND		0.00200	0.00116	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Carbon disulfide	ND		0.00100	0.000383	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Carbon tetrachloride	ND		0.00100	0.000335	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Chlorobenzene	ND		0.00100	0.000333	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Chlorodibromomethane	ND		0.00100	0.000278	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Chloroethane	ND		0.00200	0.00134	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Chloroform	ND		0.00100	0.000349	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Chloromethane	ND		0.00200	0.000546	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
cis-1,2-Dichloroethene	ND		0.00100	0.000367	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
cis-1,3-Dichloropropene	ND		0.00100	0.000500	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Dibromomethane	ND		0.00100	0.000407	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Dichlorodifluoromethane	ND		0.00200	0.000581	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Ethylbenzene	ND		0.00100	0.000416	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Hexachlorobutadiene	ND		0.00100	0.000567	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Isopropylbenzene	ND		0.00100	0.000332	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Methyl tert-Butyl Ether	ND		0.00100	0.000336	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Methylene chloride	ND		0.00200	0.000422	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
n-Butylbenzene	ND		0.00100	0.000878	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
n-Propylbenzene	ND		0.00100	0.000441	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
sec-Butylbenzene	ND		0.00100	0.000609	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Styrene	ND		0.00100	0.000269	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
tert-Butylbenzene	ND		0.00100	0.000310	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Tetrachloroethene	ND		0.00100	0.000640	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Toluene	ND		0.00100	0.000288	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
trans-1,2-Dichloroethene	ND		0.00100	0.000372	mg/L		05/24/12 08:47	05/24/12 13:04	1.00

Method: 8260B - Volatile Organic Compounds by SW846 8260B (Continued)

Lab Sample ID: 12E0312-BLK1
Matrix: Water
Analysis Batch: 12E0312

Client Sample ID: Method Bla
Prep Type: Total
Prep Batch: 12E0312_P

Analyte	Blank Result	Blank Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.00100	0.000220	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Trichloroethene	ND		0.00100	0.000449	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Trichlorofluoromethane	ND		0.00200	0.000573	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Vinyl chloride	ND		0.00200	0.000537	mg/L		05/24/12 08:47	05/24/12 13:04	1.00
Xylenes, total	ND		0.00300	0.00120	mg/L		05/24/12 08:47	05/24/12 13:04	1.00

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4	*110*		*69 - 133*	*05/24/12 08:47*	*05/24/12 13:04*	*1.00*
4-Bromofluorobenzene	*101*		*66 - 124*	*05/24/12 08:47*	*05/24/12 13:04*	*1.00*
Dibromofluoromethane	*113*		*81 - 127*	*05/24/12 08:47*	*05/24/12 13:04*	*1.00*
Toluene-d8	*104*		*87 - 121*	*05/24/12 08:47*	*05/24/12 13:04*	*1.00*

Lab Sample ID: 12E0312-BS1
Matrix: Water
Analysis Batch: 12E0312

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 12E0312_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.02000	0.0187		mg/L		94	66 - 137
1,1,1-Trichloroethane	0.02000	0.0214		mg/L		107	69 - 141
1,1,2,2-Tetrachloroethane	0.02000	0.0194		mg/L		97	61 - 128
1,1,2-Trichloroethane	0.02000	0.0196		mg/L		98	67 - 142
1,1-Dichloroethane	0.02000	0.0201		mg/L		100	65 - 134
1,1-Dichloroethene	0.02000	0.0201		mg/L		100	62 - 135
1,2,4-Trimethylbenzene	0.02000	0.0168		mg/L		84	66 - 138
1,2-Dibromoethane (EDB)	0.02000	0.0193		mg/L		97	67 - 141
1,2-Dichlorobenzene	0.02000	0.0173		mg/L		87	63 - 130
1,2-Dichloroethane	0.02000	0.0236		mg/L		118	66 - 137
1,2-Dichloropropane	0.02000	0.0205		mg/L		103	80 - 120
1,3-Dichlorobenzene	0.02000	0.0172		mg/L		86	63 - 131
1,4-Dichlorobenzene	0.02000	0.0170		mg/L		85	62 - 128
2-Butanone (MEK)	0.02000	0.0216		mg/L		108	50 - 150
2-Hexanone	0.02000	0.0165		mg/L		82	50 - 150
4-Isopropyltoluene	0.02000	0.0165		mg/L		82	63 - 131
4-Methyl-2-pentanone (MIBK)	0.02000	0.0166		mg/L		83	62 - 128
Acetone	0.02000	0.0251		mg/L		125	71 - 194
Benzene	0.02000	0.0201		mg/L		101	64 - 133
Bromobenzene	0.02000	0.0186		mg/L		93	63 - 131
Bromochloromethane	0.02000	0.0216		mg/L		108	66 - 137
Bromodichloromethane	0.02000	0.0228		mg/L		114	65 - 135
Bromoethane	0.02000	0.0204		mg/L		102	67 - 137
Bromoform	0.02000	0.0204		mg/L		102	60 - 125
Bromomethane	0.02000	0.0229		mg/L		114	40 - 187
Carbon disulfide	0.02000	0.0191		mg/L		96	64 - 132
Carbon tetrachloride	0.02000	0.0220		mg/L		110	59 - 134
Chlorobenzene	0.02000	0.0182		mg/L		91	63 - 132
Chlorodibromomethane	0.02000	0.0205		mg/L		102	65 - 136
Chloroethane	0.02000	0.0201		mg/L		101	39 - 142
Chloroform	0.02000	0.0217		mg/L		109	80 - 120
Chloromethane	0.02000	0.0205		mg/L		103	64 - 134

Method: 8260B - Volatile Organic Compounds by SW846 8260B (Continued)

Lab Sample ID: 12E0312-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 12E0312 — **Prep Batch: 12E0312_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	0.02000	0.0203		mg/L		101	67 - 133
cis-1,3-Dichloropropene	0.02000	0.0207		mg/L		103	84 - 124
Dibromomethane	0.02000	0.0224		mg/L		112	65 - 137
Dichlorodifluoromethane	0.02000	0.0258		mg/L		129	16 - 139
Ethylbenzene	0.02000	0.0177		mg/L		89	77 - 116
Hexachlorobutadiene	0.02000	0.0163		mg/L		82	10 - 154
Isopropylbenzene	0.02000	0.0177		mg/L		88	63 - 130
Methyl tert-Butyl Ether	0.02000	0.0212		mg/L		106	55 - 114
Methylene chloride	0.02000	0.0210		mg/L		105	67 - 139
n-Butylbenzene	0.02000	0.0165		mg/L		82	43 - 134
n-Propylbenzene	0.02000	0.0178		mg/L		89	60 - 125
sec-Butylbenzene	0.02000	0.0164		mg/L		82	63 - 131
Styrene	0.02000	0.0178		mg/L		89	58 - 127
tert-Butylbenzene	0.02000	0.0169		mg/L		85	68 - 140
Tetrachloroethene	0.02000	0.0171		mg/L		85	47 - 146
Toluene	0.02000	0.0180		mg/L		90	80 - 123
trans-1,2-Dichloroethene	0.02000	0.0203		mg/L		101	63 - 132
trans-1,3-Dichloropropene	0.02000	0.0194		mg/L		97	70 - 145
Trichloroethene	0.02000	0.0198		mg/L		99	65 - 134
Trichlorofluoromethane	0.02000	0.0254		mg/L		127	44 - 132
nyl chloride	0.02000	0.0221		mg/L		110	53 - 139
Xylenes, total	0.06000	0.0539		mg/L		90	64 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4	*111*		*69 - 133*
4-Bromofluorobenzene	*101*		*66 - 124*
Dibromofluoromethane	*110*		*81 - 127*
Toluene-d8	*104*		*87 - 121*

Lab Sample ID: 12E0312-BSD1 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 12E0312 — **Prep Batch: 12E0312_P**

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.02000	0.0198		mg/L		99	66 - 137	5	20
1,1,1-Trichloroethane	0.02000	0.0225		mg/L		113	69 - 141	5	20
1,1,2,2-Tetrachloroethane	0.02000	0.0205		mg/L		103	61 - 128	6	20
1,1,2-Trichloroethane	0.02000	0.0207		mg/L		104	67 - 142	5	20
1,1-Dichloroethane	0.02000	0.0211		mg/L		105	65 - 134	5	20
1,1-Dichloroethene	0.02000	0.0211		mg/L		106	62 - 135	5	20
1,2,4-Trimethylbenzene	0.02000	0.0176		mg/L		88	66 - 138	4	20
1,2-Dibromoethane (EDB)	0.02000	0.0209		mg/L		105	67 - 141	8	20
1,2-Dichlorobenzene	0.02000	0.0182		mg/L		91	63 - 130	5	20
1,2-Dichloroethane	0.02000	0.0250		mg/L		125	66 - 137	6	20
1,2-Dichloropropane	0.02000	0.0212		mg/L		106	80 - 120	3	20
1,3-Dichlorobenzene	0.02000	0.0177		mg/L		89	63 - 131	3	20
1,4-Dichlorobenzene	0.02000	0.0178		mg/L		89	62 - 128	5	20
2-Butanone (MEK)	0.02000	0.0238		mg/L		119	50 - 150	10	20
2-Hexanone	0.02000	0.0173		mg/L		87	50 - 150	5	20

Method: 8260B - Volatile Organic Compounds by SW846 8260B (Continued)

Lab Sample ID: 12E0312-BSD1
Matrix: Water
Analysis Batch: 12E0312

Client Sample ID: Lab Control Sample D
Prep Type: Total
Prep Batch: 12E0312_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Isopropyltoluene	0.02000	0.0169		mg/L		84	63 - 131	2	20
4-Methyl-2-pentanone (MIBK)	0.02000	0.0181		mg/L		90	62 - 128	8	20
Acetone	0.02000	0.0265		mg/L		132	71 - 194	5	20
Benzene	0.02000	0.0208		mg/L		104	64 - 133	3	20
Bromobenzene	0.02000	0.0191		mg/L		96	63 - 131	3	20
Bromochloromethane	0.02000	0.0223		mg/L		112	66 - 137	3	20
Bromodichloromethane	0.02000	0.0238		mg/L		119	65 - 135	4	20
Bromoethane	0.02000	0.0210		mg/L		105	67 - 137	3	20
Bromoform	0.02000	0.0220		mg/L		110	60 - 125	7	20
Bromomethane	0.02000	0.0238		mg/L		119	40 - 187	4	20
Carbon disulfide	0.02000	0.0198		mg/L		99	64 - 132	3	20
Carbon tetrachloride	0.02000	0.0221		mg/L		111	59 - 134	0.7	20
Chlorobenzene	0.02000	0.0188		mg/L		94	63 - 132	4	20
Chlorodibromomethane	0.02000	0.0219		mg/L		109	65 - 136	6	20
Chloroethane	0.02000	0.0209		mg/L		105	39 - 142	4	20
Chloroform	0.02000	0.0222		mg/L		111	80 - 120	2	20
Chloromethane	0.02000	0.0213		mg/L		106	64 - 134	4	20
cis-1,2-Dichloroethene	0.02000	0.0212		mg/L		106	67 - 133	4	20
cis-1,3-Dichloropropene	0.02000	0.0218		mg/L		109	84 - 124	5	20
Dibromomethane	0.02000	0.0237		mg/L		118	65 - 137	6	20
Dichlorodifluoromethane	0.02000	0.0274		mg/L		137	16 - 139	6	[illegible]
Ethylbenzene	0.02000	0.0182		mg/L		91	77 - 116	3	[illegible]
Hexachlorobutadiene	0.02000	0.0164		mg/L		82	10 - 154	0.6	20
Isopropylbenzene	0.02000	0.0182		mg/L		91	63 - 130	3	20
Methyl tert-Butyl Ether	0.02000	0.0227		mg/L		113	55 - 114	7	20
Methylene chloride	0.02000	0.0216		mg/L		108	67 - 139	3	20
n-Butylbenzene	0.02000	0.0169		mg/L		85	43 - 134	3	20
n-Propylbenzene	0.02000	0.0183		mg/L		91	60 - 125	2	20
sec-Butylbenzene	0.02000	0.0170		mg/L		85	63 - 131	4	20
Styrene	0.02000	0.0184		mg/L		92	58 - 127	3	20
tert-Butylbenzene	0.02000	0.0175		mg/L		87	68 - 140	3	20
Tetrachloroethene	0.02000	0.0174		mg/L		87	47 - 146	2	20
Toluene	0.02000	0.0184		mg/L		92	80 - 123	2	20
trans-1,2-Dichloroethene	0.02000	0.0210		mg/L		105	63 - 132	4	20
trans-1,3-Dichloropropene	0.02000	0.0201		mg/L		101	70 - 145	4	20
Trichloroethene	0.02000	0.0201		mg/L		100	65 - 134	2	20
Trichlorofluoromethane	0.02000	0.0269	L	mg/L		134	44 - 132	6	20
Vinyl chloride	0.02000	0.0233		mg/L		116	53 - 139	5	20
Xylenes, total	0.06000	0.0555		mg/L		92	64 - 132	3	20

Surrogate	*LCS Dup %Recovery*	*LCS Dup Qualifier*	*Limits*
1,2-Dichloroethane-d4	*109*		*69 - 133*
4-Bromofluorobenzene	*102*		*66 - 124*
Dibromofluoromethane	*112*		*81 - 127*
Toluene-d8	*104*		*87 - 121*

Method: 8260B - Volatile Organic Compounds by SW846 8260B (Continued)

Lab Sample ID: 12E0312-MS1
Matrix: Water
Analysis Batch: 12E0312

Client Sample ID: TMW-1
Prep Type: Total
Prep Batch: 12E0312_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		0.02000	0.0185		mg/L		93	66 - 137
1,1,1-Trichloroethane	ND		0.02000	0.0220		mg/L		110	69 - 141
1,1,2,2-Tetrachloroethane	ND		0.02000	0.0182		mg/L		91	61 - 128
1,1,2-Trichloroethane	ND		0.02000	0.0184		mg/L		92	67 - 142
1,1-Dichloroethane	ND		0.02000	0.0201		mg/L		101	65 - 134
1,1-Dichloroethene	ND		0.02000	0.0209		mg/L		104	62 - 135
1,2,4-Trimethylbenzene	ND		0.02000	0.0174		mg/L		87	66 - 138
1,2-Dibromoethane (EDB)	ND		0.02000	0.0189		mg/L		95	67 - 141
1,2-Dichlorobenzene	ND		0.02000	0.0172		mg/L		86	63 - 130
1,2-Dichloroethane	ND		0.02000	0.0228		mg/L		114	66 - 137
1,2-Dichloropropane	ND		0.02000	0.0199		mg/L		100	80 - 120
1,3-Dichlorobenzene	ND		0.02000	0.0174		mg/L		87	63 - 131
1,4-Dichlorobenzene	ND		0.02000	0.0172		mg/L		86	62 - 128
2-Butanone (MEK)	ND		0.02000	0.0216		mg/L		108	50 - 150
2-Hexanone	ND		0.02000	0.0156		mg/L		78	50 - 150
4-Isopropyltoluene	ND		0.02000	0.0173		mg/L		87	63 - 131
4-Methyl-2-pentanone (MIBK)	ND		0.02000	0.0162		mg/L		81	62 - 128
Acetone	0.00494	J	0.02000	0.0255		mg/L		103	71 - 194
Benzene	ND		0.02000	0.0201		mg/L		100	64 - 133
Bromobenzene	ND		0.02000	0.0181		mg/L		90	63 - 131
Bromochloromethane	ND		0.02000	0.0207		mg/L		104	66 - 137
Bromodichloromethane	ND		0.02000	0.0220		mg/L		110	65 - 135
Bromoethane	ND		0.02000	0.0207		mg/L		104	67 - 137
Bromoform	ND		0.02000	0.0189		mg/L		95	60 - 125
Bromomethane	ND		0.02000	0.0234		mg/L		117	40 - 187
Carbon disulfide	ND		0.02000	0.0200		mg/L		100	64 - 132
Carbon tetrachloride	ND		0.02000	0.0227		mg/L		114	59 - 134
Chlorobenzene	ND		0.02000	0.0182		mg/L		91	63 - 132
Chlorodibromomethane	ND		0.02000	0.0198		mg/L		99	65 - 136
Chloroethane	ND		0.02000	0.0208		mg/L		104	39 - 142
Chloroform	ND		0.02000	0.0214		mg/L		107	80 - 120
Chloromethane	ND		0.02000	0.0209		mg/L		104	64 - 134
cis-1,2-Dichloroethene	ND		0.02000	0.0199		mg/L		99	67 - 133
cis-1,3-Dichloropropene	ND		0.02000	0.0200		mg/L		100	84 - 124
Dibromomethane	ND		0.02000	0.0217		mg/L		109	65 - 137
Dichlorodifluoromethane	ND		0.02000	0.0283	M7	mg/L		141	16 - 139
Ethylbenzene	ND		0.02000	0.0182		mg/L		91	77 - 116
Hexachlorobutadiene	ND		0.02000	0.0173		mg/L		86	10 - 154
Isopropylbenzene	ND		0.02000	0.0182		mg/L		91	63 - 130
Methyl tert-Butyl Ether	ND		0.02000	0.0202		mg/L		101	55 - 114
Methylene chloride	ND		0.02000	0.0204		mg/L		102	67 - 139
n-Butylbenzene	ND		0.02000	0.0174		mg/L		87	43 - 134
n-Propylbenzene	ND		0.02000	0.0183		mg/L		91	60 - 125
sec-Butylbenzene	ND		0.02000	0.0173		mg/L		87	63 - 131
Styrene	ND		0.02000	0.0177		mg/L		88	58 - 127
tert-Butylbenzene	ND		0.02000	0.0178		mg/L		89	68 - 140
Tetrachloroethene	ND		0.02000	0.0175		mg/L		88	47 - 146
Toluene	ND		0.02000	0.0182		mg/L		91	80 - 123
trans-1,2-Dichloroethene	ND		0.02000	0.0206		mg/L		103	63 - 132

Method: 8260B - Volatile Organic Compounds by SW846 8260B (Continued)

Lab Sample ID: 12E0312-MS1
Matrix: Water
Analysis Batch: 12E0312

Client Sample ID: TMW-
Prep Type: Total
Prep Batch: 12E0312_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	ND		0.02000	0.0186		mg/L		93	70 - 145
Trichloroethene	ND		0.02000	0.0200		mg/L		100	65 - 134
Trichlorofluoromethane	ND		0.02000	0.0270	M7	mg/L		135	44 - 132
Vinyl chloride	ND		0.02000	0.0238		mg/L		119	53 - 139
Xylenes, total	ND		0.06000	0.0548		mg/L		91	64 - 132

Surrogate	*Matrix Spike %Recovery*	*Matrix Spike Qualifier*	*Limits*
1,2-Dichloroethane-d4	*109*		*69 - 133*
4-Bromofluorobenzene	*100*		*66 - 124*
Dibromofluoromethane	*111*		*81 - 127*
Toluene-d8	*102*		*87 - 121*

Lab Sample ID: 12E0312-MSD1
Matrix: Water
Analysis Batch: 12E0312

Client Sample ID: TMW-1
Prep Type: Total
Prep Batch: 12E0312_P

Analyte	Sample Result	Sample Qualifier	Spike Added	ıtrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		0.02000	0.0190		mg/L		95	66 - 137	3	20
1,1,1-Trichloroethane	ND		0.02000	0.0226		mg/L		113	69 - 141	3	20
1,1,2,2-Tetrachloroethane	ND		0.02000	0.0193		mg/L		97	61 - 128	6	20
1,1,2-Trichloroethane	ND		0.02000	0.0198		mg/L		99	67 - 142	7	
1,1-Dichloroethane	ND		0.02000	0.0209		mg/L		104	65 - 134	3	20
1,1-Dichloroethene	ND		0.02000	0.0215		mg/L		108	62 - 135	3	20
1,2,4-Trimethylbenzene	ND		0.02000	0.0173		mg/L		87	66 - 138	0.4	20
1,2-Dibromoethane (EDB)	ND		0.02000	0.0199		mg/L		99	67 - 141	5	20
1,2-Dichlorobenzene	ND		0.02000	0.0179		mg/L		89	63 - 130	4	20
1,2-Dichloroethane	ND		0.02000	0.0242		mg/L		121	66 - 137	6	20
1,2-Dichloropropane	ND		0.02000	0.0209		mg/L		105	80 - 120	5	20
1,3-Dichlorobenzene	ND		0.02000	0.0175		mg/L		88	63 - 131	0.7	20
1,4-Dichlorobenzene	ND		0.02000	0.0174		mg/L		87	62 - 128	1	20
2-Butanone (MEK)	ND		0.02000	0.0226		mg/L		113	50 - 150	5	20
2-Hexanone	ND		0.02000	0.0176		mg/L		88	50 - 150	12	20
4-Isopropyltoluene	ND		0.02000	0.0170		mg/L		85	63 - 131	2	20
4-Methyl-2-pentanone (MIBK)	ND		0.02000	0.0176		mg/L		88	62 - 128	8	20
Acetone	0.00494	J	0.02000	0.0282		mg/L		116	71 - 194	10	20
Benzene	ND		0.02000	0.0208		mg/L		104	64 - 133	4	20
Bromobenzene	ND		0.02000	0.0185		mg/L		93	63 - 131	3	20
Bromochloromethane	ND		0.02000	0.0226		mg/L		113	66 - 137	9	20
Bromodichloromethane	ND		0.02000	0.0237		mg/L		119	65 - 135	8	20
Bromoethane	ND		0.02000	0.0210		mg/L		105	67 - 137	1	20
Bromoform	ND		0.02000	0.0199		mg/L		99	60 - 125	5	20
Bromomethane	ND		0.02000	0.0235		mg/L		118	40 - 187	0.4	20
Carbon disulfide	ND		0.02000	0.0204		mg/L		102	64 - 132	2	20
Carbon tetrachloride	ND		0.02000	0.0233		mg/L		116	59 - 134	2	20
Chlorobenzene	ND		0.02000	0.0185		mg/L		92	63 - 132	2	20
Chlorodibromomethane	ND		0.02000	0.0206		mg/L		103	65 - 136	4	20
Chloroethane	ND		0.02000	0.0207		mg/L		104	39 - 142	0.4	
Chloroform	ND		0.02000	0.0223		mg/L		111	80 - 120	4	20
Chloromethane	ND		0.02000	0.0216		mg/L		108	64 - 134	4	20

Method: 8260B - Volatile Organic Compounds by SW846 8260B (Continued)

Lab Sample ID: 12E0312-MSD1
Matrix: Water
Analysis Batch: 12E0312

Client Sample ID: TMW-1
Prep Type: Total
Prep Batch: 12E0312_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	ND		0.02000	0.0213		mg/L		106	67 - 133	7	20
cis-1,3-Dichloropropene	ND		0.02000	0.0212		mg/L		106	84 - 124	6	20
Dibromomethane	ND		0.02000	0.0230		mg/L		115	65 - 137	6	20
Dichlorodifluoromethane	ND		0.02000	0.0289	M7	mg/L		145	16 - 139	2	20
Ethylbenzene	ND		0.02000	0.0183		mg/L		91	77 - 116	0.4	20
Hexachlorobutadiene	ND		0.02000	0.0167		mg/L		83	10 - 154	4	20
Isopropylbenzene	ND		0.02000	0.0182		mg/L		91	63 - 130	0.2	20
Methyl tert-Butyl Ether	ND		0.02000	0.0223		mg/L		111	55 - 114	10	20
Methylene chloride	ND		0.02000	0.0214		mg/L		107	67 - 139	5	20
n-Butylbenzene	ND		0.02000	0.0170		mg/L		85	43 - 134	2	20
n-Propylbenzene	ND		0.02000	0.0184		mg/L		92	60 - 125	0.8	20
sec-Butylbenzene	ND		0.02000	0.0173		mg/L		86	63 - 131	0.3	20
Styrene	ND		0.02000	0.0177		mg/L		89	58 - 127	0.4	20
tert-Butylbenzene	ND		0.02000	0.0175		mg/L		87	68 - 140	2	20
Tetrachloroethene	ND		0.02000	0.0174		mg/L		87	47 - 146	0.5	20
Toluene	ND		0.02000	0.0182		mg/L		91	80 - 123	0.2	20
trans-1,2-Dichloroethene	ND		0.02000	0.0211		mg/L		106	63 - 132	2	20
trans-1,3-Dichloropropene	ND		0.02000	0.0196		mg/L		98	70 - 145	5	20
Trichloroethene	ND		0.02000	0.0206		mg/L		103	65 - 134	3	20
Trichlorofluoromethane	ND		0.02000	0.0275	M7	mg/L		138	44 - 132	2	20
nyl chloride	ND		0.02000	0.0240		mg/L		120	53 - 139	1	20
Xylenes, total	ND		0.06000	0.0548		mg/L		91	64 - 132	0.03	20

Surrogate	*Matrix Spike Dup %Recovery*	*Matrix Spike Dup Qualifier*	*Limits*
1,2-Dichloroethane-d4	*109*		*69 - 133*
4-Bromofluorobenzene	*100*		*66 - 124*
Dibromofluoromethane	*114*		*81 - 127*
Toluene-d8	*104*		*87 - 121*

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP

Lab Sample ID: 12E0311-BLK1
Matrix: Water
Analysis Batch: 12E0311

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 12E0311_P

Analyte	Blank Result	Blank Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0100	0.000840	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
1,2-Diphenylhydrazine	ND		0.0100	0.000978	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2,4,5-Trichlorophenol	ND		0.0100	0.00115	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2,4,6-Trichlorophenol	ND		0.0100	0.00109	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2,4-Dichlorophenol	ND		0.0100	0.00103	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2,4-Dimethylphenol	ND		0.0100	0.00190	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2,4-Dinitrophenol	ND		0.0500	0.00374	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2,4-Dinitrotoluene	ND		0.0100	0.00288	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2,6-Dinitrotoluene	ND		0.0100	0.00103	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Chloronaphthalene	ND		0.0100	0.00146	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
-Chlorophenol	ND		0.0100	0.00149	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2-Methylnaphthalene	ND		0.0100	0.000969	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2-Methylphenol	ND		0.0100	0.00182	mg/L		05/24/12 17:00	05/30/12 11:28	1.00

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP (Continued)

Lab Sample ID: 12E0311-BLK1
Matrix: Water
Analysis Batch: 12E0311

Client Sample ID: Method Bla
Prep Type: Total
Prep Batch: 12E0311_P

Analyte	Blank Result	Blank Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		0.0500	0.00119	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
2-Nitrophenol	ND		0.0100	0.00105	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
3 & 4 Methylphenol	ND		0.0200	0.00258	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
3,3'-Dichlorobenzidine	ND		0.0500	0.0100	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
3-Nitroaniline	ND		0.0500	0.00122	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
4,6-Dinitro-2-methylphenol	ND		0.0500	0.00356	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
4-Bromophenyl phenyl ether	ND		0.0100	0.000933	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
4-Chloro-3-methylphenol	ND		0.0100	0.00107	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
4-Chloroaniline	ND		0.0100	0.00600	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
4-Chlorophenyl phenyl ether	ND		0.0100	0.00144	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
4-Nitroaniline	ND		0.0500	0.00109	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
4-Nitrophenol	ND		0.0500	0.00410	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Acenaphthene	ND		0.0100	0.00110	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Acenaphthylene	ND		0.0100	0.000905	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Anthracene	ND		0.0100	0.00113	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Benzo[a]anthracene	ND		0.0100	0.00112	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Benzo[a]pyrene	ND		0.0100	0.00111	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Benzo[b]fluoranthene	ND		0.0100	0.000788	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Benzo[g,h,i]perylene	ND		0.0100	0.000762	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Benzo[k]fluoranthene	ND		0.0100	0.00123	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Bis(2-chloroethoxy)methane	ND		0.0100	0.00113	mg/L		05/24/12 17:00	05/30/12 11:28	1
Bis(2-chloroethyl)ether	ND		0.0100	0.000544	mg/L		05/24/12 17:00	05/30/12 11:28	1
Bis(2-chloroisopropyl) ether	ND		0.0100	0.00122	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Bis(2-ethylhexyl) phthalate	ND		0.0100	0.00274	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Butyl benzyl phthalate	ND		0.0100	0.000987	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Chrysene	ND		0.0100	0.00183	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Dibenz[a,h]anthracene	ND		0.0100	0.00139	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Dibenzofuran	ND		0.0100	0.00105	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Diethyl phthalate	ND		0.0100	0.00147	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Dimethyl phthalate	ND		0.0100	0.00126	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Di-n-butyl phthalate	ND		0.0100	0.00113	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Di-n-octyl phthalate	ND		0.0100	0.00180	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Diphenylamine	ND		0.0100	0.000936	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Fluoranthene	ND		0.0100	0.000921	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Fluorene	ND		0.0100	0.00101	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Hexachlorobenzene	ND		0.0100	0.00147	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Hexachlorobutadiene	ND		0.0100	0.00128	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Hexachlorocyclopentadiene	ND		0.0500	0.00600	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Hexachloroethane	ND		0.0100	0.000940	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Isophorone	ND		0.0100	0.00109	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Naphthalene	ND		0.0100	0.000876	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Nitrobenzene	ND		0.0100	0.00112	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
N-Nitrosodi-n-propylamine	ND		0.0100	0.00104	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
N-Nitrosodiphenylamine	ND		0.0100	0.000936	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Pentachloroethane	ND		0.0100	0.000672	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Pentachlorophenol	ND		0.0500	0.00544	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Phenanthrene	ND		0.0100	0.000998	mg/L		05/24/12 17:00	05/30/12 11:28	1
Phenol	ND		0.0100	0.00214	mg/L		05/24/12 17:00	05/30/12 11:28	1
Pyrene	ND		0.0100	0.000917	mg/L		05/24/12 17:00	05/30/12 11:28	1.00
Pyridine	ND		0.0100	0.00238	mg/L		05/24/12 17:00	05/30/12 11:28	1.00

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP (Continued)

Lab Sample ID: 12E0311-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 12E0311 — **Prep Batch: 12E0311_P**

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5	86		45 - 116	05/24/12 17:00	05/30/12 11:28	1.00
2,4,6-Tribromophenol	89		51 - 130	05/24/12 17:00	05/30/12 11:28	1.00
2-Fluorobiphenyl	88		58 - 116	05/24/12 17:00	05/30/12 11:28	1.00
2-Fluorophenol	85		44 - 114	05/24/12 17:00	05/30/12 11:28	1.00
Nitrobenzene-d5	85		52 - 114	05/24/12 17:00	05/30/12 11:28	1.00
Terphenyl-d14	101		64 - 126	05/24/12 17:00	05/30/12 11:28	1.00

Lab Sample ID: 12E0311-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 12E0311 — **Prep Batch: 12E0311_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	0.05000	0.0454		mg/L		91	63 - 104
1,2-Diphenylhydrazine	0.05000	0.0458		mg/L		92	65 - 115
2,4,5-Trichlorophenol	0.05000	0.0462		mg/L		92	56 - 109
2,4,6-Trichlorophenol	0.05000	0.0457		mg/L		91	62 - 106
2,4-Dichlorophenol	0.05000	0.0464		mg/L		93	64 - 106
2,4-Dimethylphenol	0.05000	0.0268		mg/L		54	17 - 97
2,4-Dinitrophenol	0.05000	0.0754	L	mg/L		151	46 - 115
2,4-Dinitrotoluene	0.05000	0.0503		mg/L		101	55 - 113
2,6-Dinitrotoluene	0.05000	0.0474		mg/L		95	61 - 106
2-Chloronaphthalene	0.05000	0.0514		mg/L		103	62 - 112
2-Chlorophenol	0.05000	0.0470		mg/L		94	61 - 106
2-Methylnaphthalene	0.05000	0.0492		mg/L		98	62 - 107
2-Methylphenol	0.05000	0.0436		mg/L		87	57 - 106
2-Nitroaniline	0.05000	0.0456	J	mg/L		91	58 - 113
2-Nitrophenol	0.05000	0.0461		mg/L		92	63 - 107
3 & 4 Methylphenol	0.05000	0.0461		mg/L		92	62 - 108
3,3'-Dichlorobenzidine	0.05000	0.0467	J	mg/L		93	22 - 121
3-Nitroaniline	0.05000	0.0493	J	mg/L		99	43 - 124
4,6-Dinitro-2-methylphenol	0.05000	0.0606	L	mg/L		121	65 - 114
4-Bromophenyl phenyl ether	0.05000	0.0530		mg/L		106	60 - 116
4-Chloro-3-methylphenol	0.05000	0.0421		mg/L		84	64 - 105
4-Chloroaniline	0.05000	0.0395		mg/L		79	35 - 110
4-Chlorophenyl phenyl ether	0.05000	0.0514		mg/L		103	57 - 110
4-Nitroaniline	0.05000	0.0479	J	mg/L		96	48 - 130
4-Nitrophenol	0.05000	0.0389	J	mg/L		78	46 - 122
Acenaphthene	0.05000	0.0510		mg/L		102	67 - 105
Acenaphthylene	0.05000	0.0533	L	mg/L		107	65 - 106
Anthracene	0.05000	0.0499		mg/L		100	60 - 108
Benzo[a]anthracene	0.05000	0.0476		mg/L		95	63 - 109
Benzo[a]pyrene	0.05000	0.0427		mg/L		85	64 - 104
Benzo[b]fluoranthene	0.05000	0.0444		mg/L		89	59 - 108
Benzo[g,h,i]perylene	0.05000	0.0502		mg/L		100	55 - 124
Benzo[k]fluoranthene	0.05000	0.0530		mg/L		106	57 - 125
Bis(2-chloroethoxy)methane	0.05000	0.0487		mg/L		97	56 - 112
Bis(2-chloroethyl)ether	0.05000	0.0417		mg/L		83	55 - 110
Bis(2-chloroisopropyl) ether	0.05000	0.0479		mg/L		96	54 - 112
Bis(2-ethylhexyl) phthalate	0.05000	0.0456		mg/L		91	10 - 174

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP (Continued)

Lab Sample ID: 12E0311-BS1
Matrix: Water
Analysis Batch: 12E0311

Client Sample ID: Lab Control Samp
Prep Type: Total
Prep Batch: 12E0311_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Butyl benzyl phthalate	0.05000	0.0430		mg/L		86	59 - 109
Chrysene	0.05000	0.0486		mg/L		97	65 - 111
Dibenz[a,h]anthracene	0.05000	0.0459		mg/L		92	60 - 118
Dibenzofuran	0.05000	0.0530		mg/L		106	65 - 108
Diethyl phthalate	0.05000	0.0508		mg/L		102	61 - 108
Dimethyl phthalate	0.05000	0.0490		mg/L		98	65 - 105
Di-n-butyl phthalate	0.05000	0.0497		mg/L		99	60 - 110
Di-n-octyl phthalate	0.05000	0.0438		mg/L		88	59 - 113
Diphenylamine	0.05000	0.0425		mg/L		85	47 - 92
Fluoranthene	0.05000	0.0518		mg/L		104	65 - 112
Fluorene	0.05000	0.0532		mg/L		106	66 - 106
Hexachlorobenzene	0.05000	0.0514		mg/L		103	65 - 108
Hexachlorobutadiene	0.05000	0.0501		mg/L		100	59 - 105
Hexachlorocyclopentadiene	0.05000	0.0225	J	mg/L		45	10 - 91
Hexachloroethane	0.05000	0.0475		mg/L		95	56 - 112
Isophorone	0.05000	0.0469		mg/L		94	64 - 112
Naphthalene	0.05000	0.0504		mg/L		101	61 - 111
Nitrobenzene	0.05000	0.0410		mg/L		82	61 - 108
N-Nitrosodi-n-propylamine	0.05000	0.0496		mg/L		99	53 - 113
N-Nitrosodiphenylamine	0.05000	0.0425		mg/L		85	46 - 92
Pentachloroethane	0.05000	0.0455		mg/L		91	58 - 115
Pentachlorophenol	0.05000	0.0535		mg/L		107	56 - 114
Phenanthrene	0.05000	0.0535		mg/L		107	60 - 112
Phenol	0.05000	0.0470		mg/L		94	54 - 124
Pyrene	0.05000	0.0503		mg/L		101	64 - 108
Pyridine	0.05000	0.00608	L4 J	mg/L		12	18 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Phenol-d5	*96*		*45 - 116*
2,4,6-Tribromophenol	*102*		*51 - 130*
2-Fluorobiphenyl	*95*		*58 - 116*
2-Fluorophenol	*91*		*44 - 114*
Nitrobenzene-d5	*94*		*52 - 114*
Terphenyl-d14	*102*		*64 - 126*

Lab Sample ID: 12E0311-MS1
Matrix: Water
Analysis Batch: 12E0311

Client Sample ID: TMW-1
Prep Type: Total
Prep Batch: 12E0311_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		0.05000	0.0412		mg/L		82	63 - 104
1,2-Diphenylhydrazine	ND		0.05000	0.0436		mg/L		87	65 - 115
2,4,5-Trichlorophenol	ND		0.05000	0.0452		mg/L		90	56 - 109
2,4,6-Trichlorophenol	ND		0.05000	0.0446		mg/L		89	62 - 106
2,4-Dichlorophenol	ND		0.05000	0.0432		mg/L		86	64 - 106
2,4-Dimethylphenol	ND		0.05000	0.0211		mg/L		42	17 - 97
2,4-Dinitrophenol	ND		0.05000	0.0803	M7	mg/L		161	46 - 115
2,4-Dinitrotoluene	ND		0.05000	0.0483		mg/L		97	55 - 113
2,6-Dinitrotoluene	ND		0.05000	0.0460		mg/L		92	61 - 106

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP (Continued)

Lab Sample ID: 12E0311-MS1
Matrix: Water
Analysis Batch: 12E0311

Client Sample ID: TMW-1
Prep Type: Total
Prep Batch: 12E0311_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	ND		0.05000	0.0484		mg/L		97	62 - 112
2-Chlorophenol	ND		0.05000	0.0429		mg/L		86	61 - 106
2-Methylnaphthalene	ND		0.05000	0.0458		mg/L		92	62 - 107
2-Methylphenol	ND		0.05000	0.0418		mg/L		84	57 - 106
2-Nitroaniline	ND		0.05000	0:0378	J	mg/L		76	58 - 113
2-Nitrophenol	ND		0.05000	0.0433		mg/L		87	63 - 107
3 & 4 Methylphenol	ND		0.05000	0.0427		mg/L		85	62 - 108
3,3'-Dichlorobenzidine	ND		0.05000	0.0189	J	mg/L		38	22 - 121
3-Nitroaniline	ND		0.05000	0.0385	J	mg/L		77	43 - 124
4,6-Dinitro-2-methylphenol	ND		0.05000	0.0608	M7	mg/L		122	65 - 114
4-Bromophenyl phenyl ether	ND		0.05000	0.0495		mg/L		99	60 - 116
4-Chloro-3-methylphenol	ND		0.05000	0.0403		mg/L		81	64 - 105
4-Chloroaniline	ND		0.05000	0.0314		mg/L		63	35 - 110
4-Chlorophenyl phenyl ether	ND		0.05000	0.0496		mg/L		99	57 - 110
4-Nitroaniline	ND		0.05000	0.0297	J	mg/L		59	48 - 130
4-Nitrophenol	ND		0.05000	0.0411	J	mg/L		82	46 - 122
Acenaphthene	ND		0.05000	0.0481		mg/L		96	67 - 105
Acenaphthylene	ND		0.05000	0.0503		mg/L		101	65 - 106
Anthracene	ND		0.05000	0.0475		mg/L		95	60 - 108
Benzo[a]anthracene	ND		0.05000	0.0458		mg/L		92	63 - 109
Benzo[a]pyrene	ND		0.05000	0.0402		mg/L		80	64 - 104
Benzo[b]fluoranthene	ND		0.05000	0.0427		mg/L		85	59 - 108
Benzo[g,h,i]perylene	ND		0.05000	0.0479		mg/L		96	55 - 124
Benzo[k]fluoranthene	ND		0.05000	0.0506		mg/L		101	57 - 125
Bis(2-chloroethoxy)methane	ND		0.05000	0.0455		mg/L		91	56 - 112
Bis(2-chloroethyl)ether	ND		0.05000	0.0396		mg/L		79	55 - 110
Bis(2-chloroisopropyl) ether	ND		0.05000	0.0442		mg/L		88	54 - 112
Bis(2-ethylhexyl) phthalate	ND		0.05000	0.0452		mg/L		90	10 - 174
Butyl benzyl phthalate	ND		0.05000	0.0418		mg/L		84	59 - 109
Chrysene	ND		0.05000	0.0471		mg/L		94	65 - 111
Dibenz[a,h]anthracene	ND		0.05000	0.0431		mg/L		86	60 - 118
Dibenzofuran	ND		0.05000	0.0509		mg/L		102	65 - 108
Diethyl phthalate	ND		0.05000	0.0486		mg/L		97	61 - 108
Dimethyl phthalate	ND		0.05000	0.0478		mg/L		96	65 - 105
Di-n-butyl phthalate	0.00385	J	0.05000	0.0525		mg/L		97	60 - 110
Di-n-octyl phthalate	ND		0.05000	0.0428		mg/L		86	59 - 113
Diphenylamine	ND		0.05000	0.0418		mg/L		84	47 - 92
Fluoranthene	ND		0.05000	0.0499		mg/L		100	65 - 112
Fluorene	ND		0.05000	0.0508		mg/L		102	66 - 106
Hexachlorobenzene	ND		0.05000	0.0487		mg/L		97	65 - 108
Hexachlorobutadiene	ND		0.05000	0.0450		mg/L		90	59 - 105
Hexachlorocyclopentadiene	ND		0.05000	0.0197	J	mg/L		39	10 - 91
Hexachloroethane	ND		0.05000	0.0421		mg/L		84	56 - 112
Isophorone	ND		0.05000	0.0446		mg/L		89	64 - 112
Naphthalene	ND		0.05000	0.0462		mg/L		92	61 - 111
Nitrobenzene	ND		0.05000	0.0459		mg/L		92	61 - 108
N-Nitrosodi-n-propylamine	ND		0.05000	0.0461		mg/L		92	53 - 113
N-Nitrosodiphenylamine	ND		0.05000	0.0418		mg/L		84	46 - 92
Pentachloroethane	ND		0.05000	0.0409		mg/L		82	58 - 115
Pentachlorophenol	ND		0.05000	0.0546		mg/L		109	56 - 114

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP (Continued)

Lab Sample ID: 12E0311-MS1
Matrix: Water
Analysis Batch: 12E0311

Client Sample ID: TMW-
Prep Type: Total
Prep Batch: 12E0311_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Phenanthrene	ND		0.05000	0.0506		mg/L		101	60 - 112
Phenol	ND		0.05000	0.0472		mg/L		94	54 - 124
Pyrene	ND		0.05000	0.0483		mg/L		97	64 - 108
Pyridine	ND		0.05000	0.0296		mg/L		59	18 - 126

Surrogate	*Matrix Spike %Recovery*	*Matrix Spike Qualifier*	*Limits*
Phenol-d5	*89*		*45 - 116*
2,4,6-Tribromophenol	*102*		*51 - 130*
2-Fluorobiphenyl	*98*		*58 - 116*
2-Fluorophenol	*80*		*44 - 114*
Nitrobenzene-d5	*87*		*52 - 114*
Terphenyl-d14	*95*		*64 - 126*

Lab Sample ID: 12E0311-MSD1
Matrix: Water
Analysis Batch: 12E0311

Client Sample ID: TMW-1
Prep Type: Total
Prep Batch: 12E0311_P

Analyte	Sample Result	Sample Qualifier	Spike Added	trix Spike Dup Result	Matrix Spike Du Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		0.05000	0.0412		mg/L		82	63 - 104	0.2	30
1,2-Diphenylhydrazine	ND		0.05000	0.0428		mg/L		86	65 - 115	2	30
2,4,5-Trichlorophenol	ND		0.05000	0.0454		mg/L		91	56 - 109	0.3	
2,4,6-Trichlorophenol	ND		0.05000	0.0451		mg/L		90	62 - 106	1	30
2,4-Dichlorophenol	ND		0.05000	0.0425		mg/L		85	64 - 106	2	30
2,4-Dimethylphenol	ND		0.05000	0.0194		mg/L		39	17 - 97	8	30
2,4-Dinitrophenol	ND		0.05000	0.0811	M7	mg/L		162	46 - 115	1	30
2,4-Dinitrotoluene	ND		0.05000	0.0479		mg/L		96	55 - 113	0.8	30
2,6-Dinitrotoluene	ND		0.05000	0.0457		mg/L		91	61 - 106	0.6	30
2-Chloronaphthalene	ND		0.05000	0.0487		mg/L		97	62 - 112	0.4	30
2-Chlorophenol	ND		0.05000	0.0436		mg/L		87	61 - 106	2	30
2-Methylnaphthalene	ND		0.05000	0.0447		mg/L		89	62 - 107	2	30
2-Methylphenol	ND		0.05000	0.0405		mg/L		81	57 - 106	3	30
2-Nitroaniline	ND		0.05000	0.0369	J	mg/L		74	58 - 113	2	30
2-Nitrophenol	ND		0.05000	0.0432		mg/L		86	63 - 107	0.07	30
3 & 4 Methylphenol	ND		0.05000	0.0415		mg/L		83	62 - 108	3	30
3,3'-Dichlorobenzidine	ND		0.05000	0.0180	J	mg/L		36	22 - 121	5	30
3-Nitroaniline	ND		0.05000	0.0376	J	mg/L		75	43 - 124	2	30
4,6-Dinitro-2-methylphenol	ND		0.05000	0.0611	M7	mg/L		122	65 - 114	0.5	30
4-Bromophenyl phenyl ether	ND		0.05000	0.0481		mg/L		96	60 - 116	3	30
4-Chloro-3-methylphenol	ND		0.05000	0.0392		mg/L		78	64 - 105	3	30
4-Chloroaniline	ND		0.05000	0.0302		mg/L		60	35 - 110	4	30
4-Chlorophenyl phenyl ether	ND		0.05000	0.0487		mg/L		97	57 - 110	2	30
4-Nitroaniline	ND		0.05000	0.0289	J	mg/L		58	48 - 130	3	30
4-Nitrophenol	ND		0.05000	0.0422	J	mg/L		84	46 - 122	3	30
Acenaphthene	ND		0.05000	0.0471		mg/L		94	67 - 105	2	30
Acenaphthylene	ND		0.05000	0.0502		mg/L		100	65 - 106	0.3	30
Anthracene	ND		0.05000	0.0454		mg/L		91	60 - 108	4	30
Benzo[a]anthracene	ND		0.05000	0.0445		mg/L		89	63 - 109	3	
Benzo[a]pyrene	ND		0.05000	0.0380		mg/L		76	64 - 104	6	30
Benzo[b]fluoranthene	ND		0.05000	0.0433		mg/L		87	59 - 108	1	30

Method: 8270C - Acid and Base/Neutral Extractables by SW846 TRRP (Continued)

Lab Sample ID: 12E0311-MSD1 — **Client Sample ID: TMW-1**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 12E0311 — **Prep Batch: 12E0311_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[g,h,i]perylene	ND		0.05000	0.0463		mg/L		93	55 - 124	3	30
Benzo[k]fluoranthene	ND		0.05000	0.0459		mg/L		92	57 - 125	10	30
Bis(2-chloroethoxy)methane	ND		0.05000	0.0447		mg/L		89	56 - 112	2	30
Bis(2-chloroethyl)ether	ND		0.05000	0.0404		mg/L		81	55 - 110	2	30
Bis(2-chloroisopropyl) ether	ND		0.05000	0.0444		mg/L		89	54 - 112	0.6	30
Bis(2-ethylhexyl) phthalate	ND		0.05000	0.0414		mg/L		83	10 - 174	9	30
Butyl benzyl phthalate	ND		0.05000	0.0393		mg/L		79	59 - 109	6	30
Chrysene	ND		0.05000	0.0449		mg/L		90	65 - 111	5	30
Dibenz[a,h]anthracene	ND		0.05000	0.0417		mg/L		83	60 - 118	3	30
Dibenzofuran	ND		0.05000	0.0505		mg/L		101	65 - 108	1	30
Diethyl phthalate	ND		0.05000	0.0479		mg/L		96	61 - 108	2	30
Dimethyl phthalate	ND		0.05000	0.0466		mg/L		93	65 - 105	2	30
Di-n-butyl phthalate	0.00385	J	0.05000	0.0512		mg/L		95	60 - 110	3	30
Di-n-octyl phthalate	ND		0.05000	0.0406		mg/L		81	59 - 113	5	30
Diphenylamine	ND		0.05000	0.0408		mg/L		82	47 - 92	2	30
Fluoranthene	ND		0.05000	0.0485		mg/L		97	65 - 112	3	30
Fluorene	ND		0.05000	0.0503		mg/L		101	66 - 106	0.9	30
Hexachlorobenzene	ND		0.05000	0.0482		mg/L		96	65 - 108	1	30
Hexachlorobutadiene	ND		0.05000	0.0455		mg/L		91	59 - 105	1	30
Hexachlorocyclopentadiene	ND		0.05000	0.0191	J	mg/L		38	10 - 91	3	30
Hexachloroethane	ND		0.05000	0.0436		mg/L		87	56 - 112	3	30
Isophorone	ND		0.05000	0.0433		mg/L		87	64 - 112	3	30
Naphthalene	ND		0.05000	0.0459		mg/L		92	61 - 111	0.8	30
Nitrobenzene	ND		0.05000	0.0474		mg/L		95	61 - 108	3	30
N-Nitrosodi-n-propylamine	ND		0.05000	0.0450		mg/L		90	53 - 113	3	30
N-Nitrosodiphenylamine	ND		0.05000	0.0408		mg/L		82	46 - 92	2	30
Pentachloroethane	ND		0.05000	0.0423		mg/L		85	58 - 115	3	30
Pentachlorophenol	ND		0.05000	0.0544		mg/L		109	56 - 114	0.5	30
Phenanthrene	ND		0.05000	0.0470		mg/L		94	60 - 112	7	30
Phenol	ND		0.05000	0.0478		mg/L		96	54 - 124	1	30
Pyrene	ND		0.05000	0.0469		mg/L		94	64 - 108	3	30
Pyridine	ND		0.05000	0.0309		mg/L		62	18 - 126	4	30

Surrogate	*Matrix Spike Dup %Recovery*	*Matrix Spike Dup Qualifier*	*Limits*
Phenol-d5	*89*		*45 - 116*
2,4,6-Tribromophenol	*100*		*51 - 130*
2-Fluorobiphenyl	*99*		*58 - 116*
2-Fluorophenol	*83*		*44 - 114*
Nitrobenzene-d5	*86*		*52 - 114*
Terphenyl-d14	*90*		*64 - 126*

Method: 6020 - Total Metals by SW846 Series Methods

Lab Sample ID: 12E0345-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: V000342 — **Prep Batch: 12E0345_P**

Analyte	Blank Result	Blank Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.00100	0.0000448	mg/L		05/29/12 15:21	05/30/12 15:14	1.00

Method: 6020 - Total Metals by SW846 Series Methods (Continued)

Lab Sample ID: 12E0345-BLK1 — **Client Sample ID: Method Bla**
Matrix: Water — **Prep Type: Total**
Analysis Batch: V000342 — **Prep Batch: 12E0345_P**

Analyte	Blank Result	Blank Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.00100	0.0000120	mg/L		05/29/12 15:21	05/30/12 15:14	1.00
Chromium	ND		0.00100	0.000200	mg/L		05/29/12 15:21	05/30/12 15:14	1.00
Lead	0.0000150	J	0.00100	0.0000105	mg/L		05/29/12 15:21	05/30/12 15:14	1.00
Selenium	ND		0.00100	0.000156	mg/L		05/29/12 15:21	05/30/12 15:14	1.00
Silver	ND		0.00100	0.0000216	mg/L		05/29/12 15:21	05/30/12 15:14	1.00

Lab Sample ID: 12E0345-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: V000342 — **Prep Batch: 12E0345_P**

Analyte	Blank Result	Blank Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.000143	J	0.00100	0.0000234	mg/L		05/29/12 15:21	05/30/12 16:04	1.00

Lab Sample ID: 12E0345-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: V000342 — **Prep Batch: 12E0345_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.05000	0.0462		mg/L		92	80 - 120
Barium	0.05000	0.0447	B	mg/L		89	80 - 120
Cadmium	0.05000	0.0446		mg/L		89	80 - 120
Chromium	0.05000	0.0433		mg/L		87	80 - 120
Lead	0.05000	0.0453	B	mg/L		91	80 - 120
Selenium	0.05000	0.0480		mg/L		96	80 - 120
Silver	0.01000	0.00904		mg/L		90	80 - 120

Lab Sample ID: 12E0345-MS1 — **Client Sample ID: TMW-1**
Matrix: Water — **Prep Type: Total**
Analysis Batch: V000342 — **Prep Batch: 12E0345_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.00138	J	0.05000	0.0488		mg/L		95	75 - 125
Barium	0.0715	B	0.05000	0.122	B	mg/L		101	75 - 125
Cadmium	ND		0.05000	0.0464		mg/L		93	75 - 125
Chromium	0.00116	J	0.05000	0.0476		mg/L		93	75 - 125
Lead	ND		0.05000	0.0477	B	mg/L		95	75 - 125
Selenium	0.00114	J	0.05000	0.0496		mg/L		97	75 - 125
Silver	ND		0.01000	0.00952		mg/L		95	75 - 125

Lab Sample ID: 12E0345-MSD1 — **Client Sample ID: TMW-1**
Matrix: Water — **Prep Type: Total**
Analysis Batch: V000342 — **Prep Batch: 12E0345_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	trix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.00138	J	0.05000	0.0480		mg/L		93	75 - 125	2	20
Barium	0.0715	B	0.05000	0.120	B	mg/L		96	75 - 125	2	20
Cadmium	ND		0.05000	0.0460		mg/L		92	75 - 125	0.7	20
Chromium	0.00116	J	0.05000	0.0475		mg/L		93	75 - 125	0.2	
Lead	ND		0.05000	0.0469	B	mg/L		94	75 - 125	2	
Selenium	0.00114	J	0.05000	0.0473		mg/L		92	75 - 125	5	20
Silver	ND		0.01000	0.00938		mg/L		94	75 - 125	2	20

QC Sample Results

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

Method: 7470A - Total Metals by SW846 Series Methods

Lab Sample ID: 12F0007-BLK1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 12F0007 — **Prep Batch: 12F0007_P**

Analyte	Blank Result	Blank Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200	0.0000620	mg/L		05/31/12 19:00	06/01/12 12:52	1.00

Lab Sample ID: 12F0007-BS1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 12F0007 — **Prep Batch: 12F0007_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.005000	0.00540		mg/L		108	80 - 120

Lab Sample ID: 12F0007-MS1 — **Client Sample ID: TMW-1**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 12F0007 — **Prep Batch: 12F0007_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.002000	0.00218		mg/L		109	80 - 120

Lab Sample ID: 12F0007-MSD1 — **Client Sample ID: TMW-1**
Matrix: Water — **Prep Type: Total**
Analysis Batch: 12F0007 — **Prep Batch: 12F0007_P**

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.002000	0.00210		mg/L		105	80 - 120	4	20

Lab Chronicle

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

Client Sample ID: TB-20120518

Lab Sample ID: AVE0237-01

Date Collected: 05/18/12 07:00

Matrix: Wat

Date Received: 05/19/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	5030B MS		1.00	12E0312_P	05/24/12 08:47	DY	TAL AUS
Total	Analysis	8260B		1.00	12E0312	05/24/12 14:42	DY	TAL AUS

Client Sample ID: TMW-1

Lab Sample ID: AVE0237-02

Date Collected: 05/18/12 10:15

Matrix: Water

Date Received: 05/19/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	5030B MS		1.00	12E0312_P	05/24/12 08:47	DY	TAL AUS
Total	Analysis	8260B		1.00	12E0312	05/24/12 15:09	DY	TAL AUS
Total	Prep	3520C MS		1.00	12E0311_P	05/24/12 17:00	EF	TAL AUS
Total	Analysis	8270C		1.00	12E0311	05/30/12 13:40	LAT	TAL AUS
Total	Prep	3020A MS		1.00	12E0345_P	05/29/12 15:21	RHH	TAL AUS
Total	Analysis	6020		5.00	V000342	05/30/12 15:24	SFP	TAL AUS
Total	Prep	7470A / 245.1		1.00	12F0007_P	05/31/12 19:00	GWS	TAL AUS
Total	Analysis	7470A		1.00	12F0007	06/01/12 12:54	GWS	TAL AUS

Client Sample ID: DUP-20120518

Lab Sample ID: AVE0237-03

Date Collected: 05/18/12 11:15

Matrix: Wat

Date Received: 05/19/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	5030B MS		1.00	12E0312_P	05/24/12 08:47	DY	TAL AUS
Total	Analysis	8260B		1.00	12E0312	05/24/12 15:37	DY	TAL AUS
Total	Prep	3520C MS		1.00	12E0311_P	05/24/12 17:00	EF	TAL AUS
Total	Analysis	8270C		1.00	12E0311	05/30/12 14:02	LAT	TAL AUS
Total	Prep	3020A MS		1.00	12E0345_P	05/29/12 15:21	RHH	TAL AUS
Total	Analysis	6020		5.00	V000342	05/30/12 15:49	SFP	TAL AUS
Total	Prep	7470A / 245.1		1.00	12F0007_P	05/31/12 19:00	GWS	TAL AUS
Total	Analysis	7470A		1.00	12F0007	06/01/12 12:58	GWS	TAL AUS

Laboratory References:

TAL AUS = TestAmerica Austin, 14050 Summit Drive, Suite A100, Austin, TX 78728, TEL 512-244-0855

Method Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds by SW846 8260B		TAL AUS
8270C	Acid and Base/Neutral Extractables by SW846 TRRP		TAL AUS
6020	Total Metals by SW846 Series Methods		TAL AUS
7470A	Total Metals by SW846 Series Methods		TAL AUS

Protocol References:

Laboratory References:

TAL AUS = TestAmerica Austin, 14050 Summit Drive, Suite A100, Austin, TX 78728, TEL 512-244-0855

Certification Summary

Client: TITAN Engineering, Inc.
Project/Site: 583-01

TestAmerica Job ID: AVE0237

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Austin	Arkansas DEQ	State Program	6	88-0685
TestAmerica Austin	California	State Program	9	2411
TestAmerica Austin	Kansas	NELAC	7	E-10165
TestAmerica Austin	Louisiana	NELAC	6	30736
TestAmerica Austin	North Carolina DENR	State Program	4	302
TestAmerica Austin	Oklahoma	State Program	6	8720
TestAmerica Austin	Pennsylvania	NELAC	3	68-04085
TestAmerica Austin	South Carolina	State Program	4	82003
TestAmerica Austin	Texas	NELAC	6	T104704217-11-9
TestAmerica Austin	USDA	Federal		P330-08-00046
TestAmerica Austin	Virginia	NELAC	3	460219

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica – Austin Laboratory Chain of Custody Addendum **Work Order Number** AVE0237

RECEIVED BY: BJ CLIENT: TITAN Eng.

DATE/TIME RECEIVED: 5/19/12 0830 PROJECT: Al-Kel

UNPACKED DATE/TIME: 5/21/12 0930 LOGIN BY: BJ LOGIN REVIEWED BY: DM

Number of Shipping Containers Received with COC: 1

VOC SAMPLES: ☐ YES **(IF YES, GO TO SECTIONS 1.0, 2.0, 6.0, & 7.0)**

1.0 CONTAINERS EXAMINED UPON RECEIPT: BJ

Container Sealed: ☑ YES ☐ NO Custody Seal Present: ☑ YES ☐ NO Custody Seal Signed/Dated: ☑ YES ☐ NO

If seal not intact list air bill number of that container(s): _____

2.0 VOC CANISTERS EXAMINED UPON RECEIPT: _____

Canister Valves Closed: ☐ YES ☐ NO Canister Valves Capped: ☐ YES ☐ NO

Sample IDs match COC: ☐ YES ☐ NO Other Equipment Received: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO Can Size: ☐ 6L ☐ 1L Other: _____

Packing Material Used: (circle) None / Absorbent / Paper / Bubble Wrap

Samples received in Tedlar bags ☐ N/A ☐ YES ☐ NO

3.0 CONDITION OF BOTTLES/CONTAINERS **VERIFIED BY:** BJ

Sample IDs match COC: ☑ YES ☐ NO Bottles received intact: BJ 5/21/12 ☑ YES ☐ NO

See additional discrepancies/comments section: ☐ YES ☑ NO Samples received from USDA restricted area: ☐ YES ☑ NO

Chain-of-Custody form properly maintained: ☐ YES ☑ NO VOA trip blanks included: 2 ☑ N/A ☑ YES ☐ NO

4.0 SAMPLE TEMPERATURE UPON RECEIPT BY: BJ **IR THERMOMETER #:** ☑ P5 ☐ P7

Container(s) temperature: TB = Temp. Blank and/or SC = Sample Container CF = Correction Factor *[acceptable tolerance ≤6°C]*

TB ☑ SC ☐ Initial 2.4 CF -0.3	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF	TB ☐ SC ☐ Initial CF
Final 2.1	Final	Final	Final	Final	Final	Final	Final

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____ OK to analyze samples: ☑ YES ☐ NO

5.0 PRESERVATION CHECKS

PRESERVATION OF SAMPLES REQUIRED: ☐ N/A ☑ YES ☑ VOA Samples **VERIFIED BY:** BJ

NOTE: pH CHECK OF SAMPLES PERFORMED AT TIME OF ANALYSIS BY BENCH ANALYST

pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Cyanide samples checked for sulfides: ☐ YES ☐ NO

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Chlorine checked per specification (EPA 335.x & N.C.) ☐ YES ☐ NO Free chlorine present: ☐ YES ☐ NO

If preservation is outside acceptable limit, PM notified (_____PM) Date/Time: _____

Volatile samples filled completely: ☑ YES ☐ NO [if no, list ID and approx. amt. of headspace (>6mm) in Comments Section 7.0]

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____

Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

_____

8.0 CORRECTIVE ACTION:

Client's Name: _____ Informed verbally on: _____ By: _____

Client's Name: _____ Informed verbally on: _____ By: _____

Sample(s) processed "as is" comments: _____

Samples(s) on hold until: _____ If released, notify: _____

Project Management Login Review: Mark Salcke Date: 5/22/12

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE Revised 07/26/11

Test America

THE LEADER IN ENVIRONMENTAL TESTING

No. 25393

AU E0237

CHAIN OF CUSTODY RECORD

6/4/2012

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: TITAN Eng	PROJECT NAME/NUMBER: Al-Kel Alliance
SEND REPORT TO: Brian Sims	BILLING INFORMATION
ADDRESS: 2801 Network Blvd Ste 200 Frisco TX 75034	BILL TO: SAME AS Left
	ADDRESS:
PHONE: 469 365-1134	PHONE:
FAX:	FAX: PO NO: 583-01

LAB JOB NO.

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	VOC 8260	SVOC 8270	Metals 6020/7000	REMARKS/PRECAUTIONS
	TB-20120518	5-18-12	700	W	Voa	HCl	2	X			
	TMW-1		1015	W	V, L, P	HCl HNO3	15	X	X	X	
	Dup-20120518		1115	W	V, L, P	HCl HNO3	5	X	X	X	

SAMPLER: Brian Sims

SHIPMENT METHOD: Overnight

AIRBILL NO.:

REQUIRED TURNAROUND* ☐ SAME DAY ☐ 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☐ 5 DAYS ☐ 10 DAYS ☑ ROUTINE ☐ OTHER

1. RELINQUISHED BY:	DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE
SIGNATURE:	5-18-12	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY: Brian Sims TITAN	TIME 1115	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME
1. RECEIVED BY:	DATE	2. RECEIVED BY:	DATE	3. RECEIVED BY:	DATE
SIGNATURE: TITAN	5-18-12	SIGNATURE:	5/19/12	SIGNATURE:	
PRINTED NAME/COMPANY: Lyle Alsobrook TITAN	TIME 1115	PRINTED NAME/COMPANY: Bill Jenkins	TIME 0830	PRINTED NAME/COMPANY:	TIME

*RUSH TURNAROUND MAY REQUIRE SURCHARGE

TAL-8222-560 (0808)

TestAmerica
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone: 361.289.2673 /Fax: 361.289.2471

Appendix A Laboratory Data Package Cover Page

This data package is for Job No. AVE0237 and laboratory batch no(s): 12E0311,12E0312,12E0345,12F0007 and consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- ☑ R1 Field chain-of-custody documentation;
- ☑ R2 Sample identification cross-reference;
- ☑ R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC Chapter 5,
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- ☑ R4 Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- ☑ R5 Test reports/summary forms for blank samples;
- ☑ R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- ☑ R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- ☑ R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- ☑ R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix:
- ☑ R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC §25.6 and was last inspection by [ ] TCEQ or [ ] _____ on **(enter date of last inspection)**. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Neal Salcher	Neal Salcher	Project Manager	Monday, June 4, 2012
Name (Printed)	Signature	Official Title (Printed)	Date

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	TestAmerica Austin	LRC Date:	06/01/12
Project Name:	Al-Kel	Laboratory Job Number:	AVE0237
Reviewer Name:	RJL	Prep Batch Number(s):	12E0311,12E0312,12E0345,12F0007

# [1]	A [2]	Description	Yes	No	NA [3]	NR [4]	ER# [5]
R1		**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2		**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3		**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4		**Surrogate recovery data**					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5		**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6		**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?		X			A001
		Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7		**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			A002
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8		**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9		**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10		**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAP-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?		X			A003

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	TestAmerica Austin	LRC Date:	06/01/12
Project Name:	Al-Kel	Laboratory Job Number:	AVE0237
Reviewer Name:	RJL	Prep Batch Number(s):	12E0311,12E0312,12E0345,12F0007

R[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2		**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3		**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4		**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5		**Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6		**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7		**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8		**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?	X				
S9		**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			A004
0		**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11		**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12		**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13		**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14		**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15		**Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16		**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports

Laboratory Name:	TestAmerica Austin	LRC Date:	06/01/12
Project Name:	Al-Kel	Laboratory Job Number:	AVE0237
Reviewer Name:	RJL	Prep Batch Number(s):	12E0311,12E0312,12E0345,12F0007

ER# [1]	Description
A001	LCS Recovery for 2,4-Dinitrophenol (151%) was outside acceptance limits (46-115) in 12E0311-BS1 for 8270C TRRP - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted. LCS Recovery for 4,6-Dinitro-2-methylphenol (121%) was outside acceptance limits (65-114) in 12E0311-BS1 for 8270C TRRP - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted. LCS Recovery for Acenaphthylene (107%) was outside acceptance limits (65-114) in 12E0311-BS1 for 8270C TRRP - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted. LCS Recovery for Pyridine (12%) was outside acceptance limits (18-126) in 12E0311-BS1 for 8270C TRRP - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was below the acceptance limits. A low bias to sample results is indicated. LCS Recovery for Trichlorofluoromethane (134%) was outside acceptance limits (44-132) in 12E0312-BSD1 for 8260B TRRP - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
A002	Matrix Spike Recovery for 2,4-Dinitrophenol (161%) was outside acceptance limits (46-115) in 12E0311-MS1 for 8270C TRRP - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS). Matrix Spike Recovery for 4,6-Dinitro-2-methylphenol (122%) was outside acceptance limits (65-114) in 12E0311-MS1 for 8270C TRRP - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS). Matrix Spike Recovery for 2,4-Dinitrophenol (162%) was outside acceptance limits (46-115) in 12E0311-MSD1 for 8270C TRRP - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS). Matrix Spike Recovery for 4,6-Dinitro-2-methylphenol (122%) was outside acceptance limits (65-114) in 12E0311-MSD1 for 8270C TRRP - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS). Matrix Spike Recovery for Dichlorodifluoromethane (141%) was outside acceptance limits (16-139) in 12E0312-MS1 for 8260B TRRP - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS). Matrix Spike Recovery for Trichlorofluoromethane (135%) was outside acceptance limits (44-132) in 12E0312-MS1 for 8260B TRRP - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS). Matrix Spike Recovery for Dichlorodifluoromethane (145%) was outside acceptance limits (16-139) in 12E0312-MSD1 for 8260B TRRP - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS). Matrix Spike Recovery for Trichlorofluoromethane (138%) was outside acceptance limits (44-132) in 12E0312-MSD1 for 8260B TRRP - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).
A003	TestAmerica Austin is not currently Texas NELAC certified for Diphenylamine by 8270. We are in the process of adding additional analytes that the state did not originally offer for certification.
A004	Serial dilution analysis by 6020 was outside acceptance criteria for barium on sample AVE0237-02 in batch ID# 12E0345. Post spike analysis was acceptable.

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

RG-366/TRRP-13 December 2002

Detectability Check Standard (DCS)

Method: 6020
Matrix: Water
Date Analyzed: 02/29/12
Units: ug/L

ANALYTE	CURRENT SDL (ug/L)	SPIKE RANGE		SPIKE	MEAS VALUE
		MINIMUM	MAXIMUM		
Chromium	0.2	0.2	0.6	0.6	0.898
Arsenic	0.0448	0.0448	0.1344	0.132	0.16
Silver	0.0216	0.0216	0.0648	0.064	0.096
Cadmium	0.012	0.012	0.036	0.036	0.043
Barium	0.0234	0.0234	0.0702	0.056	0.13
Lead	0.0105	0.0105	0.0315	0.0315	0.109
Selenium	0.156	0.156	0.468	0.466	0.579

The Detectability Check Standard (DCS) meets the requirements as stated in TRRP-13, Section 2.1.2, Reportable Data, May 2010 Revision.

Detectability Check Standard (DCS)

Method: 7470
Matrix: Water
Date Analyzed: 03/23/12
Units: ug/L

ANALYTE	CURRENT SDL (ug/L)	SPIKE RANGE		SPIKE	MEAS VALUE
		MINIMUM	MAXIMUM		
Mercury	0.055	0.055	0.165	0.05	0.0604

SDL = Sample Detection Limit

The Detectability Check Standard (DCS) meets the requirements as stated in TRRP-13, Section 2.1.2, Reportable Data, May 2010 Revision.

Detectability Check Standard (DCS)

Method: 8260
Matrix: Water
Date: 01/11/12
Units: ug/L

ANALYTE	CURRENT SDL (ug/L)	SPIKE RANGE		SPIKE	MEAS VALUE
		MINIMUM	MAXIMUM		
Dichlorodifluoromethane	0.581	0.581	1.743	1	1.1545
Chloromethane (SPCC)	0.546	0.546	1.638	1	0.9453
Vinyl chloride (CCC)	0.537	0.537	1.611	1	1.0827
1,3-Butadiene	0.358	0.358	1.074	1	0.9994
Bromomethane	1.16	1.16	3.48	2	1.9033
Ethylene oxide	25	25	75	62.5	65.1148
Chloroethane	1.34	1.34	4.02	2	2.1541
Trichlorofluoromethane	0.573	0.573	1.719	1	1.1029
Ethyl ether	0.865	0.865	2.595	2	2.0772
Ethanol	35.5	35.5	106.5	50	51.152
1,1-Dichloroethene (CCC)	0.4267	0.4267	1.2801	1	1.0346
Carbon disulfide	0.383	0.383	1.149	1	1.0976
1,1,2-Trichlorotrifluoroethane	0.3819	0.3819	1.1457	1	1.0902
Propylene oxide	3.81	3.81	11.43	10	10.7221
Iodomethane	0.59	0.59	1.77	1	0.2967
Bromoethane	0.381	0.381	1.143	1	1.0274
Acrolein	3.78	3.78	11.34	10	10.6947
3-Chloropropene	0.3667	0.3667	1.1001	1	0.9266
Methylene chloride	0.4221	0.4221	1.2663	1	1.0531
Acetone	1.54	1.54	4.62	2	1.7918
trans-1,2-Dichloroethene	0.372	0.372	1.116	1	1.0272
Methyl acetate	1.95	1.95	5.85	5	5.3153
Hexane	0.602	0.602	1.806	1	1.1375
Methyl tert-butyl ether (MTBE)	0.336	0.336	1.008	1	1.0275
tert-Butyl alcohol	25	25	75	50	47.9819
Acetonitrile	12.7	12.7	38.1	25	26.0355
Isopropyl ether	0.3396	0.3396	1.0188	1	1.0018
2-Chloro-1,3-butadiene	0.3497	0.3497	1.0491	1	0.9268
1,1-Dichloroethane (SPCC)	0.3743	0.3743	1.1229	1	1.0663
Acrylonitrile	3.08	3.08	9.24	5	5.3188
Vinyl acetate	1	1	3	2	1.7133
cis-1,2-Dichloroethene	0.3674	0.3674	1.1022	1	0.9844
2,2-Dichloropropane	0.39	0.39	1.17	1	0.9858
Cyclohexane	0.556	0.556	1.668	1	1.1034
Bromochloromethane	0.3681	0.3681	1.1043	1	0.9638
Chloroform (CCC)	0.3486	0.3486	1.0458	1	1.033
Carbon tetrachloride	0.335	0.335	1.005	1	0.8718
Ethyl acetate	3.78	3.78	11.34	10	10.5938
Tetrahydrofuran	2	2	6	5	5.6673
1,1,1-Trichloroethane	0.3599	0.3599	1.0797	1	1.0055

The Detectability Check Standard (DCS) meets the requirements as stated in TRRP-13, Section 2.1.2, Reportable Data, May 2010 Revision.

Detectability Check Standard (DCS)

Method: 8260
Matrix: Water
Date: 01/11/12
Units: ug/L

1,1-Dichloropropene	0.3479	0.3479	1.0437	1	1.0294
2-Butanone (MEK)	1.1	1.1	3.3	2	2.2589
Benzene	0.339	0.339	1.017	0.5	0.5015
Propanenitrile	3.02	3.02	9.06	5	5.3935
Methacrylonitrile	1.25	1.25	3.75	2.5	2.4149
1,2-Dichloroethane	0.392	0.392	1.176	1	1.1276
Isobutyl alcohol	23.1	23.1	69.3	50	48.1202
Methylcyclohexane	2.49	2.49	7.47	5	4.8959
Trichloroethene	0.4487	0.4487	1.3461	1	0.9258
Dibromomethane	0.407	0.407	1.221	1	1.0774
n-Butanol	51.4	51.4	154.2	100	86.3303
1,2-Dichloropropane (CCC)	0.3734	0.3734	1.1202	1	1.0453
Bromodichloromethane	0.3689	0.3689	1.1067	1	0.9659
1,4-Dioxane	33.9	33.9	101.7	50	46.8777
Methyl methacrylate	0.365	0.365	1.095	1	0.8963
1-Bromo-2-chloroethane	2	2	6	5	5.4802
cis-1,3-Dichloropropene	0.5	0.5	1.5	0.5	0.4144
2-Chloroethyl vinyl ether	2	2	6	5	0.9337
Toluene (CCC)	0.288	0.288	0.864	0.5	0.5025
Epichlorohydrin	25	25	75	25	26.6556
2-Nitropropane	5	5	15	5	4.0539
Tetrachloroethene	0.64	0.64	1.92	1	1.015
4-Methyl-2-pentanone (MIBK)	1.08	1.08	3.24	2	1.9615
trans-1,3-Dichloropropene	0.22	0.22	0.66	0.5	0.4128
1,1,2-Trichloroethane	0.3522	0.3522	1.0566	1	1.0483
4-Methyl-2-pentanol (MIBC)	5.19	5.19	15.57	10	7.223
Ethyl methacrylate	0.249	0.249	0.747	0.5	0.4274
Dibromochloromethane	0.2783	0.2783	0.8349	0.5	0.3875
1,3-Dichloropropane	0.5	0.5	1.5	1	1.0778
1,2-Dibromoethane (EDB)	0.5	0.5	1.5	1	0.9396
2-Hexanone	5	5	15	5	4.9352
Chlorobenzene (SPCC)	0.333	0.333	0.999	0.5	0.4947
1-Chlorohexane	0.505	0.505	1.515	1	1.0028
Ethylbenzene (CCC)	0.4156	0.4156	1.2468	0.5	0.512
1,1,1,2-Tetrachloroethane	0.3321	0.3321	0.9963	0.5	0.4266
m&p-Xylene	0.826	0.826	2.478	1	0.9377
o-Xylene	0.3863	0.3863	1.1589	0.5	0.4401
Bromoform (SPCC)	0.684	0.684	2.052	2	1.4982
Styrene	0.269	0.269	0.807	0.5	0.4076
Isopropylbenzene	0.332	0.332	0.996	0.5	0.456
Bromobenzene	0.394	0.394	1.182	1	0.8698
n-Propylbenzene	0.4412	0.4412	1.3236	1	0.9308
1,1,2,2-Tetrachloroethane (SPCC)	0.3102	0.3102	0.9306	0.5	0.669
2-Chlorotoluene	0.358	0.358	1.074	1	1.0792
Cyclohexanone	6.961	6.961	20.883	10	8.5281

The Detectability Check Standard (DCS) meets the requirements as stated in TRRP-13, Section 2.1.2, Reportable Data, May 2010 Revision.

Detectability Check Standard (DCS)

Method: 8260
Matrix: Water
Date: 01/11/12
Units: ug/L

1,2,3-Trichloropropane	0.45	0.45	1.35	1	1.0799
trans-1,4-Dichloro-2-butene	2	2	6	5	5.1196
3-Ethyltoluene	0.4747	0.4747	1.4241	1	1.0948
4-Chlorotoluene	0.362	0.362	1.086	1	1.0381
1,3,5-Trimethylbenzene	0.4883	0.4883	1.4649	1	1.073
2-Ethyltoluene	0.3813	0.3813	1.1439	1	1.1062
tert-Butylbenzene	0.31	0.31	0.93	0.5	0.5447
Pentachloroethane	0.8419	0.8419	2.5257	2.5	2.2468
1,2,4-Trimethylbenzene	0.5982	0.5982	1.7946	1	1.0349
sec-Butylbenzene	0.6093	0.6093	1.8279	1	1.1034
p-Isopropyltoluene	0.6331	0.6331	1.8993	1	0.9836
1,3-Dichlorobenzene	0.3857	0.3857	1.1571	1	1.0057
1,4-Dichlorobenzene	0.293	0.293	0.879	0.5	0.5441
Benzyl chloride	1.02	1.02	3.06	2	1.5366
n-Butylbenzene	0.8777	0.8777	2.6331	2	1.9136
1,2-Dichlorobenzene	0.434	0.434	1.302	1	1.0226
1,3,5-Trichlorobenzene	1.71	1.71	5.13	5	4.0115
1,2-Dibromo-3-chloropropane (DBCP)	2	2	6	5	1.3464
Hexachlorobutadiene	0.5669	0.5669	1.7007	1	0.7296
1,2,4-Trichlorobenzene	0.484	0.484	1.452	1	0.8005
Naphthalene	0.69	0.69	2.07	2	1.8348
1,2,3-Trichlorobenzene	0.5376	0.5376	1.6128	1	0.7832
1,3-Dichloropropene (total)	0.506	0.506	1.518	1	0.8272
BTEX (total)	1.75	1.75	5.25	3	2.8938
1,2-Dichloroethene (total)	0.7304	0.7304	2.1912	2	2.0116
Xylenes (total)	1.2	1.2	3.6	1.5	1.3778

The Detectability Check Standard (DCS) meets the requirements as stated in TRRP-13, Section 2.1.2, Reportable Data, May 2010 Revision.

Detectability Check Standard (DCS)

Method: 8270
Matrix: Water
Date: 03/22/12
Units: ug/L

ANALYTE	CURRENT SDL (ug/L)	SPIKE RANGE		SPIKE	MEAS VALUE
		MINIMUM	MAXIMUM		
1,2,4,5-Tetrachlorobenzene	1.25	1.25	3.75	2	1.2406
1,2,4-Trichlorobenzene	0.840	0.84	2.52	2	1.2045
1,2-Dichlorobenzene	0.973	0.973	2.919	1	0.55976
1,2-Diphenylhydrazine	0.978	0.978	2.934	2	1.108
1,3,5-Trinitrobenzene	1.86	1.86	5.58	2	2.454
1,3-Dichlorobenzene	0.994	0.994	2.982	1	0.5059
1,3-Dinitrobenzene	0.968	0.968	2.904	2	0.82009
1,4-Dichlorobenzene	0.809	0.809	2.427	1	0.53878
1,4-Dinitrobenzene	3.00	3	9	6	5.0459
1,4-Dioxane	4.35	4.35	13.05	6	13.616
1,4-Naphthoquinone	8.9	8.9	26.7	6	1.3953
1-Chloronaphthalene	0.646	0.646	1.938	1	0.57054
1-Methylnaphthalene	1.05	1.05	3.15	2	1.2775
2,3,4,6-Tetrachlorophenol	1.16	1.16	3.48	2	0.89819
2,3,5,6-Tetrachlorophenol	1.77	1.77	5.31	2	0.71562
2,4,5-Trichlorophenol	1.15	1.15	3.45	2	1.0052
2,4,6-Trichlorophenol	1.09	1.09	3.27	2	1.0295
2,4-Dichlorophenol	1.03	1.03	3.09	2	1.1886
2,4-Dimethylphenol	1.90	1.9	5.7	2	0.98223
2,4-Dinitrotoluene	2.88	2.88	8.64	6	3.3982
2,6-Dichlorophenol	0.717	0.717	2.151	2	1.2353
2,6-Dinitrotoluene	1.03	1.03	3.09	2	1.0547
2-Acetylaminofluorene	1.35	1.35	4.05	2	0.67174
2-Chloronaphthalene	1.46	1.46	4.38	2	1.3514
2-Chlorophenol	1.49	1.49	4.47	2	1.4053
2-Ethoxyethanol	1.26	1.26	3.78	2	0.81935
2-Methylnaphthalene	0.969	0.969	2.907	1	0.55581
2-Methylphenol	1.82	1.82	5.46	2	1.2256
2-Nitroaniline	1.19	1.19	3.57	2	1.0104
2-Nitrophenol	1.05	1.05	3.15	2	1.0531
2-Picoline	6.08	6.08	18.24	6	2.2633
2-Toluidine	4.99	4.99	14.97	6	1.3838
3 & 4 Methylphenol	2.58	2.58	7.74	6	3.4182
3,3'-Dichlorobenzidine	10	10	30	6	10.055
3,3'-Dimethylbenzidine	5.73	5.73	17.19	6	1.8683
3-Methylphenol	2.06	2.06	6.18	6	3.4182
3-Nitroaniline	1.22	1.22	3.66	2	0.86274
4,6-Dinitro-2-methylphenol	3.56	3.56	10.68	6	7.0003
4-Aminobiphenyl	3.71	3.71	11.13	6	1.1288
4-Bromophenyl phenyl ether	0.933	0.933	2.799	2	1.3144

The Detectability Check Standard (DCS) meets the requirements as stated in TRRP-13, Section 2.1.2, Reportable Data, May 2010 Revision.

4-Chloro-3-methylphenol	1.07	1.07	3.21	2	1.105
4-Chloroaniline	6	6	18	6	2.5574
4-Chlorophenyl phenyl ether	1.44	1.44	4.32	2	1.3989
4-Nitroaniline	1.09	1.09	3.27	2	0.63107
4-Nitrophenol	4.10	4.1	12.3	6	2.9829
7,12-Dimethylbenz[a]anthracene	1.60	1.6	4.8	2	0.60936
Acenaphthene	1.10	1.1	3.3	2	1.2742
Acenaphthylene	0.905	0.905	2.715	2	1.1756
Acetophenone	0.759	0.759	2.277	1	0.92342
Acrylamide	25.0	25	75	6	0.83313
Aniline	2.05	2.05	6.15	6	3.0175
Anthracene	1.13	1.13	3.39	2	1.029
Aramite	0.709	0.709	2.127	2	0.98549
Azobenzene	0.978	0.978	2.934	2	1.108
Benzidine	25	25	75	6	5.2312
Benzo[a]anthracene	1.12	1.12	3.36	2	1.3179
Benzo[a]pyrene	1.11	1.11	3.33	2	0.90778
Benzo[b]fluoranthene	0.788	0.788	2.364	1	0.53324
Benzo[g,h,i]perylene	0.762	0.762	2.286	1	0.62513
Benzo[k]fluoranthene	1.23	1.23	3.69	2	1.5628
Benzoic acid	13.5	13.5	40.5	6	7.0791
Benzyl alcohol	3.58	3.58	10.74	6	3.4561
Biphenyl	1.25	1.25	3.75	2	1.3352
Bis(2-chloroethoxy)methane	1.13	1.13	3.39	2	1.7124
Bis(2-chloroethyl)ether	0.544	0.544	1.632	1	0.58057
Bis(2-chloroisopropyl) ether	1.22	1.22	3.66	2	1.4239
Bis(2-ethylhexyl) phthalate	2.74	2.74	8.22	6	41.468
Butyl benzyl phthalate	0.987	0.987	2.961	1	0.60741
Carbazole	1.05	1.05	3.15	2	1.2851
Chlorobenzilate	0.570	0.57	1.71	1	0.55571
Chrysene	1.83	1.83	5.49	2	1.3101
Diallate	0.816	0.816	2.448	2	1.1683
Dibenz[a,h]anthracene	1.39	1.39	4.17	2	1.1953
Dibenz[a,j]acridine	1.68	1.68	5.04	2	0.94223
Dibenzofuran	1.05	1.05	3.15	2	1.3073
Diethyl phthalate	1.47	1.47	4.41	2	1.3592
Dimethoate	1.73	1.73	5.19	2	1.0444
Dimethyl phthalate	1.26	1.26	3.78	2	1.2906
Dimethyl terephthalate (DMT)	1.39	1.39	4.17	2	8.4757
Di-n-butyl phthalate	1.13	1.13	3.39	2	1.2605
Di-n-octyl phthalate	1.8	1.8	5.4	2	1.0296
Dinoseb	1.15	1.15	3.45	2	7.7212
Diphenyl ether	0.836	0.836	2.508	1	0.57296
Diphenylamine	0.936	0.936	2.808	2	0.52814
Disulfoton	5.68	5.68	17.04	6	1.7298
Ethyl Methanesulfonate	0.589	0.589	1.767	1	0.55059
Famphur	8.46	8.46	25.38	6	15.32
Fluoranthene	0.921	0.921	2.763	1	0.5893
Fluorene	1.01	1.01	3.03	2	1.2989
Hexachlorobenzene	1.47	1.47	4.41	2	1.3616
Hexachlorobutadiene	1.28	1.28	3.84	2	1.2587
Hexachlorocyclopentadiene	6	6	18	6	2.2871

The Detectability Check Standard (DCS) meets the requirements as stated in TRRP-13, Section 2.1.2, Reportable Data, May 2010 Revision.

Hexachloroethane	0.940	0.94	2.82	2	1.1484
Hexachloropropene	1.08	1.08	3.24	2	0.98914
Indeno[1,2,3-cd]pyrene	1.52	1.52	4.56	2	1.2252
Isodrin	0.878	0.878	2.634	1	0.56432
Isophorone	1.09	1.09	3.27	2	1.3181
Isosafrole	1.01	1.01	3.03	2	0.91628
Methyl Methanesulfonate	0.660	0.66	1.98	1	0.56547
N,N-Dimethyl Formamide	1.84	1.84	5.52	2	0.66737
Naphthalene	0.876	0.876	2.628	1	0.58496
Nitrobenzene	1.12	1.12	3.36	2	1.4958
N-Methyl-2-pyrrolidinone	4.17	4.17	12.51	6	4.4333
N-Nitro-o-toluidine	1.64	1.64	4.92	2	0.85967
N-Nitrosodiethylamine	1.28	1.28	3.84	2	0.74828
N-Nitrosodimethylamine	1.5	1.5	4.5	2	0.80016
N-Nitrosodi-n-butylamine	3.35	3.35	10.05	6	2.519
N-Nitrosodi-n-propylamine	1.04	1.04	3.12	2	0.96336
N-Nitrosodiphenylamine	0.936	0.936	2.808	2	0.52814
N-Nitrosomethylethylamine	1.20	1.2	3.6	2	0.74133
N-Nitrosomorpholine	1.48	1.48	4.44	2	0.8764
N-Nitrosopiperidine	1.36	1.36	4.08	2	0.75578
N-Nitrosopyrrolidine	2	2	6	2	0.65151
O,O,O-Triethyl phosphorothioate	0.713	0.713	2.139	1	0.54846
Parathion-ethyl	1.04	1.04	3.12	2	0.833
Parathion-methyl	0.852	0.852	2.556	2	0.87463
p-Dimethylamino azobenzene	2.1	2.1	6.3	6	2.6128
Pentachlorobenzene	0.698	0.698	2.094	1	0.59798
Pentachloroethane	0.672	0.672	2.016	2	1.1029
Pentachloronitrobenzene	0.792	0.792	2.376	2	0.94018
Pentachlorophenol	5.44	5.44	16.32	6	5.1538
Phenacetin	1.12	1.12	3.36	2	0.91116
Phenanthrene	0.998	0.998	2.994	1	0.62296
Phenol	2.14	2.14	6.42	6	3.9753
Phorate	2.46	2.46	7.38	6	1.4578
Pronamide	2	2	6	2	1.0626
Propyl cellosolve	2.17	2.17	6.51	6	3.0339
Pyrene	0.917	0.917	2.751	1	0.57438
Pyridine	2.38	2.38	7.14	6	2.7764
Safrole	0.854	0.854	2.562	1	0.50171
Sulfotepp	0.876	0.876	2.628	1	0.64054
Thionazin	0.858	0.858	2.574	1	0.53731

The Detectability Check Standard (DCS) meets the requirements as stated in TRRP-13, Section 2.1.2, Reportable Data, May 2010 Revision.

DATA USABILITY SUMMARY

Property: Al-Kel Alliance
Reviewer: Brian Sims, TITAN Engineering, Inc.
Date: June 22, 2012

Laboratory: Test America
Laboratory Job No(s): AVE0237, dated June 4, 2012

Intended use of data:
- ☐ Soil investigation
- ☒ Groundwater investigation
- ☐ Other: _____

Samples analyzed: 3 (Incl. a trip blank)

Analyses requested:
- ☐ TX-1005 (TPH)
- ☐ EPA-8021 (BTEX/MTBE)
- ☒ EPA-8270 (PAHs)
- ☒ EPA-8260 (VOCs)
- ☐ E160.3 (% Moisture)
- ☒ Other: 6020 & 7471A (Metals)

Data reviewed:
- ☒ Laboratory reportable data
- ☒ Laboratory review checklists (LRCs)
- ☒ Laboratory exception reports (ERs)
- ☒ Chain-of-custody (CoC) forms
- ☒ Field notes
- ☐ Other: _____

Project Objectives:

Type of Chemical	Recovery (%)		RPD (%)
	Low	High	
Organics	60	140	40
Inorganics	70	130	30

Level of Performance:	
Do SQLs and MQLs meet project objectives?	YES
According to the LRCs:	
Are soil sample concentrations corrected for moisture content?	YES
Does sample information agree with the CoC forms?	YES
Were the sample containers made of appropriate materials?	YES
Were the samples received by the laboratory in good condition?	YES
Were sample temperatures 4°C ± 2°C?	YES
Were samples prepared and analyzed within the holding times specified in SW-846, Table 2-40?	YES
Did the initial/continuing calibrations (ICCV/CCV) meet SW-846 requirements for the analyses performed?	YES
Do the LRCs document instrument performance calibrations (GC/MS tunes) for analyses performed?	YES

Environmental Sample Surrogates:	
Were surrogate recoveries within project objectives?	YES
Field QA/QC:	
Were target analytes detected in any trip blanks?	NO
Were target analytes detected in field blanks?	NA
Were target analytes detected in any equipment blanks?	NA
Did field duplicate precision meet project objectives?	YES
Laboratory QA/QC:	
Were target COCs detected in any laboratory blanks?	NO
Were surrogate recoveries for laboratory blanks within project objectives?	YES
Were LCS/LCSD recoveries and/or RPD values within project objectives	NO
Were surrogate recoveries for LCS/LCSD within project objectives?	YES
Percent recovery of 2,4-Dinitrophenol was above project objectives (Batch 12E0311). 2,4-Dinitrophenol was not detected above the SDL in any of the associated samples, so no qualifiers were assigned. Percent recovery of Pyridine was below project objectives (Batch 12E0311). Pyridine was not detected above the SDL therefore only non-detect samples qualified with a J,L.	
Were MS/MSD recoveries and/or RPD values within project objectives?	YES
Were surrogate recoveries for MS/MSD within project objectives?	NO
Percent recovery of 2,4-Dinitrophenol and Dichlorodifluoromethane were above project objectives. 2,4-Dinitrophenol and Dichlorodifluoromethane were not detected above the SDL in any of the associated samples, so no qualifiers were assigned	
According to Field Records:	
Were the chain-of-custody forms completed and signed?	YES
Were samples collected according to documented SOPs?	YES
Were the samples preserved in the field according to SW-846, Table 2-40?	YES
Were groundwater samples filtered?	NA
Were field instruments used during sampling properly calibrated?	YES

Qualifiers	
U	Not detected above the SDL
J	Estimated concentration (detected below quantitation limits)
R	Rejected
B	Detected in associated method blank
S	Spike recovery outside accepted recovery limits
Bias Codes	
H	Bias likely to be high
L	Bias likely to be low

Attachments:

- ☒ Laboratory reportable data
- ☒ Laboratory ERs
- ☐ Field notes
- ☒ Laboratory LRCs
- ☒ CoC forms
- ☒ Table 1: Field Precision

Table 1
Field Precision

Field Identification	Analyte	Sample Result	Duplicate Result	RPD%	Qualified
RCRA Metals via SW-846 6020 & 7471A - mg/L					
TMW-1 / Dup-20120518	Arsenic	J	J	---	A
	Barium	0.0715	0.0712	99.8	A
	Cadmium	U	U	---	A
	Chromium	J	U	---	A
	Lead	J	0.00007	---	A
	Selenium	J	J	---	A
	Silver	U	U	---	A
	Mercury	U	U	---	A
Field Identification	**Analyte**	**Sample Result**	**Duplicate Result**	**RPD%**	**Qualified**
VOCs via SW-846 8260B - mg/L					
TMW-1 / Dup-20120518	1,1,1,2-Tetrachloroethane	U	U	---	A
	1,1,1-Trichloroethane	U	U	---	A
	1,1,2,2-Tetrachloroethane	U	U	---	A
	1,1,2-Trichloroethane	U	U	---	A
	1,1-Dichloroethane	U	U	---	A
	1,1-Dichloroethene	U	U	---	A
	1,2,4-Trimethylbenzene	U	U	---	A
	1,2-Dibromoethane (EDB)	U	U	---	A
	1,2-Dichlorobenzene	U	U	---	A
	1,2-Dichloroethane	U	U	---	A
	1,2-Dichloropropane	U	U	---	A
	1,3-Dichlorobenzene	U	U	---	A
	1,4-Dichlorobenzene	U	U	---	A
	2-Butanone (MEK)	U	U	---	A
	2-Hexanone	U	U	---	A
	4-Isopropyltoluene	U	U	---	A
	4-Methyl-2-pentanone (MIBK)	U	U	---	A
	Acetone	J	**0.00519**	---	A
	Benzene	U	U	---	A
	Bromobenzene	U	U	---	A
	Bromochloromethane	U	U	---	A
	Bromodichloromethane	U	U	---	A
	Bromoethane	U	U	---	A
	Bromoform	U	U	---	A
	Bromomethane	U	U	---	A
	Carbon disulfide	U	U	---	A
	Carbon tetrachloride	U	U	---	A
	Chlorobenzene	U	U	---	A
	Chlorodibromomethane	U	U	---	A
	Chloroethane	U	U	---	A
	Chloroform	U	U	---	A
	Chloromethane	U	U	---	A
	cis-1,2-Dichloroethene	U	U	---	A
	cis-1,3-Dichloropropene	U	U	---	A
	Dibromomethane	U	U	---	A

	Dichlorodifluoromethane	U	U	---	A
	Ethylbenzene	U	U	---	A
	Hexachlorobutadiene	U	U	---	A
	Isopropylbenzene	U	U	---	A
	Methyl tert-Butyl Ether	U	U	---	A
	Methylene chloride	U	U	---	A
	n-Butylbenzene	U	U	---	A
	n-Propylbenzene	U	U	---	A
	sec-Butylbenzene	U	U	---	A
	Styrene	U	U	---	A
	tert-Butylbenzene	U	U	---	A
	Tetrachloroethene	U	U	---	A
	Toluene	U	U	---	A
	trans-1,2-Dichloroethene	U	U	---	A
	trans-1,3-Dichloropropene	U	U	---	A
	Trichloroethene	U	U	---	A
	Trichlorofluoromethane	U	U	---	A
	Vinyl chloride	U	U	---	A
	Xylenes, total	U	U	---	A
Field Identification	**Analyte**	**Sample Result**	**Duplicate Result**	**RPD%**	**Qualified**
	SVOCs via SW-846 8270C - mg/L				
TMW-1 / Dup-20120518	1,2,4-Trichlorobenzene	U	U	---	A
	1,2-Diphenylhydrazine	U	U	---	A
	2,4,5-Trichlorophenol	U	U	---	A
	2,4,6-Trichlorophenol	U	U	---	A
	2,4-Dichlorophenol	U	U	---	A
	2,4-Dimethylphenol	U	U	---	A
	2,4-Dinitrophenol	U	U	---	A
	2,4-Dinitrotoluene	U	U	---	A
	2,6-Dinitrotoluene	U	U	---	A
	2-Chloronaphthalene	U	U	---	A
	2-Chlorophenol	U	U	---	A
	2-Methylnaphthalene	U	U	---	A
	2-Methylphenol	U	U	---	A
	2-Nitroaniline	U	U	---	A
	2-Nitrophenol	U	U	---	A
	3 & 4 Methylphenol	U	U	---	A
	3,3'-Dichlorobenzidine	U	U	---	A
	3-Nitroaniline	U	U	---	A
	4,6-Dinitro-2-methylphenol	U	U	---	A
	4-Bromophenyl phenyl ether	U	U	---	A
	4-Chloro-3-methylphenol	U	U	---	A
	4-Chloroaniline	U	U	---	A
	4-Chlorophenyl phenyl ether	U	U	---	A
	4-Nitroaniline	U	U	---	A
	4-Nitrophenol	U	U	---	A
	Acenaphthene	U	U	---	A
	Acenaphthylene	U	U	---	A
	Anthracene	U	U	---	A
	Benzo[a]anthracene	U	U	---	A
	Benzo[a]pyrene	U	U	---	A

	Benzo[b]fluoranthene	U	U	---	A
	Benzo[g,h,i]perylene	U	U	---	A
	Benzo[k]fluoranthene	U	U	---	A
	Bis(2-chloroethoxy)methane	U	U	---	A
	Bis(2-chloroethyl)ether	U	U	---	A
	Bis(2-chloroisopropyl) ether	U	U	---	A
	Bis(2-ethylhexyl) phthalate	U	U	---	A
	Butyl benzyl phthalate	U	U	---	A
	Chrysene	U	U	---	A
	Dibenz[a,h]anthracene	U	U	---	A
	Dibenzofuran	U	U	---	A
	Diethyl phthalate	U	U	---	A
	Dimethyl phthalate	U	U	---	A
	Di-n-butyl phthalate	J	U	---	A
	Di-n-octyl phthalate	U	U	---	A
	Diphenylamine	U	U	---	A
	Fluoranthene	U	U	---	A
	Fluorene	U	U	---	A
	Hexachlorobenzene	U	U	---	A
	Hexachlorobutadiene	U	U	---	A
	Hexachlorocyclopentadiene	U	U	---	A
	Hexachloroethane	U	U	---	A
	Isophorone	U	U	---	A
	Naphthalene	U	U	---	A
	Nitrobenzene	U	U	---	A
	N-Nitrosodi-n-propylamine	U	U	---	A
	N-Nitrosodiphenylamine	U	U	---	A
	Pentachloroethane	U	U	---	A
	Pentachlorophenol	U	U	---	A
	Phenanthrene	U	U	---	A
	Phenol	U	U	---	A
	Pyrene	U	U	---	A
	Pyridine	U	U	---	A

Notes:

A - Acceptable data
U - Unacceptable data (Explanation in the Field QA/QC section of the DUS)
J - Estimated value
R - Rejected
NA – Not Analyzed
RPD = (Sample – Duplicate)*200/(Sample + Duplicate)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

TestAmerica Job ID: 600-55286-1
Client Project/Site: Al-Kel Alliance
Revision: 1

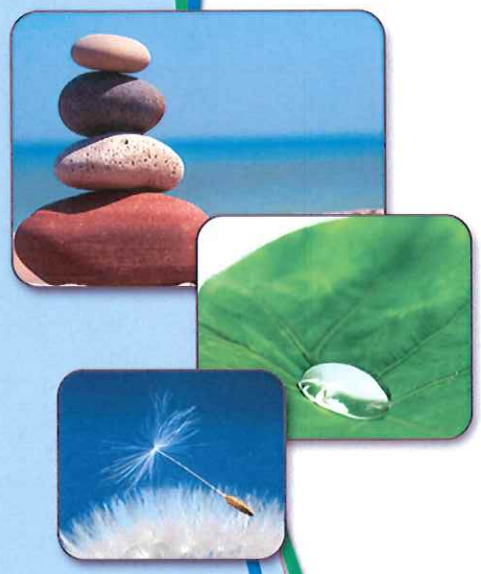
For:
TITAN Engineering
2801 Network Blvd
Suite 200
Frisco, Texas 75034

Attn: Mr. Brian Sims

Authorized for release by:
6/6/2012 6:00:27 PM
Cathy Upton
LAN Analyst
cathy.upton@testamericainc.com

Designee for

Sachin Kudchadkar
Project Manager II
sachin.kudchadkar@testamericainc.com



LINKS

Review your project results through TotalAccess

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

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

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

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Houston
TRRP Data Package Cover Page

Job Number: 600-55286-1

Project Name/Number: Al-Kel Alliance

This Data Package consists of:

This signature page, the laboratory review checklist, and the following Reportable Data:

- ☒ R1 Field Chain-of-Custody Form
- ☒ R2 Sample Identification Cross-reference;
- ☒ R3 Test Reports (Analytical Data Sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC Chapter 5
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- ☒ R4 Surrogate Recovery Data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- ☒ R5 Test Reports/Summary Forms for Blank Samples;
- ☒ R6 Test Reports/Summary Forms for Laboratory Control Samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - d) The laboratory's LCS QC limits
- ☒ R7 Test Reports for Matrix Spike/Matrix Spike Duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked sample,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- ☒ R8 Laboratory analytical duplicates (if applicable) recovery and precision, including:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- ☒ R9 List of method quantitation limit (MQL) and detectability check sample results for each analyte for each method and matrix;
- ☒ R10 Other problems or anomalies

The exception report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under Texas laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm, to the best of my knowledge, that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Pat Adoor	Patricia Adoor	05/31/2012
Name (printed)	Signature	Date

Data Delivery Analyst

Official Title (printed)

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 05/23/12
Project Name: Al-Kel Alliance	Laboratory Job Number: 600-55286
Reviewer Name: YX	Prep Batch Number: 600-79694 -VOA

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-custody (C-O-C)					
R1	OI	Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soil/solid samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?				X	1
		Were MS/MSD RPDs within laboratory QC limits?				X	1
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 05/23/12
Project Name: Al-Kel Alliance	Laboratory Job Number: 600-55286
Reviewer Name: YX	Prep Batch Number: 600-79694 -VOA

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw data (NELAC section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?			X		
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports	
Laboratory Name: TestAmerica-Houston	LRC Date: 05/23/12
Project Name: Al-Kel Alliance	Laboratory Job Number: 600-55286
Reviewer Name: YX	Prep Batch Number: 600-79694 -VOA

ER #[1]	DESCRIPTION
1	The laboratory selected a sample from another group to perform as the MS/MSD.

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 05/23/12
Project Name: Al-Kel Alliance	Laboratory Job Number: 600-55286
Reviewer Name: JL	Prep Batch Number: 600-79719-Herb

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-custody (C-O-C)					
R1	OI	Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soil/solid samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?				X	1
		Were MS/MSD RPDs within laboratory QC limits?				X	1
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name: TestAmerica-Houston	LRC Date: 05/23/12
Project Name: Al-Kel Alliance	Laboratory Job Number: 600-55286
Reviewer Name: JL	Prep Batch Number: 600-79719-Herb

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?	X				
S7	O	**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?			X		
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports	
Laboratory Name: TestAmerica-Houston	LRC Date: 05/23/12
Project Name: Al-Kel Alliance	Laboratory Job Number: 600-55286
Reviewer Name: JL	Prep Batch Number: 600-79719-Herb

ER #[1]	DESCRIPTION
1	The laboratory selected a sample form another group to perform as the MS/MSD.

ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

Detection Check Standard

Matrix: Water
Method: 8260B
Preparation: Wei Shen
Date Analyzed: 2/2/2012
Date Prepared: 2/2/2012
TALs Batches: II.i\2/2/12.b.b\J03307.D
Units: ug/L

Analyte	MDL	DCS Spike	Measured Result	MQL
Dichlorodifluoromethane	0.12	0.5	0.105	1
Chloromethane	0.18	0.5	0.955	2
Vinyl Chloride	0.11	0.25	0.281	2
Bromomethane	0.25	0.5	0.777	2
Chloroethane	0.08	0.25	0.346	2
Trichlorofluoromethane	0.08	0.25	0.299	1
Allyl chloride	2	0.5	0.475	5
Acrolein	1.63	0.5	1.49	5
1,1-Dichloroethene	0.19	0.5	0.145	1
trans-1,2-Dichloroethene	0.09	0.25	0.346	1
Trichlorotrifluoroethane	0.66	0.5	0.275	1
Acetone	0.99	0.5	1.51	2
Methyl Iodide	2	0.5	1.52	5
Carbon Disulfide	0.24	0.5	0.463	1
Acetonitrile	0.27	0.5	0.878	1
Methylene Chloride	0.15	0.5	2.12	1
Methyl tert-butyl ether	0.12	0.5	0.263	1
Vinyl Acetate	0.21	0.5	1.32	1
Acrylonitrile	0.52	0.5	0.877	1
Chloroprene	0.33	0.5	0.25	1
Propionitrile	2.36	0.25	1.4	5
cis-1,2-Dichloroethene	0.06	0.5	0.177	1
1,2-Dichloroethene	0.3	0.5	0.345	1
2-Butanone (MEK)	1.9	0.25	4.11	1
Isobutyl alcohol	17.16	0.25	20.77	1
Bromochloromethane	0.18	0.5	0.3	1
Metthacrylonitrile	5	0.25	1.81	1
Carbon Tetrachloride	0.15	0.5	0.691	5
Benzene	0.08	0.25	0.324	1
1,2-Dichloroethane	0.14	0.5	0.223	1
Trichloroethene	0.13	0.5	0.236	1
1,1,1-Trichloroethane	0.15	0.5	0.209	1
1,1-Dichloroethane	0.11	0.25	0.324	1
1,2-Dichloropropane	0.16	0.25	0.301	1
2,2-Dichloropropane	0.13	0.5	0.211	1
Methylene Bromide	0.25	0.25	0.381	1
1,4-Dioxane	30.2	0.25	66.4	50
Methyl methacrylate	0.33	0.25	0.959	1
Chloroform	0.13	0.5	0.242	1

Bromodichloromethane	0.16	0.5	0.312	1
2-Chloroethyl vinyl ether	0.98	0.25	0.398	1
1,1-Dichloropropene	0.21	0.5	0.419	1
cis-1,3-Dichloropropene	0.18	0.5	0.244	1
4-Methyl-2-pentanone	0.45	0.5	0.556	2
Toluene	0.15	0.5	0.556	1
trans-1,3-Dichloropropene	0.58	0.25	0.327	1
Ethyl methacrylate	0.26	0.5	0.607	1
1,1,2-Trichloroethane	0.28	0.5	0.272	1
Tetrachloroethene	0.18	0.5	0.314	1
1,3-Dichloropropane	0.22	0.5	0.402	1
2-Hexanone	1.01	0.25	0.533	1
Dibromochloromethane	0.16	0.25	0.297	1
1,2-Dibromoethane	0.21	0.25	0.343	1
Chlorobenzene	0.12	0.25	0.335	1
1,1,1,2-Tetrachloroethane	0.18	0.5	0.24	1
Ethylbenzene	0.11	0.25	0.863	1
m,p-Xylene	0.17	0.5	0.495	2
o-Xylene	0.12	0.25	0.288	1
Xylenes (total)	0.26	0.5	0.757	3
Styrene	0.07	0.25	0.993	1
Bromoform	0.19	0.5	0.249	1
Isopropylbenzene	0.18	0.5	0.184	1
Bromobenzene	0.19	0.5	0.245	1
1,2,3 - Trichloropropane	1.31	0.25	0.376	1
1,1,2,2-Tetrachloroethane	0.22	0.5	0.203	1
trans-1,4-Dichloro-2-butene	1.9	0.25	2.8	1
n-Propylbenzene	0.15	0.5	0.321	1
2-Chlorotoluene	0.13	0.5	0.199	1
4-Chlorotoluene	0.14	0.5	0.169	1
1,3,5-Trimethylbenzene	0.1	0.25	0.28	1
tert-Butylbenzene	0.08	0.25	0.288	1
p-Isopropyltoluene	0.1	0.25	0.359	1
1,2,4-Trimethylbenzene	0.14	0.5	0.221	1
sec-Butylbenzene	0.12	0.5	0.193	1
1,3-Dichlorobenzene	0.13	0.5	0.235	1
1,4-Dichlorobenzene	0.11	0.25	0.338	1
1,2-Dichlorobenzene	0.1	0.25	0.323	1
n-Butylbenzene	0.16	0.5	0.196	1
1,2,4-Trichlorobenzene	0.31	0.5	0.44	1
Hexachlorobutadiene	0.17	0.5	0.35	1
Naphthalene	0.32	0.5	0.337	1
1,2,3-Trichlorobenzene	0.57	0.5	0.869	1

Quality Control Report

Detection Check Standard

Matrix:	Water
Method:	8151
Preparation:	8151A_AP
Date Analyzed:	1/4/2012
Date Prepared:	1/4/2012
Lab Sample ID:	600-69336/4-A
File #:	housvr4\chem\ECD-08.i\010412.b\AL04-009.D
Units:	mg/L

Analyte	MDL	DCS Spike	DCS Result	MQL
Dalapon	15.98	0.1	5.04	0.2
Dicamba	0.46	0.1	0.217	0.2
MCPP	45.88	20	20.27	20
MCPA	64.99	40	36.36	20
Dichloroprop	0.45	0.1	0.214	0.2
2,4-D	0.34	0.1	0.266	0.2
2,4,5-TP	0.43	0.1	0.26	0.2
2,4,5-T	0.44	0.1	0.225	0.2
2,4-DB	0.66	0.1	0.33	0.2

Job ID: 600-55286-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-55286-1

Comments
The report was revised to correct the result for MCPA in the DUP sample.

Receipt

The samples were received on 5/19/2012 11:23 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

Method Summary

Client: TITAN Engineering
Project/Site: Al-Kel Alliance

TestAmerica Job ID: 600-55286-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8151A	Herbicides (GC)	SW846	TAL HOU

Protocol References:

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

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: TITAN Engineering
Project/Site: Al-Kel Alliance

TestAmerica Job ID: 600-55286-1

Sample ID	Client Sample ID	Matrix	Collected	Received
600-55286-1	TMW-1	Water	05/18/12 10:15	05/19/12 11:23
600-55286-2	Dup 20120518	Water	05/18/12 11:15	05/19/12 11:23
600-55286-3	TB 20120518	Water	05/18/12 07:00	05/19/12 11:23

Client Sample Results

Client: TITAN Engineering
Project/Site: Al-Kel Alliance

TestAmerica Job ID: 600-55286-1

Client Sample ID: TMW-1

Date Collected: 05/18/12 10:15
Date Received: 05/19/12 11:23

Lab Sample ID: 600-55286-1
Matrix: Wa

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0392	U	0.196	0.0392	ug/L		05/21/12 15:58	05/23/12 17:55	1
Dalapon	0.980	U JL	9.80	0.980	ug/L		05/21/12 15:58	05/23/12 17:55	1
2,4-DB	0.0490	U	0.196	0.0490	ug/L		05/21/12 15:58	05/23/12 17:55	1
Dicamba	0.00980	U	0.196	0.00980	ug/L		05/21/12 15:58	05/23/12 17:55	1
Dichlorprop	0.0294	U	0.196	0.0294	ug/L		05/21/12 15:58	05/23/12 17:55	1
Dinoseb	0.0196	U	0.196	0.0196	ug/L		05/21/12 15:58	05/23/12 17:55	1
Mecoprop	2.59	U	19.6	2.59	ug/L		05/21/12 15:58	05/23/12 17:55	1
MCPA	5.67	U	19.6	5.67	ug/L		05/21/12 15:58	05/23/12 17:55	1
2,4,5-T	0.0196	U	0.196	0.0196	ug/L		05/21/12 15:58	05/23/12 17:55	1
Silvex (2,4,5-TP)	0.0196	U	0.196	0.0196	ug/L		05/21/12 15:58	05/23/12 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*52*		*10 - 125.2*	*05/21/12 15:58*	*05/23/12 17:55*	*1*

Client Sample ID: Dup 20120518

Date Collected: 05/18/12 11:15
Date Received: 05/19/12 11:23

Lab Sample ID: 600-55286-2
Matrix: Water

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0392	U	0.196	0.0392	ug/L		05/21/12 15:58	05/23/12 18:20	1
Dalapon	0.980	U JL	9.80	0.980	ug/L		05/21/12 15:58	05/23/12 18:20	
2,4-DB	0.0490	U	0.196	0.0490	ug/L		05/21/12 15:58	05/23/12 18:20	
Dicamba	0.00980	U	0.196	0.00980	ug/L		05/21/12 15:58	05/23/12 18:20	1
Dichlorprop	0.0294	U	0.196	0.0294	ug/L		05/21/12 15:58	05/23/12 18:20	1
Dinoseb	0.0196	U	0.196	0.0196	ug/L		05/21/12 15:58	05/23/12 18:20	1
Mecoprop	2.59	U	19.6	2.59	ug/L		05/21/12 15:58	05/23/12 18:20	1
MCPA	5.67	U	19.6	5.67	ug/L		05/21/12 15:58	05/23/12 18:20	1
2,4,5-T	0.0196	U	0.196	0.0196	ug/L		05/21/12 15:58	05/23/12 18:20	1
Silvex (2,4,5-TP)	0.0196	U	0.196	0.0196	ug/L		05/21/12 15:58	05/23/12 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*65*		*10 - 125.2*	*05/21/12 15:58*	*05/23/12 18:20*	*1*

Client Sample ID: TB 20120518

Date Collected: 05/18/12 07:00
Date Received: 05/19/12 11:23

Lab Sample ID: 600-55286-3
Matrix: Water

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.990	U	2.00	0.990	ug/L			05/21/12 11:43	1
Benzene	0.0800	U	1.00	0.0800	ug/L			05/21/12 11:43	1
Chlorobromomethane	0.180	U	1.00	0.180	ug/L			05/21/12 11:43	1
Bromoform	0.190	U	1.00	0.190	ug/L			05/21/12 11:43	1
Bromomethane	0.250	U	2.00	0.250	ug/L			05/21/12 11:43	1
2-Butanone (MEK)	0.760	U	2.00	0.760	ug/L			05/21/12 11:43	1
Carbon disulfide	0.240	U	1.00	0.240	ug/L			05/21/12 11:43	1
Carbon tetrachloride	0.150	U	5.00	0.150	ug/L			05/21/12 11:43	
Dibromochloromethane	0.150	U	1.00	0.150	ug/L			05/21/12 11:43	1
Chlorobenzene	0.120	U	1.00	0.120	ug/L			05/21/12 11:43	1

Client Sample ID: TB 20120518

Lab Sample ID: 600-55286-3

Date Collected: 05/18/12 07:00

Matrix: Water

Date Received: 05/19/12 11:23

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	0.0800	U	2.00	0.0800	ug/L			05/21/12 11:43	1
Chloroform	0.130	U	1.00	0.130	ug/L			05/21/12 11:43	1
Chloromethane	0.180	U	2.00	0.180	ug/L			05/21/12 11:43	1
1,1-Dichloroethane	0.110	U	1.00	0.110	ug/L			05/21/12 11:43	1
1,2-Dichloroethane	0.140	U	1.00	0.140	ug/L			05/21/12 11:43	1
1,1-Dichloroethene	0.190	U	1.00	0.190	ug/L			05/21/12 11:43	1
trans-1,2-Dichloroethene	0.0900	U	1.00	0.0900	ug/L			05/21/12 11:43	1
1,2-Dichloropropane	0.160	U	1.00	0.160	ug/L			05/21/12 11:43	1
cis-1,3-Dichloropropene	0.180	U	1.00	0.180	ug/L			05/21/12 11:43	1
trans-1,3-Dichloropropene	0.210	U	1.00	0.210	ug/L			05/21/12 11:43	1
Ethylbenzene	0.110	U	1.00	0.110	ug/L			05/21/12 11:43	1
2-Hexanone	0.350	U	1.00	0.350	ug/L			05/21/12 11:43	1
Methylene Chloride	0.150	U	1.00	0.150	ug/L			05/21/12 11:43	1
4-Methyl-2-pentanone (MIBK)	0.450	U	2.00	0.450	ug/L			05/21/12 11:43	1
Styrene	0.0700	U	1.00	0.0700	ug/L			05/21/12 11:43	1
1,1,2,2-Tetrachloroethane	0.220	U	1.00	0.220	ug/L			05/21/12 11:43	1
Tetrachloroethene	0.130	U	1.00	0.130	ug/L			05/21/12 11:43	1
Toluene	0.150	U	1.00	0.150	ug/L			05/21/12 11:43	1
1,1,1-Trichloroethane	0.150	U	1.00	0.150	ug/L			05/21/12 11:43	1
1,1,2-Trichloroethane	0.280	U	1.00	0.280	ug/L			05/21/12 11:43	1
Trichloroethene	0.180	U	1.00	0.180	ug/L			05/21/12 11:43	1
inyl acetate	0.210	U	1.00	0.210	ug/L			05/21/12 11:43	1
Vinyl chloride	0.110	U	2.00	0.110	ug/L			05/21/12 11:43	1
o-Xylene	0.120	U	1.00	0.120	ug/L			05/21/12 11:43	1
m-Xylene & p-Xylene	0.170	U	2.00	0.170	ug/L			05/21/12 11:43	1
Xylenes, Total	0.260	U	3.00	0.260	ug/L			05/21/12 11:43	1
cis-1,2-Dichloroethene	0.0600	U	1.00	0.0600	ug/L			05/21/12 11:43	1
Bromodichloromethane	0.160	U	1.00	0.160	ug/L			05/21/12 11:43	1
1,2-Dichloroethene, Total	0.300	U	1.00	0.300	ug/L			05/21/12 11:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*05/21/12 11:43*	*1*
Dibromofluoromethane	*89*		*62 - 130*		*05/21/12 11:43*	*1*
4-Bromofluorobenzene	*95*		*67 - 139*		*05/21/12 11:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*50 - 134*		*05/21/12 11:43*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

GC Semi VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: TITAN Engineering
Project/Site: Al-Kel Alliance

TestAmerica Job ID: 600-55286-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	12DCE
Lab Sample ID	Client Sample ID	(70-130)	(62-130)	(67-139)	(50-134)
600-55286-3	TB 20120518	96	89	95	91
LCS 600-79694/3	Lab Control Sample	97	98	100	96
MB 600-79694/4	Method Blank	96	90	100	92

Surrogate Legend

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

Method: 8151A - Herbicides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DCPA1
Lab Sample ID	Client Sample ID	(10-125.2)
600-55286-1	TMW-1	52
600-55286-2	Dup 20120518	65
LCS 600-79719/2-A	Lab Control Sample	76
MB 600-79719/1-A	Method Blank	93

Surrogate Legend

DCPA = 2,4-Dichlorophenylacetic acid

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

Lab Sample ID: MB 600-79694/4
Matrix: Water
Analysis Batch: 79694

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

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.990	U	2.00	0.990	ug/L			05/21/12 11:14	1
Benzene	0.0800	U	1.00	0.0800	ug/L			05/21/12 11:14	1
Chlorobromomethane	0.180	U	1.00	0.180	ug/L			05/21/12 11:14	1
Bromoform	0.190	U	1.00	0.190	ug/L			05/21/12 11:14	1
Bromomethane	0.250	U	2.00	0.250	ug/L			05/21/12 11:14	1
2-Butanone (MEK)	0.760	U	2.00	0.760	ug/L			05/21/12 11:14	1
Carbon disulfide	0.240	U	1.00	0.240	ug/L			05/21/12 11:14	1
Carbon tetrachloride	0.150	U	5.00	0.150	ug/L			05/21/12 11:14	1
Dibromochloromethane	0.150	U	1.00	0.150	ug/L			05/21/12 11:14	1
Chlorobenzene	0.120	U	1.00	0.120	ug/L			05/21/12 11:14	1
Chloroethane	0.0800	U	2.00	0.0800	ug/L			05/21/12 11:14	1
Chloroform	0.130	U	1.00	0.130	ug/L			05/21/12 11:14	1
Chloromethane	0.180	U	2.00	0.180	ug/L			05/21/12 11:14	1
1,1-Dichloroethane	0.110	U	1.00	0.110	ug/L			05/21/12 11:14	1
1,2-Dichloroethane	0.140	U	1.00	0.140	ug/L			05/21/12 11:14	1
1,1-Dichloroethene	0.190	U	1.00	0.190	ug/L			05/21/12 11:14	1
trans-1,2-Dichloroethene	0.0900	U	1.00	0.0900	ug/L			05/21/12 11:14	1
1,2-Dichloropropane	0.160	U	1.00	0.160	ug/L			05/21/12 11:14	1
cis-1,3-Dichloropropene	0.180	U	1.00	0.180	ug/L			05/21/12 11:14	1
trans-1,3-Dichloropropene	0.210	U	1.00	0.210	ug/L			05/21/12 11:14	1
Ethylbenzene	0.110	U	1.00	0.110	ug/L			05/21/12 11:14	
2-Hexanone	0.350	U	1.00	0.350	ug/L			05/21/12 11:14	
Methylene Chloride	0.150	U	1.00	0.150	ug/L			05/21/12 11:14	1
4-Methyl-2-pentanone (MIBK)	0.450	U	2.00	0.450	ug/L			05/21/12 11:14	1
Styrene	0.0700	U	1.00	0.0700	ug/L			05/21/12 11:14	1
1,1,2,2-Tetrachloroethane	0.220	U	1.00	0.220	ug/L			05/21/12 11:14	1
Tetrachloroethene	0.130	U	1.00	0.130	ug/L			05/21/12 11:14	1
Toluene	0.150	U	1.00	0.150	ug/L			05/21/12 11:14	1
1,1,1-Trichloroethane	0.150	U	1.00	0.150	ug/L			05/21/12 11:14	1
1,1,2-Trichloroethane	0.280	U	1.00	0.280	ug/L			05/21/12 11:14	1
Trichloroethene	0.180	U	1.00	0.180	ug/L			05/21/12 11:14	1
Vinyl acetate	0.210	U	1.00	0.210	ug/L			05/21/12 11:14	1
Vinyl chloride	0.110	U	2.00	0.110	ug/L			05/21/12 11:14	1
o-Xylene	0.120	U	1.00	0.120	ug/L			05/21/12 11:14	1
m-Xylene & p-Xylene	0.170	U	2.00	0.170	ug/L			05/21/12 11:14	1
Xylenes, Total	0.260	U	3.00	0.260	ug/L			05/21/12 11:14	1
cis-1,2-Dichloroethene	0.0600	U	1.00	0.0600	ug/L			05/21/12 11:14	1
Bromodichloromethane	0.160	U	1.00	0.160	ug/L			05/21/12 11:14	1
1,2-Dichloroethene, Total	0.300	U	1.00	0.300	ug/L			05/21/12 11:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*05/21/12 11:14*	*1*
Dibromofluoromethane	*90*		*62 - 130*		*05/21/12 11:14*	*1*
4-Bromofluorobenzene	*100*		*67 - 139*		*05/21/12 11:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*50 - 134*		*05/21/12 11:14*	*1*

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

Lab Sample ID: LCS 600-79694/3
Matrix: Water
Analysis Batch: 79694

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	15.31		ug/L		77	28 - 152
Benzene	10.0	9.172		ug/L		92	69 - 131
Chlorobromomethane	10.0	8.819		ug/L		88	60 - 141
Bromoform	10.0	13.44		ug/L		134	39 - 149
Bromomethane	10.0	12.53		ug/L		125	52 - 146
2-Butanone (MEK)	20.0	15.64		ug/L		78	59 - 133
Carbon disulfide	10.0	10.06		ug/L		101	32 - 177
Carbon tetrachloride	10.0	12.33		ug/L		123	59 - 147
Dibromochloromethane	10.0	11.78		ug/L		118	58 - 132
Chlorobenzene	10.0	9.091		ug/L		91	60 - 136
Chloroethane	10.0	11.57		ug/L		116	56 - 144
Chloroform	10.0	9.528		ug/L		95	69 - 128
Chloromethane	10.0	13.37		ug/L		134	32 - 151
1,1-Dichloroethane	10.0	9.518		ug/L		95	66 - 126
1,2-Dichloroethane	10.0	9.756		ug/L		98	66 - 140
1,1-Dichloroethene	10.0	10.24		ug/L		102	59 - 145
trans-1,2-Dichloroethene	10.0	9.672		ug/L		97	70 - 132
1,2-Dichloropropane	10.0	9.482		ug/L		95	72 - 125
cis-1,3-Dichloropropene	10.0	11.38		ug/L		114	60 - 135
trans-1,3-Dichloropropene	10.0	12.88		ug/L		129	63 - 133
Ethylbenzene	10.0	9.200		ug/L		92	68 - 128
2-Hexanone	20.0	18.15		ug/L		91	51 - 130
Methylene Chloride	10.0	9.229		ug/L		92	62 - 134
4-Methyl-2-pentanone (MIBK)	20.0	18.52		ug/L		93	56 - 142
Styrene	10.0	9.778		ug/L		98	68 - 133
1,1,2,2-Tetrachloroethane	10.0	10.13		ug/L		101	68 - 134
Tetrachloroethene	10.0	9.654		ug/L		97	61 - 142
Toluene	10.0	9.470		ug/L		95	67 - 130
1,1,1-Trichloroethane	10.0	11.08		ug/L		111	65 - 142
1,1,2-Trichloroethane	10.0	9.829		ug/L		98	68 - 130
Trichloroethene	10.0	8.858		ug/L		89	68 - 130
Vinyl acetate	10.0	8.370		ug/L		84	58 - 175
Vinyl chloride	10.0	11.42		ug/L		114	47 - 146
o-Xylene	10.0	9.300		ug/L		93	68 - 134
m-Xylene & p-Xylene	20.0	18.98		ug/L		95	67 - 132
Xylenes, Total	30.0	28.28		ug/L		94	68 - 132
cis-1,2-Dichloroethene	10.0	8.696		ug/L		87	69 - 129
Bromodichloromethane	10.0	10.80		ug/L		108	73 - 130
1,2-Dichloroethene, Total	20.0	18.37		ug/L		92	65 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*70 - 130*
Dibromofluoromethane	*98*		*62 - 130*
4-Bromofluorobenzene	*100*		*67 - 139*
1,2-Dichloroethane-d4 (Surr)	*96*		*50 - 134*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 600-79719/1-A
Matrix: Water
Analysis Batch: 79974

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 79719

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0400	U	0.200	0.0400	ug/L		05/21/12 15:58	05/23/12 14:31	1
Dalapon	1.00	U	10.0	1.00	ug/L		05/21/12 15:58	05/23/12 14:31	1
2,4-DB	0.0500	U	0.200	0.0500	ug/L		05/21/12 15:58	05/23/12 14:31	1
Dicamba	0.0100	U	0.200	0.0100	ug/L		05/21/12 15:58	05/23/12 14:31	1
Dichlorprop	0.0300	U	0.200	0.0300	ug/L		05/21/12 15:58	05/23/12 14:31	1
Dinoseb	0.0200	U	0.200	0.0200	ug/L		05/21/12 15:58	05/23/12 14:31	1
Mecoprop	2.64	U	20.0	2.64	ug/L		05/21/12 15:58	05/23/12 14:31	1
MCPA	5.78	U	20.0	5.78	ug/L		05/21/12 15:58	05/23/12 14:31	1
2,4,5-T	0.0200	U	0.200	0.0200	ug/L		05/21/12 15:58	05/23/12 14:31	1
Silvex (2,4,5-TP)	0.0200	U	0.200	0.0200	ug/L		05/21/12 15:58	05/23/12 14:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*93*		*10 - 125.2*	*05/21/12 15:58*	*05/23/12 14:31*	*1*

Lab Sample ID: LCS 600-79719/2-A
Matrix: Water
Analysis Batch: 79974

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 79719

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	0.800	0.6019		ug/L		75	25 - 151
Dalapon	0.800	1.00	U	ug/L		37	10 - 137
2,4-DB	0.800	0.5964		ug/L		75	24 - 164
Dicamba	0.800	0.6976		ug/L		87	31 - 124
Dichlorprop	0.800	0.7201		ug/L		90	42 - 127
Dinoseb	0.800	0.7135		ug/L		89	11 - 130
Mecoprop	80.0	79.28		ug/L		99	10 - 176
MCPA	80.0	74.05		ug/L		93	26 - 164
2,4,5-T	0.800	0.7348		ug/L		92	36 - 140
Silvex (2,4,5-TP)	0.800	0.8936		ug/L		112	47 - 136

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*76*		*10 - 125.2*

Unadjusted Detection Limits

Client: TITAN Engineering
Project/Site: Al-Kel Alliance

TestAmerica Job ID: 600-55286-1

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

Analyte	MQL	MDL	Units	Method
1,1,1-Trichloroethane	1.00	0.150	ug/L	8260B
1,1,2,2-Tetrachloroethane	1.00	0.220	ug/L	8260B
1,1,2-Trichloroethane	1.00	0.280	ug/L	8260B
1,1-Dichloroethane	1.00	0.110	ug/L	8260B
1,1-Dichloroethene	1.00	0.190	ug/L	8260B
1,2-Dichloroethane	1.00	0.140	ug/L	8260B
1,2-Dichloroethene, Total	1.00	0.300	ug/L	8260B
1,2-Dichloropropane	1.00	0.160	ug/L	8260B
2-Butanone (MEK)	2.00	0.760	ug/L	8260B
2-Hexanone	1.00	0.350	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	2.00	0.450	ug/L	8260B
Acetone	2.00	0.990	ug/L	8260B
Benzene	1.00	0.0800	ug/L	8260B
Bromodichloromethane	1.00	0.160	ug/L	8260B
Bromoform	1.00	0.190	ug/L	8260B
Bromomethane	2.00	0.250	ug/L	8260B
Carbon disulfide	1.00	0.240	ug/L	8260B
Carbon tetrachloride	5.00	0.150	ug/L	8260B
Chlorobenzene	1.00	0.120	ug/L	8260B
Chlorobromomethane	1.00	0.180	ug/L	8260B
Chloroethane	2.00	0.0800	ug/L	8260B
Chloroform	1.00	0.130	ug/L	8260B
Chloromethane	2.00	0.180	ug/L	8260B
cis-1,2-Dichloroethene	1.00	0.0600	ug/L	8260B
cis-1,3-Dichloropropene	1.00	0.180	ug/L	8260B
Dibromochloromethane	1.00	0.150	ug/L	8260B
Ethylbenzene	1.00	0.110	ug/L	8260B
Methylene Chloride	1.00	0.150	ug/L	8260B
m-Xylene & p-Xylene	2.00	0.170	ug/L	8260B
o-Xylene	1.00	0.120	ug/L	8260B
Styrene	1.00	0.0700	ug/L	8260B
Tetrachloroethene	1.00	0.130	ug/L	8260B
Toluene	1.00	0.150	ug/L	8260B
trans-1,2-Dichloroethene	1.00	0.0900	ug/L	8260B
trans-1,3-Dichloropropene	1.00	0.210	ug/L	8260B
Trichloroethene	1.00	0.180	ug/L	8260B
Vinyl acetate	1.00	0.210	ug/L	8260B
Vinyl chloride	2.00	0.110	ug/L	8260B
Xylenes, Total	3.00	0.260	ug/L	8260B

Method: 8151A - Herbicides (GC)

Analyte	MQL	MDL	Units	Method
2,4,5-T	0.200	0.0200	ug/L	8151A
2,4-D	0.200	0.0400	ug/L	8151A
2,4-DB	0.200	0.0500	ug/L	8151A
Dalapon	10.0	1.00	ug/L	8151A
Dicamba	0.200	0.0100	ug/L	8151A
Dichlorprop	0.200	0.0300	ug/L	8151A
Dinoseb	0.200	0.0200	ug/L	8151A
MCPA	20.0	5.78	ug/L	8151A
Mecoprop	20.0	2.64	ug/L	8151A
Silvex (2,4,5-TP)	0.200	0.0200	ug/L	8151A

QC Association Summary

Client: TITAN Engineering
Project/Site: Al-Kel Alliance

TestAmerica Job ID: 600-55286-1

GC/MS VOA

Analysis Batch: 79694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-55286-3	TB 20120518	Total/NA	Water	8260B	
LCS 600-79694/3	Lab Control Sample	Total/NA	Water	8260B	
MB 600-79694/4	Method Blank	Total/NA	Water	8260B	

GC Semi VOA

Prep Batch: 79719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-55286-1	TMW-1	Total/NA	Water	8151A	
600-55286-2	Dup 20120518	Total/NA	Water	8151A	
LCS 600-79719/2-A	Lab Control Sample	Total/NA	Water	8151A	
MB 600-79719/1-A	Method Blank	Total/NA	Water	8151A	

Analysis Batch: 79974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-55286-1	TMW-1	Total/NA	Water	8151A	79719
600-55286-2	Dup 20120518	Total/NA	Water	8151A	79719
LCS 600-79719/2-A	Lab Control Sample	Total/NA	Water	8151A	79719
MB 600-79719/1-A	Method Blank	Total/NA	Water	8151A	79719

Lab Chronicle

Client: TITAN Engineering
Project/Site: Al-Kel Alliance

TestAmerica Job ID: 600-55286-1

Client Sample ID: TMW-1

Lab Sample ID: 600-55286-1

Date Collected: 05/18/12 10:15
Matrix: Water
Date Received: 05/19/12 11:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			79719	05/21/12 15:58	SMB	TAL HOU
Total/NA	Analysis	8151A		1	79974	05/23/12 17:55	JAL	TAL HOU

Client Sample ID: Dup 20120518

Lab Sample ID: 600-55286-2

Date Collected: 05/18/12 11:15
Matrix: Water
Date Received: 05/19/12 11:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8151A			79719	05/21/12 15:58	SMB	TAL HOU
Total/NA	Analysis	8151A		1	79974	05/23/12 18:20	JAL	TAL HOU

Client Sample ID: TB 20120518

Lab Sample ID: 600-55286-3

Date Collected: 05/18/12 07:00
Matrix: Water
Date Received: 05/19/12 11:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	79694	05/21/12 11:43	DT	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Certification Summary

Client: TITAN Engineering
Project/Site: Al-Kel Alliance

TestAmerica Job ID: 600-55286-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Houston	Arkansas DEQ	State Program	6	88-0759
TestAmerica Houston	Louisiana	NELAC	6	30643
TestAmerica Houston	Oklahoma	State Program	6	9503
TestAmerica Houston	Texas	NELAC	6	T104704223-10-6-TX
TestAmerica Houston	USDA	Federal		P330-08-00217
TestAmerica Houston	Utah	NELAC	8	GULF

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

No. 25392

CHAIN OF CUSTODY RECORD

6/6/2012

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: TITAN Eng	PROJECT NAME/NUMBER: Al-Kel Alliance
SEND REPORT TO: Brian Sims	BILLING INFORMATION
ADDRESS: 2801 Network Blvd	BILL TO: SAME AS Left
Ste 200	ADDRESS:
Frisco TX 75034	
PHONE: 469 365 1134	PHONE:
FAX:	FAX: PO NO: 583-01

LAB JOB NO.

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	ANALYSIS/METHOD REQUEST: Herbicides 8151	VOC 8260	REMARKS/PRECAUTIONS
	TMW-1	5-18-12	1015	W	L	4°	3	X		
	Dup 20120518		1115		L	4°	1	X		
	TB 20120518		700		V	HCl	2		X	

SAMPLER: Brian Sims

SHIPMENT METHOD: Overnight

AIRBILL NO.:

REQUIRED TURNAROUND* ☐ SAME DAY ☐ 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☐ 5 DAYS ☐ 10 DAYS ☑ ROUTINE ☐ OTHER

1. RELINQUISHED BY:	DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE
SIGNATURE:	5-18-12	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY: Brian Sims TITAN	TIME 1115	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME
1. RECEIVED BY:	DATE	2. RECEIVED BY:	DATE	3. RECEIVED BY:	DATE
SIGNATURE:	5-18-12	SIGNATURE:	5.19.12	SIGNATURE:	
PRINTED NAME/COMPANY: Kyle Kissane TITAN	TIME 1115	PRINTED NAME/COMPANY: Dana Capps TA	TIME 1123	PRINTED NAME/COMPANY:	TIME

*RUSH TURNAROUND MAY REQUIRE SURCHARGE

TestAmerica
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone: 361.289.2673 Fax: 361.289.2471

TAL-8222-560 (0808)

Login Sample Receipt Checklist

Client: TITAN Engineering

Job Number: 600-55286-1

Login Number: 55286
List Number: 1
Creator: Capps, Dana

List Source: TestAmerica Houston

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	2.0
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 sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

DATA USABILITY SUMMARY

Property: Al-Kel Alliance
Reviewer: Brian Sims, TITAN Engineering, Inc.
Date: June 22, 2012

Laboratory: Test America
Laboratory Job No(s): 600-55286-1, dated June 6, 2012

Intended use of data:
- ☐ Soil investigation
- ☒ Groundwater investigation
- ☐ Other: _____

Samples analyzed: 3 (Incl. a trip blank)

Analyses requested:
- ☐ TX-1005 (TPH)
- ☐ EPA-8021 (BTEX/MTBE)
- ☐ EPA-8270 (PAHs)
- ☐ EPA-8260 (VOCs)
- ☐ E160.3 (% Moisture)
- ☒ Other: 8151A (Herbicides)

Data reviewed:
- ☒ Laboratory reportable data
- ☒ Laboratory review checklists (LRCs)
- ☒ Laboratory exception reports (ERs)
- ☒ Chain-of-custody (CoC) forms
- ☒ Field notes
- ☐ Other: _____

Project Objectives:

Type of Chemical	Recovery (%)		RPD (%)
	Low	High	
Organics	60	140	40
Inorganics	70	130	30

Level of Performance:	
Do SQLs and MQLs meet project objectives?	YES
According to the LRCs:	
Are soil sample concentrations corrected for moisture content?	YES
Does sample information agree with the CoC forms?	YES
Were the sample containers made of appropriate materials?	YES
Were the samples received by the laboratory in good condition?	YES
Were sample temperatures 4°C ± 2°C?	YES
Were samples prepared and analyzed within the holding times specified in SW-846, Table 2-40?	YES
Did the initial/continuing calibrations (ICCV/CCV) meet SW-846 requirements for the analyses performed?	YES
Do the LRCs document instrument performance calibrations (GC/MS tunes) for analyses performed?	YES

Environmental Sample Surrogates:	
Were surrogate recoveries within project objectives?	NO
For sample TMW-1, percent recovery of Surr: 2,4-Dichlorophenylacetic acide was below project objectives at 52%. However, this was the only surrogate spike for this sample that was not within project objectives, so no qualifiers were assigned.	
Field QA/QC:	
Were target analytes detected in any trip blanks?	NO
Were target analytes detected in field blanks?	NA
Were target analytes detected in any equipment blanks?	NA
Did field duplicate precision meet project objectives?	NA
Laboratory QA/QC:	
Were target COCs detected in any laboratory blanks?	YES
Were surrogate recoveries for laboratory blanks within project objectives?	YES
Were LCS/LCSD recoveries and/or RPD values within project objectives	NO
Percent recovery of Dalapon was below project objectives. So, J and L qualifiers were assigned to the concentrations of these compounds in the associated samples.	
Were surrogate recoveries for LCS/LCSD within project objectives?	YES
Were MS/MSD recoveries and/or RPD values within project objectives?	NA
MS/MSD was conducted on unrelated samples	
Were surrogate recoveries for MS/MSD within project objectives?	YES
According to Field Records:	
Were the chain-of-custody forms completed and signed?	YES
Were samples collected according to documented SOPs?	YES
Were the samples preserved in the field according to SW-846, Table 2-40?	YES
Were groundwater samples filtered?	NA
Were field instruments used during sampling properly calibrated?	YES

Qualifiers	
U	Not detected above the SDL
J	Estimated concentration (detected below quantitation limits)
R	Rejected
B	Detected in associated method blank
S	Spike recovery outside accepted recovery limits
Bias Codes	
H	Bias likely to be high
L	Bias likely to be low

Attachments:

- ☒ Laboratory reportable data
- ☒ Laboratory ERs
- ☐ Field notes
- ☒ Laboratory LRCs
- ☒ CoC forms
- ☒ Table 1: Field Precision

Table 1
Field Precision

Field Identification	Analyte	Sample Result	Duplicate Result	RPD%	Qualified
TMW-1 / Dup 20120518	2,4-D	U	U	---	A
	Dalapon	U	U	---	A
	2,4-DB	U	U	---	A
	Dicamba	U	U	---	A
	Dichloroprop	U	U	---	A
	Dinoseb	J	J	---	A
	Mecoprop	U	U	---	A
	MCPA	U	U	---	A
	2,4,5-T	U	U	---	A
	Silvex (2,4,5-TP)	U	U	---	A

Notes:

A - Acceptable data
U - Unacceptable data (Explanation in the Field QA/QC section of the DUS)
J - Estimated value
R - Rejected
NA – Not Analyzed
RPD = (Sample – Duplicate)*200/(Sample + Duplicate)

313621 v.1

NON-NOTIFIER EPA ID REQUEST FORM

*This form is to be used to request an EPA ID Number for a facility that is not required to register **and** has hazardous waste violations.*

Complete this form to the best of your knowledge. Must have Company Name, Complete SiteAddress and Facility Status.

TEXAS REQUEST EPA IDENTIFICATION NUMBER ***REQUEST DATE:*** 9/8/99	TNRCC Registration Number: (if applicable):	F Number (if applicable): F0396
Company Name: Bocks Board Packaging of Texas Inc.	EPA ID NUMBER: TXR000032854	
TNRCC Region #: 04	County Name: Dallas /113	
Complete Site Address (must be physical address; **not** P.O. Box, longitude-latitude, etc) : 1520 East Wintergreen Rd. Hutchins, TX 75141		
Facility Status (circle all that apply): Conditionally Exempt Small Quantity Generator (CESQG) Inactive Abandoned ***Unknown***		
Comments :		

9/9/99

Requested by: Debbie Bohl

Date: 9/8/1999