

**RECEIVED**

**3:38 pm, Jul 10, 2012**

Alameda County  
Environmental Health

**SECOND QUARTER 2012  
GROUNDWATER MONITORING REPORT  
JORDAN RANCH – PARCEL H  
DUBLIN, CALIFORNIA**

The logo for ENGEIO INCORPORATED features the word "ENGEIO" in large, white, 3D block letters. Below it, the word "INCORPORATED" is written in smaller, white, sans-serif capital letters. The background of the logo is a composite image: the top part shows a green, rolling hillside with a few trees under a blue sky, and the bottom part shows a rocky, brownish terrain with large boulders.

**Submitted to:**

Dilan Roe

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda, CA 94502-6577

**Prepared by:**

ENGEIO Incorporated

**Project No.**

7828.000.001

**July 6, 2012**

Copyright © 2012 By ENGEIO Incorporated. This Document May Not Be Reproduced In Whole Or In Part By Any Means Whatsoever, Nor May It Be Quoted Or Excerpted Without The Express Written Consent Of ENGEIO Incorporated

- Expect Excellence -

Project No.  
**7828.000.000**

July 6, 2012

Dilan Roe  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

Subject: Jordan Ranch Parcel H – Former Leaking Underground Storage Tank  
Dublin, California  
ACEH Case No. R00002918

## **SECOND QUARTER 2012 GROUNDWATER MONITORING REPORT**

Dear Ms. Roe:

This letter summarizes the results of the April 2012 groundwater monitoring event completed for the Jordan Ranch – Parcel H (Site) located in Dublin, California. This is the second monitoring event following completion of the soil and groundwater remediation activities in October 2011. The Site is located at east side of the intersection of Central Parkway and Fallon Road. A Vicinity Map is attached as Figure 1.

### **GROUNDWATER MONITORING**

#### **Groundwater Elevations**

ENGEO measured and recorded groundwater depths from the top of well casings (TOC) for wells MW-1, MW-2, MW-4, and MW-5 on April 30, 2012. The monitoring well locations are shown on Figure 2.

The depths to groundwater at the Site ranged from 10.40 feet below the TOC in MW-1 to 12.20 feet below the TOC in MW-2. During this sampling event, the direction of groundwater flow appeared to be towards the south at a gradient of approximately 0.006 feet per foot (ft/ft). Groundwater elevation contours for this event are depicted on Figure 2. The cumulative groundwater elevation data from this event is summarized in Table 1 (attached).

#### **Well Sampling**

After recording groundwater depth measurements, we collected groundwater samples from wells MW-1, MW-2, MW-4, and MW-5. Well sampling logs are attached.

ENGEO conducted the following activities during sampling:

- Purged wells MW-1, MW-2, MW-4, and MW-5 using a submersible pump.
- Monitored and recorded pH, temperature, and conductivity measurements during purging.
- Contained the purge water in labeled 55-gallon drum.

- Obtained groundwater samples using a disposable bailer.
- Transferred the groundwater to laboratory provided pre-preserved sample containers, which were labeled to include sample identification, date, and time of collection and requested analyses.
- Stored the groundwater samples on ice during transportation to a State certified laboratory using a chain-of custody record.
- Submitted the samples for the analysis of total petroleum hydrocarbon as gasoline (TPHg), BTEX, and MTBE by EPA Test Method 8260B; and diesel (TPHd) by EPA Test Method 8015B.

### Groundwater Analytical Results

Concentrations of petroleum hydrocarbons detected during the Second Quarter 2012 monitoring event are tabulated below:

Well Location	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-Benzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)
MW-1	<50	<50	<0.5	<0.5	<0.5	<1	<0.5
MW-2	620	4,100	14	10	340	660	21
MW-4	<50	<50	<0.5	<0.5	<0.5	<1	14
MW-5	2,600	37,000	880	2,500	3,200	15,000	140

Cumulative groundwater monitoring well data is summarized in Table 2, attached. A copy of the groundwater laboratory report and chain-of-custody record are attached.

### FINDINGS

A comparison of pre- and post-remediation groundwater data is provided in the table below. Continued reductions in TPHg and benzene concentrations are noted since the First Quarter 2012 monitoring event. A slight rebound in MTBE concentrations is noted since the First Quarter 2012 monitoring event.

Well Location	August 2010			April 2012			Percent Reduction		
	TPHg	Benzene	MTBE	TPHg	Benzene	MTBE	TPHg	Benzene	MTBE
MW-1	<50	<0.5	<0.5	<50	<0.5	<0.5	NA	NA	NA
MW-2	15,000	780	170	4,100	14	21	73%	98%	88%
MW-4	<50	<0.5	80	<50	<0.5	14	NA	NA	83%
MW-5	74,000	7,500	100	37,000	880	140	50%	88%	↑40%*

\* Percent increase

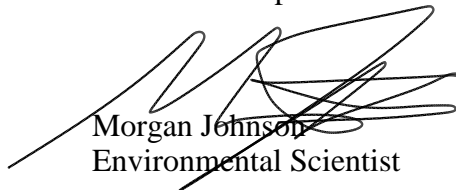
## LIMITATIONS

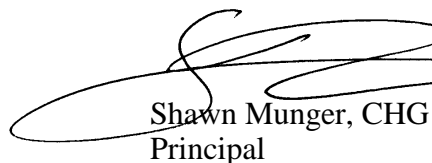
At the time we performed our professional services, they were consistent with those generally accepted environmental engineering principles and practices currently employed in Northern California. ENGEO does not express or imply any other warranty. Findings in this report are valid as of the day of monitoring. However, changes in groundwater conditions can occur with the passage of time, whether due to natural processes or human activity on the Site or on surrounding properties. ENGEO prepared this report for the exclusive use of our client. This report is applicable only for the subject property. We are not responsible for others' interpretations of this report's data. This report does not represent a legal opinion.

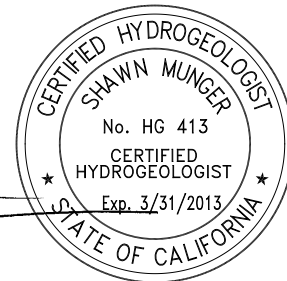
If you have any questions or comments regarding this report, please call and we will be glad to discuss them with you.

Sincerely,

ENGEO Incorporated

  
Morgan Johnson  
Environmental Scientist

  
Shawn Munger, CHG  
Principal



Attachments: Figure 1: Vicinity Map  
Figure 2: Groundwater Elevation Contour Map  
Figure 3: Concentrations of Petroleum Hydrocarbons in Groundwater  
Table 1: Groundwater Elevations  
Table 2: Groundwater Analytical Data  
Monitoring Well Sampling Logs  
Groundwater Laboratory Analytical Report and Chain-of-Custody Record

CC: Mr. Ravi Nandwana, BJP-ROF Jordan Ranch, LLC

## **FIGURES**

**Figure 1: Vicinity Map**

**Figure 2: Groundwater Elevation Contour Map**

**Figure 3: Concentrations of Petroleum Hydrocarbons in Groundwater**



© 2012 BY ENGeo INCORPORATED. THIS DOCUMENT MAY NOT BE REPRODUCED IN WHOLE OR IN PART BY ANY MEANS WHATSOEVER, NOR MAY IT BE QUOTED OR EXCERPTED WITHOUT THE EXPRESS WRITTEN CONSENT OF ENGeo INCORPORATED.



BASE MAP SOURCE: GOOGLE EARTH



VICINITY MAP  
JORDAN RANCH - PARCEL H  
DUBLIN, CALIFORNIA

PROJECT NO.: 7828.000.001

DATE: AS SHOWN

DRAWN BY: SRP

CHECKED BY: SM

FIGURE NO

1





- MW-5 APPROXIMATE LOCATION OF MONITORING WELL
- 412.93
- APPROXIMATE LOCATION OF INJECTION POINT
- 414.8 — GROUNDWATER IN FEET
- APPROXIMATE GROUNDWATER FLOW DIRECTION



BASE MAP SOURCE: UNKNOWN

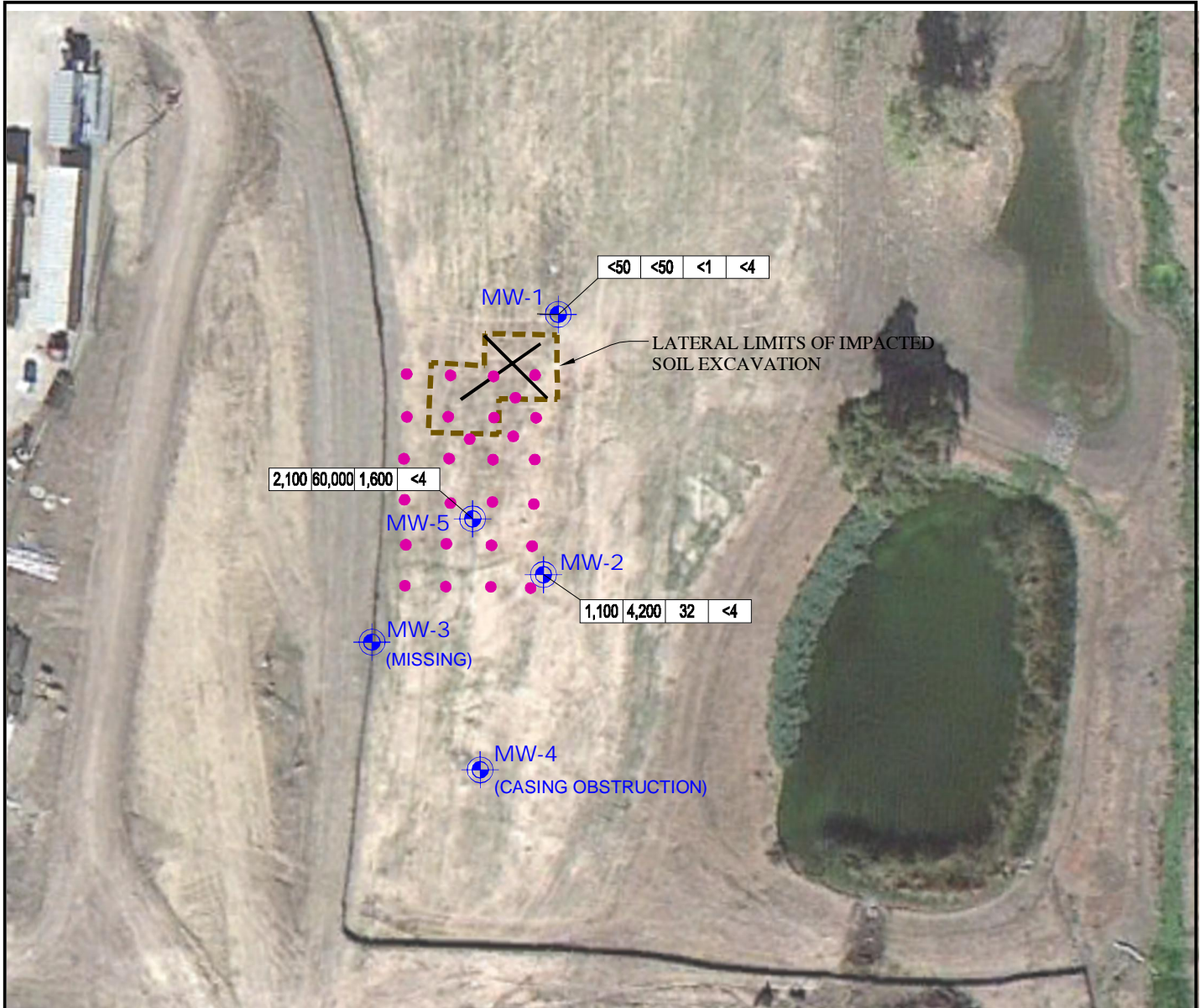


**GROUNDWATER ELEVATION CONTOUR MAP - JANUARY 2012**  
 JORDAN RANCH PARCEL H  
 DUBLIN, CALIFORNIA

PROJECT NO.: 7828.000.001	
SCALE: AS SHOWN	
DRAWN BY: SRP	CHECKED BY: SM

FIGURE NO.  
**2**





**EXPLANATION**

MW-5

APPROXIMATE LOCATION OF MONITORING WELL

2,100 | 60,000 | 1,600 | <4

CONCENTRATIONS OF MTBE IN GROUNDWATER (  $\mu\text{g/L}$  )

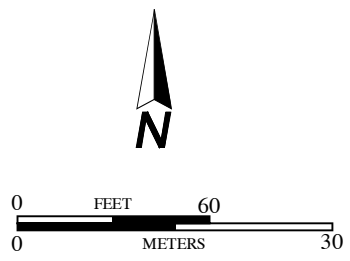
CONCENTRATIONS OF BENZENE IN GROUNDWATER (  $\mu\text{g/L}$  )

CONCENTRATIONS OF TPHg IN GROUNDWATER (  $\mu\text{g/L}$  )

CONCENTRATIONS OF TPHd IN GROUNDWATER (  $\mu\text{g/L}$  )

(  $\mu\text{g/L}$  ) MICROGRAMS PER LITER

● APPROXIMATE LOCATION OF INJECTION POINT



BASE MAP SOURCE:GOOGLE EARTH



**CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER - JANUARY 2012**  
 JORDAN RANCH PARCEL H  
 DUBLIN, CALIFORNIA

PROJECT NO.: 7828.000.001	
SCALE: AS SHOWN	
DRAWN BY: SRP	CHECKED BY: SM

FIGURE NO.  
**3**



## **TABLES**

- Table 1: Groundwater Elevations**
- Table 2: Groundwater Analytical Data**

TABLE 1  
Groundwater Elevations  
Jordan Ranch  
Dublin, California

Well Number	Date	Depth to Groundwater (1) (feet bgs)	Top of Casing Elevation (2) (feet)	Groundwater Elevation (feet msl)
MW-1	12/6/2005	17.08	425.73	408.65
	7/26/2006	13.92	425.73	411.81
	4/10/2008	11.64	425.73	414.09
	8/24/2010	11.75	425.73	413.98
	1/10/2012	10.52	425.73	415.21
	4/30/2012	10.40	425.73	415.33
MW-2	12/6/2005	18.01	424.98	406.97
	7/26/2006	15.44	424.98	409.54
	4/10/2008	14.02	424.98	410.96
	8/24/2010	14.17	424.98	410.81
	1/10/2012	12.83	424.98	412.15
	4/30/2012	12.20	425.73	413.53
MW-3	12/6/2005	17.35	421.47	404.12
	7/26/2006	14.20	421.47	407.27
	4/10/2008	12.31	421.47	409.16
	8/24/2010	12.29	421.47	409.18
	1/10/2012	Inadvertantly Covered by Grading Operations		
MW-4	12/6/2005	18.58	421.60	403.02
	7/26/2006	15.75	421.60	405.85
	4/10/2008	13.89	421.60	407.71
	8/24/2010	13.88	421.60	407.72
	1/10/2012	Obstruction in Casing		
	4/30/2012	11.52	425.73	414.21
MW-5	12/6/2005	16.40	424.04	407.64
	7/26/2006	13.89	424.04	410.15
	4/10/2008	12.24	424.04	411.80
	8/24/2010	12.20	424.04	411.84
	1/10/2012	11.11	424.04	412.93
	4/30/2012	10.50	425.73	415.23

**NOTES:**

bgs = Below ground surface msl = Mean sea level

(1) Depth to groundwater measured from top of well casing.

(2) Well casing elevations surveyed by Quite River Services, Inc. January 16, 2007.

\* Depth to water measurement collected by ENGEO

**TABLE 2**  
**Cumulative Monitoring Well Analytical Data**  
**Jordan Ranch Monitoring Wells**

Well ID	Date	TPHd (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-Benzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	
MW-1	12/6/2005	NA	64	2	<0.5	<0.5	<0.5	<0.5	
	7/26/2006	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/10/2008	NA	<50	<0.5	<0.5	<0.5	<0.5	<50	
	8/24/2010	<50	<50	<0.5	<0.5	<0.5	<1.0	<0.5	
	1/10/2012	<50	<50	<1	1.1	1.1	2.4	<4	
	4/30/2012	<50	<50	<0.5	<0.5	<0.5	<1	<0.5	
MW-2	12/6/2005	NA	3,400	470	<25	55	120	800	
	7/26/2006	150	650	130	<0.5	<0.5	<0.5	510	
	4/10/2008	NA	8,700	1,600	350	370	790	810	
	8/24/2010	<50	15,000	780	93	1,200	2,600	170	
	1/10/2012	1,100	4,200	32	10	210	337	<4	
	4/30/2012	620	4,100	14	10	340	660	21	
MW-3	12/6/2005	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
	7/26/2006	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/10/2008	NA	430	45	34	22	90	<0.5	
	8/24/2010	<50	<50	<0.5	<0.5	<0.5	<1.0	<0.5	
	1/10/2012	Well inadvertently covered by grading operations							
MW-4	12/6/2005	NA	70	<0.5	<0.5	<0.5	<0.5	<0.5	
	7/26/2006	<50	<50	<0.5	<0.5	<0.5	<0.5	<5	
	4/10/2008	NA	830	29	19	16	54	1,200	
	8/24/2010	<50	<50	<0.5	<0.5	<0.5	<1.0	80	
	1/10/2012	Obstruction in well casing							
	4/30/2012	<50	<50	<0.5	<0.5	<0.5	<1.0	14	
MW-5	12/6/2005	NA	53,000	13,000	1,300	930	4,400	7,000	
	7/26/2006	560	15,000	4,100	580	200	870	2,200	
	4/10/2008	NA	66,000	24,000	7,600	2,200	9,200	<130	
	8/24/2010	<50	74,000	7,500	11,000	2,700	13,000	100	
	1/10/2012	2,100	60,000	1,600	3,700	1,800	5,400	<4	
	4/30/2012	2,600	37,000	880	2,500	3,200	15,000	140	
Cleanup Goal	210 <sup>1</sup>	100 <sup>2</sup>	1 <sup>2</sup>	150 <sup>2</sup>	300 <sup>2</sup>	1,750 <sup>2</sup>	13 <sup>3</sup>		

**NOTES:**

TPHg = Total petroleum hydrocarbons as gasoline

TPHd = Total petroleum hydrocarbons as diesel

MTBE = Methyl tert-butyl ether

(ug/L) = micrograms per liter or parts per billion

<sup>1</sup>Regional Water Quality Control Board R2 Environmental Screening Level for Drinking Water Table F-3

<sup>2</sup>Cleanup goal approved in Corrective Action Plan

<sup>3</sup>California Department of Public Health Maximum Contaminant Level



**Monitoring Well Sampling Logs**

7828.000.001  
July 6, 2012

# MONITORING WELL FIELD SAMPLING LOG



Project: <u>Jordan Ranch</u>		<b>Well ID</b>	<b>MW-1</b>					
Project No. <u>7828.000.001</u>								
Location: <u>Dublin, CA</u>								
Technician: <u>Richard Gandolfo</u>								
Activity: <input checked="" type="checkbox"/> Quarterly Sampling <input type="checkbox"/> Develop/Sample								
<b>WELL SECURITY</b>			<b>Date</b> 4/30/2012					
Well Box Set in Concrete? <span style="float: right;">Yes</span>		<b>Comments</b>						
Box Cover Equipped With Bolts and Gasket? <span style="float: right;">Yes</span>								
Well Casing Equipped With Well Seal and Lock? <span style="float: right;">No</span>								
<b>WELL CONSTRUCTION AND WATER LEVEL DETAILS</b>			<b>Date</b> 4/30/2012					
Well Type <input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Extraction Well with Pump <input type="checkbox"/> Other								
Well Diameter (in)	2	<b>Free Product Measurement</b>						
BOC (fbtoc)	29.4	(Enter measurements for wells with free product history)						
DTW = Depth to Water	10.4	Enter "0.0" if no measurable free product →						
WC (f)	19	DTFP (fbtoc) _____	2" = 0.17					
WCV (gal)	3.23	DTW (fbtoc) _____	4" = 0.66					
<b>3 X WCV (Purge Vol)</b>	<b>9.69</b>	FPT (ft)	6" = 1.50					
<b>PURGING, SAMPLING AND DECON EQUIPMENT</b>			<b>Date</b> 4/30/2012					
Purging: <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> 12-V Pump <input type="checkbox"/> Subm. Pump		<b>Comments</b>						
Sampling: <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> 12-V Pump <input type="checkbox"/> Subm. Pump <input type="checkbox"/> Other _____								
Decon:	Was purge pump decontaminated before and after this use? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Decon Product: <input type="checkbox"/> TSP/Alconox Decon Rinse:							
<b>PURGE WATER STORAGE/DISPOSAL (For Last Well Sampled Only)</b>			<b>Date</b> 4/30/2012					
Drums Onsite Arrival	1	Drums All Labeled?	Yes					
Drums Used This Event	< 1/2	Drums Leaking?	No					
Total Drums Onsite Now	2	Purge Water Processed Through GWTS?	No					
<b>PHYSICAL PARAMETERS</b>			<b>Date</b> 4/30/2012					
Time	Volume Purged (gal)	Temp (C degrees)	pH	EC (mS/cm)	DO	Salinity (%)	Turbidity (NTU)	Other
12:45	1	N/A	7.29	N/A	N/A	N/A	602	
12:50	4	N/A	7.27	N/A	N/A	N/A	587	
13:00	9	N/A	7.27	N/A	N/A	N/A	540	
<input type="checkbox"/> Sample collected through groundwater treatment system using active extraction pump; no purging required.								
<b>LABORATORY ANALYSIS</b>								
Number/Type Containers		3	VOA's	2	1-liter Ambers	0	500ml Plastic	
Preservative:		HCl						
Analysis:		TPH-g; VOCs, TPH-d, w/silica gel clean up						
Laboratory/TAT:		Test America/ 5-day						

DTW = Depth to Water

fbtoc = feet below top of casing

BOC = Bottom of Well Casing

WC = Water Column Height

DTFP = Depth to Free Product

WCV = Water Column Volume (gallons) = WC X WCV Factor

FPT = Free Product Thickness







# MONITORING WELL FIELD SAMPLING LOG



Project: <u>Jordan Ranch</u>		<b>Well ID</b>	<b>MW-5</b>					
Project No. <u>7828.000.001</u>								
Location: <u>Dublin, CA</u>								
Technician: <u>Richard Gandolfo</u>								
Activity: <input checked="" type="checkbox"/> Quarterly Sampling <input type="checkbox"/> Develop/Sample								
<b>WELL SECURITY</b>			<b>Date</b> 4/30/2012					
Well Box Set in Concrete? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Comments</b>						
Box Cover Equipped With Bolts and Gasket? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								
Well Casing Equipped With Well Seal and Lock? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <span style="float: right;">No lock</span>								
<b>WELL CONSTRUCTION AND WATER LEVEL DETAILS</b>			<b>Date</b> 4/30/2012					
Well Type <input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Extraction Well with Pump <input type="checkbox"/> Other								
Well Diameter (in)	2	<b>Free Product Measurement</b>						
BOC (fbtoc)	16.4	(Enter measurements for wells with free product history)						
DTW = Depth to Water	10.5	Enter "0.0" if no measurable free product → <input style="width: 50px;" type="text"/>						
WC (f)	5.9	DTFP (fbtoc) _____	2" = 0.17					
WCV (gal)	1	DTW (fbtoc) _____	4" = 0.66					
3 X WCV (Purge Vol)	3	FPT (ft) _____	6" = 1.50					
<b>PURGING, SAMPLING AND DECON EQUIPMENT</b>			<b>Date</b> 4/30/2012					
Purging: <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> 12-V Pump <input type="checkbox"/> Subm. Pump		<b>Comments</b>						
Sampling: <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> 12-V Pump <input type="checkbox"/> Subm. Pump <input type="checkbox"/> Other _____								
Decon:	Was purge pump decontaminated before and after this use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
	Decon Product: <input type="checkbox"/> TSP/Alconox Decon Rinse: _____							
<b>PURGE WATER STORAGE/DISPOSAL (For Last Well Sampled Only)</b>			<b>Date</b> 4/30/2012					
Drums Onsite Arrival	1	Drums All Labeled?	Yes					
Drums Used This Event	~ 1/2	Drums Leaking?	No					
Total Drums Onsite Now	2	Purge Water Processed Through GWTS?	No					
<b>PHYSICAL PARAMETERS</b>			<b>Date</b> 4/30/2012					
Time	Volume Purged (gal)	Temp (C degrees)	pH	EC (mS/cm)	DO	Salinity (%)	Turbidity (NTU)	Other
12:00	1	N/A	7.16	N/A	N/A	N/A	310	
12:05	3	N/A	7.15	N/A	N/A	N/A	271	
<input type="checkbox"/> Sample collected through groundwater treatment system using active extraction pump; no purging required.								
<b>LABORATORY ANALYSIS</b>								
Number/Type Containers		3	VOA's	2	1-liter Ambers	0	500ml Plastic	
Preservative:		HCl						
Analysis:		TPH-g; VOCs, TPH-d, w/silica gel clean up						
Laboratory/TAT:		Test America/ 5-day						

DTW = Depth to Water

fbtoc = feet below top of casing

BOC = Bottom of Well Casing

WC = Water Column Height

DTFP = Depth to Free Product

WCV = Water Column Volume (gallons) = WC X WCV Factor

FPT = Free Product Thickness

**Groundwater Laboratory Analytical Report  
and  
Chain-of-Custody Record**

7828.000.001  
July 6, 2012



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Pleasanton  
1220 Quarry Lane  
Pleasanton, CA 94566  
Tel: (925)484-1919

TestAmerica Job ID: 720-41873-1  
Client Project/Site: Jordan Ranch

For:  
Engeo, Inc.  
2213 Plaza Drive  
Rocklin, California 95765

Attn: Ms. Morgan Johnson



Authorized for release by:  
5/7/2012 2:35:02 PM

Afsaneh Salimpour  
Project Manager I  
[afsaneh.salimpour@testamericainc.com](mailto:afsaneh.salimpour@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Case Narrative . . . . .	4
Detection Summary . . . . .	5
Client Sample Results . . . . .	7
QC Sample Results . . . . .	14
QC Association Summary . . . . .	29
Lab Chronicle . . . . .	31
Certification Summary . . . . .	32
Method Summary . . . . .	33
Sample Summary . . . . .	34
Chain of Custody . . . . .	35
Receipt Checklists . . . . .	36

# Definitions/Glossary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
X	Surrogate is outside control limits
*	LCS or LCSD exceeds the control limits

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
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)



# Case Narrative

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

---

**Job ID: 720-41873-1**

---

**Laboratory: TestAmerica Pleasanton**

---

**Narrative**

**Job Narrative**  
720-41873-1

**Comments**

No additional comments.

**Receipt**

The samples were received on 4/30/2012 2:17 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.60 C.

**GC/MS VOA**

Method(s) 8260B: Matrix spikes for batch #112742 could not be recovered due to sample matrix interferences. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 8260B: Surrogate recovery for the following sample 720-41873-4 was outside control limits. Evidence of matrix interference is present.

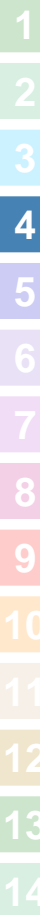
No other analytical or quality issues were noted.

**GC Semi VOA**

No analytical or quality issues were noted.

**Organic Prep**

No analytical or quality issues were noted.



# Detection Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Client Sample ID: MW-1

Lab Sample ID: 720-41873-1

No Detections

## Client Sample ID: MW-2

Lab Sample ID: 720-41873-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	21		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Benzene	14		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
n-Butylbenzene	25		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
sec-Butylbenzene	13		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
tert-Butylbenzene	2.1		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	340		5.0		ug/L	10		8260B/CA_LUFT MS	Total/NA
Isopropylbenzene	32		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
4-Isopropyltoluene	5.1		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	100		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
N-Propylbenzene	60		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Styrene	0.56		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	10		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
1,2,4-Trimethylbenzene	190		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
1,3,5-Trimethylbenzene	61		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	660		10		ug/L	10		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	4100		500		ug/L	10		8260B/CA_LUFT MS	Total/NA
Diesel Range Organics [C10-C28]	620		59		ug/L	1		8015B	Silica Gel Cleanup

## Client Sample ID: MW-4

Lab Sample ID: 720-41873-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	14		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

## Client Sample ID: MW-5

Lab Sample ID: 720-41873-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	140		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Benzene	880		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
n-Butylbenzene	55		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
sec-Butylbenzene	13		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
tert-Butylbenzene	2.9		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	3200		100		ug/L	200		8260B/CA_LUFT MS	Total/NA

# Detection Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

**Client Sample ID: MW-5 (Continued)**

**Lab Sample ID: 720-41873-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Isopropylbenzene	110		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
4-Isopropyltoluene	8.4		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	940		200		ug/L	200		8260B/CA_LUFT MS	Total/NA
N-Propylbenzene	270		200		ug/L	200		8260B/CA_LUFT MS	Total/NA
Styrene	11		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	2500		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
1,2,4-Trimethylbenzene	2100		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
1,3,5-Trimethylbenzene	520		100		ug/L	200		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	15000		200		ug/L	200		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	37000		10000		ug/L	200		8260B/CA_LUFT MS	Total/NA
Diesel Range Organics [C10-C28]	2600		55		ug/L	1		8015B	Silica Gel Cleanup

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS

**Client Sample ID: MW-1**

**Date Collected: 04/30/12 13:15**

**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			05/01/12 00:16	1
Acetone	ND		50		ug/L			05/01/12 00:16	1
Benzene	ND		0.50		ug/L			05/01/12 00:16	1
Dichlorobromomethane	ND		0.50		ug/L			05/01/12 00:16	1
Bromobenzene	ND		1.0		ug/L			05/01/12 00:16	1
Chlorobromomethane	ND		1.0		ug/L			05/01/12 00:16	1
Bromoform	ND		1.0		ug/L			05/01/12 00:16	1
Bromomethane	ND		1.0		ug/L			05/01/12 00:16	1
2-Butanone (MEK)	ND		50		ug/L			05/01/12 00:16	1
n-Butylbenzene	ND		1.0		ug/L			05/01/12 00:16	1
sec-Butylbenzene	ND		1.0		ug/L			05/01/12 00:16	1
tert-Butylbenzene	ND		1.0		ug/L			05/01/12 00:16	1
Carbon disulfide	ND		5.0		ug/L			05/01/12 00:16	1
Carbon tetrachloride	ND		0.50		ug/L			05/01/12 00:16	1
Chlorobenzene	ND		0.50		ug/L			05/01/12 00:16	1
Chloroethane	ND		1.0		ug/L			05/01/12 00:16	1
Chloroform	ND		1.0		ug/L			05/01/12 00:16	1
Chloromethane	ND		1.0		ug/L			05/01/12 00:16	1
2-Chlorotoluene	ND		0.50		ug/L			05/01/12 00:16	1
4-Chlorotoluene	ND		0.50		ug/L			05/01/12 00:16	1
Chlorodibromomethane	ND		0.50		ug/L			05/01/12 00:16	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/01/12 00:16	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/01/12 00:16	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/01/12 00:16	1
1,3-Dichloropropane	ND		1.0		ug/L			05/01/12 00:16	1
1,1-Dichloropropene	ND		0.50		ug/L			05/01/12 00:16	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/01/12 00:16	1
Ethylene Dibromide	ND		0.50		ug/L			05/01/12 00:16	1
Dibromomethane	ND		0.50		ug/L			05/01/12 00:16	1
Dichlorodifluoromethane	ND		0.50		ug/L			05/01/12 00:16	1
1,1-Dichloroethane	ND		0.50		ug/L			05/01/12 00:16	1
1,2-Dichloroethane	ND		0.50		ug/L			05/01/12 00:16	1
1,1-Dichloroethene	ND		0.50		ug/L			05/01/12 00:16	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 00:16	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 00:16	1
1,2-Dichloropropane	ND		0.50		ug/L			05/01/12 00:16	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 00:16	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 00:16	1
Ethylbenzene	ND		0.50		ug/L			05/01/12 00:16	1
Hexachlorobutadiene	ND		1.0		ug/L			05/01/12 00:16	1
2-Hexanone	ND		50		ug/L			05/01/12 00:16	1
Isopropylbenzene	ND		0.50		ug/L			05/01/12 00:16	1
4-Isopropyltoluene	ND		1.0		ug/L			05/01/12 00:16	1
Methylene Chloride	ND		5.0		ug/L			05/01/12 00:16	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			05/01/12 00:16	1
Naphthalene	ND		1.0		ug/L			05/01/12 00:16	1
N-Propylbenzene	ND		1.0		ug/L			05/01/12 00:16	1
Styrene	ND		0.50		ug/L			05/01/12 00:16	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 00:16	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 00:16	1
Tetrachloroethene	ND		0.50		ug/L			05/01/12 00:16	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Client Sample ID: MW-1**  
**Date Collected: 04/30/12 13:15**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			05/01/12 00:16	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			05/01/12 00:16	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/01/12 00:16	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/01/12 00:16	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/01/12 00:16	1
Trichloroethene	ND		0.50		ug/L			05/01/12 00:16	1
Trichlorofluoromethane	ND		1.0		ug/L			05/01/12 00:16	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/01/12 00:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/01/12 00:16	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/01/12 00:16	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/01/12 00:16	1
Vinyl acetate	ND		10		ug/L			05/01/12 00:16	1
Vinyl chloride	ND		0.50		ug/L			05/01/12 00:16	1
Xylenes, Total	ND		1.0		ug/L			05/01/12 00:16	1
2,2-Dichloropropane	ND		0.50		ug/L			05/01/12 00:16	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			05/01/12 00:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		67 - 130					05/01/12 00:16	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 138					05/01/12 00:16	1
Toluene-d8 (Surr)	100		70 - 130					05/01/12 00:16	1

**Client Sample ID: MW-2**  
**Date Collected: 04/30/12 11:30**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Methyl tert-butyl ether</b>	<b>21</b>		0.50		ug/L			05/01/12 00:45	1
Acetone	ND		50		ug/L			05/01/12 00:45	1
<b>Benzene</b>	<b>14</b>		0.50		ug/L			05/01/12 00:45	1
Dichlorobromomethane	ND		0.50		ug/L			05/01/12 00:45	1
Bromobenzene	ND		1.0		ug/L			05/01/12 00:45	1
Chlorobromomethane	ND		1.0		ug/L			05/01/12 00:45	1
Bromoform	ND		1.0		ug/L			05/01/12 00:45	1
Bromomethane	ND		1.0		ug/L			05/01/12 00:45	1
2-Butanone (MEK)	ND		50		ug/L			05/01/12 00:45	1
<b>n-Butylbenzene</b>	<b>25</b>		1.0		ug/L			05/01/12 00:45	1
<b>sec-Butylbenzene</b>	<b>13</b>		1.0		ug/L			05/01/12 00:45	1
<b>tert-Butylbenzene</b>	<b>2.1</b>		1.0		ug/L			05/01/12 00:45	1
Carbon disulfide	ND		5.0		ug/L			05/01/12 00:45	1
Carbon tetrachloride	ND		0.50		ug/L			05/01/12 00:45	1
Chlorobenzene	ND		0.50		ug/L			05/01/12 00:45	1
Chloroethane	ND		1.0		ug/L			05/01/12 00:45	1
Chloroform	ND		1.0		ug/L			05/01/12 00:45	1
Chloromethane	ND		1.0		ug/L			05/01/12 00:45	1
2-Chlorotoluene	ND		0.50		ug/L			05/01/12 00:45	1
4-Chlorotoluene	ND		0.50		ug/L			05/01/12 00:45	1
Chlorodibromomethane	ND		0.50		ug/L			05/01/12 00:45	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/01/12 00:45	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/01/12 00:45	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/01/12 00:45	1
1,3-Dichloropropane	ND		1.0		ug/L			05/01/12 00:45	1



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Client Sample ID: MW-2**  
**Date Collected: 04/30/12 11:30**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		0.50		ug/L			05/01/12 00:45	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/01/12 00:45	1
Ethylene Dibromide	ND		0.50		ug/L			05/01/12 00:45	1
Dibromomethane	ND		0.50		ug/L			05/01/12 00:45	1
Dichlorodifluoromethane	ND		0.50		ug/L			05/01/12 00:45	1
1,1-Dichloroethane	ND		0.50		ug/L			05/01/12 00:45	1
1,2-Dichloroethane	ND		0.50		ug/L			05/01/12 00:45	1
1,1-Dichloroethene	ND		0.50		ug/L			05/01/12 00:45	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 00:45	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 00:45	1
1,2-Dichloropropane	ND		0.50		ug/L			05/01/12 00:45	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 00:45	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 00:45	1
<b>Ethylbenzene</b>	<b>340</b>		5.0		ug/L			05/01/12 16:48	10
Hexachlorobutadiene	ND		1.0		ug/L			05/01/12 00:45	1
2-Hexanone	ND		50		ug/L			05/01/12 00:45	1
<b>Isopropylbenzene</b>	<b>32</b>		0.50		ug/L			05/01/12 00:45	1
<b>4-Isopropyltoluene</b>	<b>5.1</b>		1.0		ug/L			05/01/12 00:45	1
Methylene Chloride	ND		5.0		ug/L			05/01/12 00:45	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			05/01/12 00:45	1
<b>Naphthalene</b>	<b>100</b>		1.0		ug/L			05/01/12 00:45	1
<b>N-Propylbenzene</b>	<b>60</b>		1.0		ug/L			05/01/12 00:45	1
<b>Styrene</b>	<b>0.56</b>		0.50		ug/L			05/01/12 00:45	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 00:45	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 00:45	1
Tetrachloroethene	ND		0.50		ug/L			05/01/12 00:45	1
<b>Toluene</b>	<b>10</b>		0.50		ug/L			05/01/12 00:45	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			05/01/12 00:45	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/01/12 00:45	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/01/12 00:45	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/01/12 00:45	1
Trichloroethene	ND		0.50		ug/L			05/01/12 00:45	1
Trichlorofluoromethane	ND		1.0		ug/L			05/01/12 00:45	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/01/12 00:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/01/12 00:45	1
<b>1,2,4-Trimethylbenzene</b>	<b>190</b>		0.50		ug/L			05/01/12 00:45	1
<b>1,3,5-Trimethylbenzene</b>	<b>61</b>		0.50		ug/L			05/01/12 00:45	1
Vinyl acetate	ND		10		ug/L			05/01/12 00:45	1
Vinyl chloride	ND		0.50		ug/L			05/01/12 00:45	1
<b>Xylenes, Total</b>	<b>660</b>		10		ug/L			05/01/12 16:48	10
2,2-Dichloropropane	ND		0.50		ug/L			05/01/12 00:45	1
<b>Gasoline Range Organics (GRO)</b>	<b>4100</b>		500		ug/L			05/01/12 16:48	10
<b>-C5-C12</b>									

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	114		67 - 130		05/01/12 00:45	1
4-Bromofluorobenzene	104		67 - 130		05/01/12 16:48	10
1,2-Dichloroethane-d4 (Surr)	109		75 - 138		05/01/12 00:45	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 138		05/01/12 16:48	10
Toluene-d8 (Surr)	104		70 - 130		05/01/12 00:45	1
Toluene-d8 (Surr)	102		70 - 130		05/01/12 16:48	10

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS

**Client Sample ID: MW-4**  
**Date Collected: 04/30/12 10:20**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Methyl tert-butyl ether</b>	<b>14</b>		0.50		ug/L			05/01/12 01:14	1
Acetone	ND		50		ug/L			05/01/12 01:14	1
Benzene	ND		0.50		ug/L			05/01/12 01:14	1
Dichlorobromomethane	ND		0.50		ug/L			05/01/12 01:14	1
Bromobenzene	ND		1.0		ug/L			05/01/12 01:14	1
Chlorobromomethane	ND		1.0		ug/L			05/01/12 01:14	1
Bromoform	ND		1.0		ug/L			05/01/12 01:14	1
Bromomethane	ND		1.0		ug/L			05/01/12 01:14	1
2-Butanone (MEK)	ND		50		ug/L			05/01/12 01:14	1
n-Butylbenzene	ND		1.0		ug/L			05/01/12 01:14	1
sec-Butylbenzene	ND		1.0		ug/L			05/01/12 01:14	1
tert-Butylbenzene	ND		1.0		ug/L			05/01/12 01:14	1
Carbon disulfide	ND		5.0		ug/L			05/01/12 01:14	1
Carbon tetrachloride	ND		0.50		ug/L			05/01/12 01:14	1
Chlorobenzene	ND		0.50		ug/L			05/01/12 01:14	1
Chloroethane	ND		1.0		ug/L			05/01/12 01:14	1
Chloroform	ND		1.0		ug/L			05/01/12 01:14	1
Chloromethane	ND		1.0		ug/L			05/01/12 01:14	1
2-Chlorotoluene	ND		0.50		ug/L			05/01/12 01:14	1
4-Chlorotoluene	ND		0.50		ug/L			05/01/12 01:14	1
Chlorodibromomethane	ND		0.50		ug/L			05/01/12 01:14	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/01/12 01:14	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/01/12 01:14	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/01/12 01:14	1
1,3-Dichloropropane	ND		1.0		ug/L			05/01/12 01:14	1
1,1-Dichloropropene	ND		0.50		ug/L			05/01/12 01:14	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/01/12 01:14	1
Ethylene Dibromide	ND		0.50		ug/L			05/01/12 01:14	1
Dibromomethane	ND		0.50		ug/L			05/01/12 01:14	1
Dichlorodifluoromethane	ND		0.50		ug/L			05/01/12 01:14	1
1,1-Dichloroethane	ND		0.50		ug/L			05/01/12 01:14	1
1,2-Dichloroethane	ND		0.50		ug/L			05/01/12 01:14	1
1,1-Dichloroethene	ND		0.50		ug/L			05/01/12 01:14	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 01:14	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 01:14	1
1,2-Dichloropropane	ND		0.50		ug/L			05/01/12 01:14	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 01:14	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 01:14	1
Ethylbenzene	ND		0.50		ug/L			05/01/12 01:14	1
Hexachlorobutadiene	ND		1.0		ug/L			05/01/12 01:14	1
2-Hexanone	ND		50		ug/L			05/01/12 01:14	1
Isopropylbenzene	ND		0.50		ug/L			05/01/12 01:14	1
4-Isopropyltoluene	ND		1.0		ug/L			05/01/12 01:14	1
Methylene Chloride	ND		5.0		ug/L			05/01/12 01:14	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			05/01/12 01:14	1
Naphthalene	ND		1.0		ug/L			05/01/12 01:14	1
N-Propylbenzene	ND		1.0		ug/L			05/01/12 01:14	1
Styrene	ND		0.50		ug/L			05/01/12 01:14	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 01:14	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 01:14	1
Tetrachloroethene	ND		0.50		ug/L			05/01/12 01:14	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Client Sample ID: MW-4**  
**Date Collected: 04/30/12 10:20**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			05/01/12 01:14	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			05/01/12 01:14	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/01/12 01:14	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/01/12 01:14	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/01/12 01:14	1
Trichloroethene	ND		0.50		ug/L			05/01/12 01:14	1
Trichlorofluoromethane	ND		1.0		ug/L			05/01/12 01:14	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/01/12 01:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/01/12 01:14	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/01/12 01:14	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/01/12 01:14	1
Vinyl acetate	ND		10		ug/L			05/01/12 01:14	1
Vinyl chloride	ND		0.50		ug/L			05/01/12 01:14	1
Xylenes, Total	ND		1.0		ug/L			05/01/12 01:14	1
2,2-Dichloropropane	ND		0.50		ug/L			05/01/12 01:14	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			05/01/12 01:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	103		67 - 130					05/01/12 01:14	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 138					05/01/12 01:14	1
Toluene-d8 (Surr)	101		70 - 130					05/01/12 01:14	1

**Client Sample ID: MW-5**  
**Date Collected: 04/30/12 12:15**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Methyl tert-butyl ether</b>	<b>140</b>		0.50		ug/L			05/01/12 01:43	1
Acetone	ND		50		ug/L			05/01/12 01:43	1
<b>Benzene</b>	<b>880</b>		100		ug/L			05/01/12 17:18	200
Dichlorobromomethane	ND		0.50		ug/L			05/01/12 01:43	1
Bromobenzene	ND		1.0		ug/L			05/01/12 01:43	1
Chlorobromomethane	ND		1.0		ug/L			05/01/12 01:43	1
Bromoform	ND		1.0		ug/L			05/01/12 01:43	1
Bromomethane	ND		1.0		ug/L			05/01/12 01:43	1
2-Butanone (MEK)	ND		50		ug/L			05/01/12 01:43	1
<b>n-Butylbenzene</b>	<b>55</b>		1.0		ug/L			05/01/12 01:43	1
<b>sec-Butylbenzene</b>	<b>13</b>		1.0		ug/L			05/01/12 01:43	1
<b>tert-Butylbenzene</b>	<b>2.9</b>		1.0		ug/L			05/01/12 01:43	1
Carbon disulfide	ND		5.0		ug/L			05/01/12 01:43	1
Carbon tetrachloride	ND		0.50		ug/L			05/01/12 01:43	1
Chlorobenzene	ND		0.50		ug/L			05/01/12 01:43	1
Chloroethane	ND		1.0		ug/L			05/01/12 01:43	1
Chloroform	ND		1.0		ug/L			05/01/12 01:43	1
Chloromethane	ND		1.0		ug/L			05/01/12 01:43	1
2-Chlorotoluene	ND		0.50		ug/L			05/01/12 01:43	1
4-Chlorotoluene	ND		0.50		ug/L			05/01/12 01:43	1
Chlorodibromomethane	ND		0.50		ug/L			05/01/12 01:43	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/01/12 01:43	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/01/12 01:43	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/01/12 01:43	1
1,3-Dichloropropane	ND		1.0		ug/L			05/01/12 01:43	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Client Sample ID: MW-5**  
**Date Collected: 04/30/12 12:15**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		0.50		ug/L			05/01/12 01:43	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/01/12 01:43	1
Ethylene Dibromide	ND		0.50		ug/L			05/01/12 01:43	1
Dibromomethane	ND		0.50		ug/L			05/01/12 01:43	1
Dichlorodifluoromethane	ND		0.50		ug/L			05/01/12 01:43	1
1,1-Dichloroethane	ND		0.50		ug/L			05/01/12 01:43	1
1,2-Dichloroethane	ND		0.50		ug/L			05/01/12 01:43	1
1,1-Dichloroethene	ND		0.50		ug/L			05/01/12 01:43	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 01:43	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 01:43	1
1,2-Dichloropropane	ND		0.50		ug/L			05/01/12 01:43	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 01:43	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 01:43	1
<b>Ethylbenzene</b>	<b>3200</b>		100		ug/L			05/01/12 17:18	200
Hexachlorobutadiene	ND		1.0		ug/L			05/01/12 01:43	1
2-Hexanone	ND		50		ug/L			05/01/12 01:43	1
<b>Isopropylbenzene</b>	<b>110</b>		0.50		ug/L			05/01/12 01:43	1
<b>4-Isopropyltoluene</b>	<b>8.4</b>		1.0		ug/L			05/01/12 01:43	1
Methylene Chloride	ND		5.0		ug/L			05/01/12 01:43	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			05/01/12 01:43	1
<b>Naphthalene</b>	<b>940</b>		200		ug/L			05/01/12 17:18	200
<b>N-Propylbenzene</b>	<b>270</b>		200		ug/L			05/01/12 17:18	200
<b>Styrene</b>	<b>11</b>		0.50		ug/L			05/01/12 01:43	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 01:43	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 01:43	1
Tetrachloroethene	ND		0.50		ug/L			05/01/12 01:43	1
<b>Toluene</b>	<b>2500</b>		100		ug/L			05/01/12 17:18	200
1,2,3-Trichlorobenzene	ND		1.0		ug/L			05/01/12 01:43	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/01/12 01:43	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/01/12 01:43	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/01/12 01:43	1
Trichloroethene	ND		0.50		ug/L			05/01/12 01:43	1
Trichlorofluoromethane	ND		1.0		ug/L			05/01/12 01:43	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/01/12 01:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/01/12 01:43	1
<b>1,2,4-Trimethylbenzene</b>	<b>2100</b>		100		ug/L			05/01/12 17:18	200
<b>1,3,5-Trimethylbenzene</b>	<b>520</b>		100		ug/L			05/01/12 17:18	200
Vinyl acetate	ND		10		ug/L			05/01/12 01:43	1
Vinyl chloride	ND		0.50		ug/L			05/01/12 01:43	1
<b>Xylenes, Total</b>	<b>15000</b>		200		ug/L			05/01/12 17:18	200
2,2-Dichloropropane	ND		0.50		ug/L			05/01/12 01:43	1
<b>Gasoline Range Organics (GRO)</b>	<b>37000</b>		10000		ug/L			05/01/12 17:18	200
<b>-C5-C12</b>									

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	113		67 - 130		05/01/12 01:43	1
4-Bromofluorobenzene	102		67 - 130		05/01/12 17:18	200
1,2-Dichloroethane-d4 (Surr)	151	X	75 - 138		05/01/12 01:43	1
1,2-Dichloroethane-d4 (Surr)	110		75 - 138		05/01/12 17:18	200
Toluene-d8 (Surr)	104		70 - 130		05/01/12 01:43	1
Toluene-d8 (Surr)	98		70 - 130		05/01/12 17:18	200

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

**Client Sample ID: MW-1**  
**Date Collected: 04/30/12 13:15**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		58		ug/L		05/01/12 14:25	05/02/12 01:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.01		0 - 5				05/01/12 14:25	05/02/12 01:51	1
p-Terphenyl	83		31 - 150				05/01/12 14:25	05/02/12 01:51	1

**Client Sample ID: MW-2**  
**Date Collected: 04/30/12 11:30**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	620		59		ug/L		05/01/12 14:25	05/02/12 02:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.2		0 - 5				05/01/12 14:25	05/02/12 02:15	1
p-Terphenyl	82		31 - 150				05/01/12 14:25	05/02/12 02:15	1

**Client Sample ID: MW-4**  
**Date Collected: 04/30/12 10:20**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		58		ug/L		05/01/12 14:25	05/02/12 02:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.02		0 - 5				05/01/12 14:25	05/02/12 02:39	1
p-Terphenyl	74		31 - 150				05/01/12 14:25	05/02/12 02:39	1

**Client Sample ID: MW-5**  
**Date Collected: 04/30/12 12:15**  
**Date Received: 04/30/12 14:17**

**Lab Sample ID: 720-41873-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2600		55		ug/L		05/01/12 14:25	05/02/12 03:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.5		0 - 5				05/01/12 14:25	05/02/12 03:03	1
p-Terphenyl	84		31 - 150				05/01/12 14:25	05/02/12 03:03	1



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS

**Lab Sample ID: MB 720-112742/6**

**Matrix: Water**

**Analysis Batch: 112742**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			04/30/12 19:54	1
Acetone	ND		50		ug/L			04/30/12 19:54	1
Benzene	ND		0.50		ug/L			04/30/12 19:54	1
Dichlorobromomethane	ND		0.50		ug/L			04/30/12 19:54	1
Bromobenzene	ND		1.0		ug/L			04/30/12 19:54	1
Chlorobromomethane	ND		1.0		ug/L			04/30/12 19:54	1
Bromoform	ND		1.0		ug/L			04/30/12 19:54	1
Bromomethane	ND		1.0		ug/L			04/30/12 19:54	1
2-Butanone (MEK)	ND		50		ug/L			04/30/12 19:54	1
n-Butylbenzene	ND		1.0		ug/L			04/30/12 19:54	1
sec-Butylbenzene	ND		1.0		ug/L			04/30/12 19:54	1
tert-Butylbenzene	ND		1.0		ug/L			04/30/12 19:54	1
Carbon disulfide	ND		5.0		ug/L			04/30/12 19:54	1
Carbon tetrachloride	ND		0.50		ug/L			04/30/12 19:54	1
Chlorobenzene	ND		0.50		ug/L			04/30/12 19:54	1
Chloroethane	ND		1.0		ug/L			04/30/12 19:54	1
Chloroform	ND		1.0		ug/L			04/30/12 19:54	1
Chloromethane	ND		1.0		ug/L			04/30/12 19:54	1
2-Chlorotoluene	ND		0.50		ug/L			04/30/12 19:54	1
4-Chlorotoluene	ND		0.50		ug/L			04/30/12 19:54	1
Chlorodibromomethane	ND		0.50		ug/L			04/30/12 19:54	1
1,2-Dichlorobenzene	ND		0.50		ug/L			04/30/12 19:54	1
1,3-Dichlorobenzene	ND		0.50		ug/L			04/30/12 19:54	1
1,4-Dichlorobenzene	ND		0.50		ug/L			04/30/12 19:54	1
1,3-Dichloropropane	ND		1.0		ug/L			04/30/12 19:54	1
1,1-Dichloropropene	ND		0.50		ug/L			04/30/12 19:54	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			04/30/12 19:54	1
Ethylene Dibromide	ND		0.50		ug/L			04/30/12 19:54	1
Dibromomethane	ND		0.50		ug/L			04/30/12 19:54	1
Dichlorodifluoromethane	ND		0.50		ug/L			04/30/12 19:54	1
1,1-Dichloroethane	ND		0.50		ug/L			04/30/12 19:54	1
1,2-Dichloroethane	ND		0.50		ug/L			04/30/12 19:54	1
1,1-Dichloroethene	ND		0.50		ug/L			04/30/12 19:54	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			04/30/12 19:54	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			04/30/12 19:54	1
1,2-Dichloropropane	ND		0.50		ug/L			04/30/12 19:54	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			04/30/12 19:54	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			04/30/12 19:54	1
Ethylbenzene	ND		0.50		ug/L			04/30/12 19:54	1
Hexachlorobutadiene	ND		1.0		ug/L			04/30/12 19:54	1
2-Hexanone	ND		50		ug/L			04/30/12 19:54	1
Isopropylbenzene	ND		0.50		ug/L			04/30/12 19:54	1
4-Isopropyltoluene	ND		1.0		ug/L			04/30/12 19:54	1
Methylene Chloride	ND		5.0		ug/L			04/30/12 19:54	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			04/30/12 19:54	1
Naphthalene	ND		1.0		ug/L			04/30/12 19:54	1
N-Propylbenzene	ND		1.0		ug/L			04/30/12 19:54	1
Styrene	ND		0.50		ug/L			04/30/12 19:54	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			04/30/12 19:54	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-112742/6**

**Matrix: Water**

**Analysis Batch: 112742**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			04/30/12 19:54	1
Tetrachloroethene	ND		0.50		ug/L			04/30/12 19:54	1
Toluene	ND		0.50		ug/L			04/30/12 19:54	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/30/12 19:54	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/30/12 19:54	1
1,1,1-Trichloroethane	ND		0.50		ug/L			04/30/12 19:54	1
1,1,2-Trichloroethane	ND		0.50		ug/L			04/30/12 19:54	1
Trichloroethene	ND		0.50		ug/L			04/30/12 19:54	1
Trichlorofluoromethane	ND		1.0		ug/L			04/30/12 19:54	1
1,2,3-Trichloropropane	ND		0.50		ug/L			04/30/12 19:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			04/30/12 19:54	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			04/30/12 19:54	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			04/30/12 19:54	1
Vinyl acetate	ND		10		ug/L			04/30/12 19:54	1
Vinyl chloride	ND		0.50		ug/L			04/30/12 19:54	1
m-Xylene & p-Xylene	ND		1.0		ug/L			04/30/12 19:54	1
o-Xylene	ND		0.50		ug/L			04/30/12 19:54	1
Xylenes, Total	ND		1.0		ug/L			04/30/12 19:54	1
2,2-Dichloropropane	ND		0.50		ug/L			04/30/12 19:54	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/30/12 19:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		67 - 130		04/30/12 19:54	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 138		04/30/12 19:54	1
Toluene-d8 (Surr)	99		70 - 130		04/30/12 19:54	1

**Lab Sample ID: LCS 720-112742/7**

**Matrix: Water**

**Analysis Batch: 112742**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	27.7		ug/L		111	62 - 130
Acetone	125	76.1		ug/L		61	26 - 180
Benzene	25.0	26.2		ug/L		105	79 - 130
Dichlorobromomethane	25.0	30.9		ug/L		124	70 - 130
Bromobenzene	25.0	26.4		ug/L		106	70 - 130
Chlorobromomethane	25.0	27.5		ug/L		110	70 - 130
Bromoform	25.0	28.5		ug/L		114	68 - 136
Bromomethane	25.0	27.6		ug/L		110	43 - 151
2-Butanone (MEK)	125	99.9		ug/L		80	54 - 130
n-Butylbenzene	25.0	26.8		ug/L		107	70 - 142
sec-Butylbenzene	25.0	26.4		ug/L		106	70 - 134
tert-Butylbenzene	25.0	27.1		ug/L		108	70 - 135
Carbon disulfide	25.0	25.3		ug/L		101	58 - 130
Carbon tetrachloride	25.0	25.6		ug/L		102	70 - 146
Chlorobenzene	25.0	26.0		ug/L		104	70 - 130
Chloroethane	25.0	28.3		ug/L		113	62 - 138
Chloroform	25.0	27.1		ug/L		108	70 - 130
Chloromethane	25.0	25.6		ug/L		102	52 - 175

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-112742/7**

**Matrix: Water**

**Analysis Batch: 112742**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorotoluene	25.0	27.0		ug/L		108	70 - 130
4-Chlorotoluene	25.0	26.3		ug/L		105	70 - 130
Chlorodibromomethane	25.0	29.5		ug/L		118	70 - 145
1,2-Dichlorobenzene	25.0	26.6		ug/L		106	70 - 130
1,3-Dichlorobenzene	25.0	26.8		ug/L		107	70 - 130
1,4-Dichlorobenzene	25.0	26.5		ug/L		106	70 - 130
1,3-Dichloropropane	25.0	27.4		ug/L		110	70 - 130
1,1-Dichloropropene	25.0	26.3		ug/L		105	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.4		ug/L		94	70 - 136
Ethylene Dibromide	25.0	28.1		ug/L		112	70 - 130
Dibromomethane	25.0	26.9		ug/L		108	70 - 130
Dichlorodifluoromethane	25.0	21.2		ug/L		85	34 - 132
1,1-Dichloroethane	25.0	26.5		ug/L		106	70 - 130
1,2-Dichloroethane	25.0	26.9		ug/L		108	61 - 132
1,1-Dichloroethene	25.0	25.2		ug/L		101	64 - 128
cis-1,2-Dichloroethene	25.0	29.8		ug/L		119	70 - 130
trans-1,2-Dichloroethene	25.0	22.8		ug/L		91	68 - 130
1,2-Dichloropropane	25.0	27.1		ug/L		108	70 - 130
cis-1,3-Dichloropropene	25.0	28.5		ug/L		114	70 - 130
trans-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 140
Ethylbenzene	25.0	25.1		ug/L		100	80 - 120
Hexachlorobutadiene	25.0	22.3		ug/L		89	70 - 130
2-Hexanone	125	108		ug/L		86	60 - 164
Isopropylbenzene	25.0	27.2		ug/L		109	70 - 130
4-Isopropyltoluene	25.0	26.8		ug/L		107	70 - 130
Methylene Chloride	25.0	25.4		ug/L		102	70 - 147
4-Methyl-2-pentanone (MIBK)	125	128		ug/L		102	63 - 165
Naphthalene	25.0	24.1		ug/L		96	70 - 130
N-Propylbenzene	25.0	26.0		ug/L		104	70 - 130
Styrene	25.0	28.1		ug/L		112	70 - 130
1,1,1,2-Tetrachloroethane	25.0	27.9		ug/L		112	70 - 130
1,1,2,2-Tetrachloroethane	25.0	26.7		ug/L		107	70 - 130
Tetrachloroethene	25.0	26.5		ug/L		106	70 - 130
Toluene	25.0	24.3		ug/L		97	78 - 120
1,2,3-Trichlorobenzene	25.0	23.7		ug/L		95	70 - 130
1,2,4-Trichlorobenzene	25.0	23.3		ug/L		93	70 - 130
1,1,1-Trichloroethane	25.0	28.4		ug/L		114	70 - 130
1,1,2-Trichloroethane	25.0	27.8		ug/L		111	70 - 130
Trichloroethene	25.0	26.5		ug/L		106	70 - 130
Trichlorofluoromethane	25.0	25.8		ug/L		103	66 - 132
1,2,3-Trichloropropane	25.0	27.0		ug/L		108	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	28.1		ug/L		112	42 - 162
1,2,4-Trimethylbenzene	25.0	26.9		ug/L		108	70 - 132
1,3,5-Trimethylbenzene	25.0	27.4		ug/L		110	70 - 130
Vinyl acetate	25.0	35.4		ug/L		142	43 - 163
Vinyl chloride	25.0	25.5		ug/L		102	54 - 135
m-Xylene & p-Xylene	50.0	52.3		ug/L		105	70 - 142
o-Xylene	25.0	26.9		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	27.6		ug/L		110	70 - 140

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-112742/7

Matrix: Water

Analysis Batch: 112742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	105		75 - 138
Toluene-d8 (Surr)	104		70 - 130

Lab Sample ID: LCS 720-112742/9

Matrix: Water

Analysis Batch: 112742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	521		ug/L		104	62 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	106		67 - 130
1,2-Dichloroethane-d4 (Surr)	108		75 - 138
Toluene-d8 (Surr)	104		70 - 130

Lab Sample ID: LCSD 720-112742/10

Matrix: Water

Analysis Batch: 112742

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	500	517		ug/L		103	62 - 120	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	105		67 - 130
1,2-Dichloroethane-d4 (Surr)	106		75 - 138
Toluene-d8 (Surr)	103		70 - 130

Lab Sample ID: LCSD 720-112742/8

Matrix: Water

Analysis Batch: 112742

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	28.5		ug/L		114	62 - 130	3	20
Acetone	125	75.1		ug/L		60	26 - 180	1	30
Benzene	25.0	25.8		ug/L		103	79 - 130	2	20
Dichlorobromomethane	25.0	30.9		ug/L		124	70 - 130	0	20
Bromobenzene	25.0	26.3		ug/L		105	70 - 130	0	20
Chlorobromomethane	25.0	27.4		ug/L		110	70 - 130	0	20
Bromoform	25.0	28.3		ug/L		113	68 - 136	1	20
Bromomethane	25.0	26.8		ug/L		107	43 - 151	3	20
2-Butanone (MEK)	125	101		ug/L		81	54 - 130	1	20
n-Butylbenzene	25.0	26.1		ug/L		104	70 - 142	3	20
sec-Butylbenzene	25.0	25.6		ug/L		102	70 - 134	3	20
tert-Butylbenzene	25.0	26.3		ug/L		105	70 - 135	3	20
Carbon disulfide	25.0	24.6		ug/L		98	58 - 130	3	20
Carbon tetrachloride	25.0	25.0		ug/L		100	70 - 146	2	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-112742/8**

**Matrix: Water**

**Analysis Batch: 112742**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD
									Limit
Chlorobenzene	25.0	25.7		ug/L		103	70 - 130	1	20
Chloroethane	25.0	27.6		ug/L		110	62 - 138	3	20
Chloroform	25.0	26.6		ug/L		106	70 - 130	2	20
Chloromethane	25.0	25.0		ug/L		100	52 - 175	2	20
2-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130	2	20
4-Chlorotoluene	25.0	25.9		ug/L		104	70 - 130	2	20
Chlorodibromomethane	25.0	29.6		ug/L		118	70 - 145	0	20
1,2-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130	2	20
1,3-Dichlorobenzene	25.0	26.5		ug/L		106	70 - 130	1	20
1,4-Dichlorobenzene	25.0	26.1		ug/L		104	70 - 130	2	20
1,3-Dichloropropane	25.0	27.4		ug/L		110	70 - 130	0	20
1,1-Dichloropropene	25.0	25.8		ug/L		103	70 - 130	2	20
1,2-Dibromo-3-Chloropropane	25.0	23.9		ug/L		96	70 - 136	2	20
Ethylene Dibromide	25.0	28.3		ug/L		113	70 - 130	1	20
Dibromomethane	25.0	26.9		ug/L		108	70 - 130	0	20
Dichlorodifluoromethane	25.0	20.0		ug/L		80	34 - 132	6	20
1,1-Dichloroethane	25.0	26.2		ug/L		105	70 - 130	1	20
1,2-Dichloroethane	25.0	26.9		ug/L		108	61 - 132	0	20
1,1-Dichloroethene	25.0	24.3		ug/L		97	64 - 128	4	20
cis-1,2-Dichloroethene	25.0	29.5		ug/L		118	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	22.3		ug/L		89	68 - 130	2	20
1,2-Dichloropropane	25.0	27.3		ug/L		109	70 - 130	1	20
cis-1,3-Dichloropropene	25.0	28.5		ug/L		114	70 - 130	0	20
trans-1,3-Dichloropropene	25.0	26.7		ug/L		107	70 - 140	1	20
Ethylbenzene	25.0	24.5		ug/L		98	80 - 120	2	20
Hexachlorobutadiene	25.0	22.2		ug/L		89	70 - 130	0	20
2-Hexanone	125	109		ug/L		87	60 - 164	1	20
Isopropylbenzene	25.0	26.6		ug/L		106	70 - 130	2	20
4-Isopropyltoluene	25.0	26.1		ug/L		104	70 - 130	3	20
Methylene Chloride	25.0	25.2		ug/L		101	70 - 147	1	20
4-Methyl-2-pentanone (MIBK)	125	129		ug/L		103	63 - 165	1	20
Naphthalene	25.0	24.4		ug/L		98	70 - 130	1	20
N-Propylbenzene	25.0	25.5		ug/L		102	70 - 130	2	20
Styrene	25.0	27.6		ug/L		110	70 - 130	2	20
1,1,1,2-Tetrachloroethane	25.0	27.6		ug/L		110	70 - 130	1	20
1,1,1,2,2-Tetrachloroethane	25.0	26.5		ug/L		106	70 - 130	1	20
Tetrachloroethene	25.0	25.9		ug/L		104	70 - 130	2	20
Toluene	25.0	23.8		ug/L		95	78 - 120	2	20
1,2,3-Trichlorobenzene	25.0	23.9		ug/L		96	70 - 130	1	20
1,2,4-Trichlorobenzene	25.0	23.6		ug/L		94	70 - 130	1	20
1,1,1-Trichloroethane	25.0	27.9		ug/L		112	70 - 130	2	20
1,1,2-Trichloroethane	25.0	28.0		ug/L		112	70 - 130	1	20
Trichloroethene	25.0	26.1		ug/L		104	70 - 130	2	20
Trichlorofluoromethane	25.0	25.1		ug/L		100	66 - 132	3	20
1,2,3-Trichloropropane	25.0	26.8		ug/L		107	70 - 130	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.8		ug/L		107	42 - 162	5	20
1,2,4-Trimethylbenzene	25.0	26.2		ug/L		105	70 - 132	3	20
1,3,5-Trimethylbenzene	25.0	26.9		ug/L		108	70 - 130	2	20
Vinyl acetate	25.0	35.8		ug/L		143	43 - 163	1	20



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-112742/8**

**Matrix: Water**

**Analysis Batch: 112742**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride	25.0	24.6		ug/L		98	54 - 135	4	20
m-Xylene & p-Xylene	50.0	51.3		ug/L		103	70 - 142	2	20
o-Xylene	25.0	26.5		ug/L		106	70 - 130	1	20
2,2-Dichloropropane	25.0	27.5		ug/L		110	70 - 140	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	104		75 - 138
Toluene-d8 (Surr)	104		70 - 130

**Lab Sample ID: 720-41873-1 MS**

**Matrix: Water**

**Analysis Batch: 112742**

**Client Sample ID: MW-1**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	ND		25.0	29.3		ug/L		117	60 - 138
Acetone	ND		125	64.5	F	ug/L		52	60 - 140
Benzene	ND		25.0	26.5		ug/L		106	60 - 140
Dichlorobromomethane	ND		25.0	31.8		ug/L		127	60 - 140
Bromobenzene	ND		25.0	27.1		ug/L		108	60 - 140
Chlorobromomethane	ND		25.0	28.4		ug/L		114	60 - 140
Bromoform	ND		25.0	28.5		ug/L		114	56 - 140
Bromomethane	ND		25.0	26.6		ug/L		106	23 - 140
2-Butanone (MEK)	ND		125	98.2		ug/L		79	60 - 140
n-Butylbenzene	ND		25.0	26.3		ug/L		105	60 - 140
sec-Butylbenzene	ND		25.0	25.6		ug/L		102	60 - 140
tert-Butylbenzene	ND		25.0	26.4		ug/L		106	60 - 140
Carbon disulfide	ND		25.0	24.7		ug/L		99	38 - 140
Carbon tetrachloride	ND		25.0	24.7		ug/L		99	60 - 140
Chlorobenzene	ND		25.0	26.3		ug/L		105	60 - 140
Chloroethane	ND		25.0	27.5		ug/L		110	51 - 140
Chloroform	ND		25.0	27.4		ug/L		110	60 - 140
Chloromethane	ND		25.0	24.4		ug/L		98	52 - 140
2-Chlorotoluene	ND		25.0	26.9		ug/L		108	60 - 140
4-Chlorotoluene	ND		25.0	26.6		ug/L		106	60 - 140
Chlorodibromomethane	ND		25.0	30.5		ug/L		122	60 - 140
1,2-Dichlorobenzene	ND		25.0	26.9		ug/L		108	60 - 140
1,3-Dichlorobenzene	ND		25.0	27.1		ug/L		108	60 - 140
1,4-Dichlorobenzene	ND		25.0	26.9		ug/L		108	60 - 140
1,3-Dichloropropane	ND		25.0	28.5		ug/L		114	60 - 140
1,1-Dichloropropene	ND		25.0	26.0		ug/L		104	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	23.1		ug/L		92	60 - 140
Ethylene Dibromide	ND		25.0	29.2		ug/L		117	60 - 140
Dibromomethane	ND		25.0	27.6		ug/L		110	60 - 140
Dichlorodifluoromethane	ND		25.0	19.5		ug/L		78	38 - 140
1,1-Dichloroethane	ND		25.0	26.8		ug/L		107	60 - 140
1,2-Dichloroethane	ND		25.0	27.5		ug/L		110	60 - 140
1,1-Dichloroethene	ND		25.0	24.2		ug/L		97	60 - 140
cis-1,2-Dichloroethene	ND		25.0	30.3		ug/L		121	60 - 140

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: 720-41873-1 MS**

**Matrix: Water**

**Analysis Batch: 112742**

**Client Sample ID: MW-1**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
trans-1,2-Dichloroethene	ND		25.0	22.8		ug/L		91	60 - 140
1,2-Dichloropropane	ND		25.0	28.4		ug/L		114	60 - 140
cis-1,3-Dichloropropene	ND		25.0	29.7		ug/L		119	60 - 140
trans-1,3-Dichloropropene	ND		25.0	27.7		ug/L		111	60 - 140
Ethylbenzene	ND		25.0	24.8		ug/L		99	60 - 140
Hexachlorobutadiene	ND		25.0	21.8		ug/L		87	60 - 140
2-Hexanone	ND		125	107		ug/L		85	60 - 140
Isopropylbenzene	ND		25.0	26.6		ug/L		106	60 - 140
4-Isopropyltoluene	ND		25.0	26.2		ug/L		105	60 - 140
Methylene Chloride	ND		25.0	25.8		ug/L		103	40 - 140
4-Methyl-2-pentanone (MIBK)	ND		125	131		ug/L		104	60 - 140
Naphthalene	ND		25.0	24.1		ug/L		96	56 - 140
N-Propylbenzene	ND		25.0	25.8		ug/L		103	60 - 140
Styrene	ND		25.0	28.1		ug/L		112	60 - 140
1,1,1,2-Tetrachloroethane	ND		25.0	28.3		ug/L		113	60 - 140
1,1,1,2-Tetrachloroethane	ND		25.0	27.1		ug/L		108	60 - 140
Tetrachloroethene	ND		25.0	26.2		ug/L		105	60 - 140
Toluene	ND		25.0	24.3		ug/L		97	60 - 140
1,2,3-Trichlorobenzene	ND		25.0	24.0		ug/L		96	60 - 140
1,2,4-Trichlorobenzene	ND		25.0	24.1		ug/L		96	60 - 140
1,1,1-Trichloroethane	ND		25.0	27.9		ug/L		112	60 - 140
1,1,2-Trichloroethane	ND		25.0	28.9		ug/L		116	60 - 140
Trichloroethene	ND		25.0	26.4		ug/L		106	60 - 140
Trichlorofluoromethane	ND		25.0	24.6		ug/L		98	60 - 140
1,2,3-Trichloropropane	ND		25.0	26.9		ug/L		108	60 - 140
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	26.6		ug/L		106	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	26.8		ug/L		107	60 - 140
1,3,5-Trimethylbenzene	ND		25.0	27.3		ug/L		109	60 - 140
Vinyl acetate	ND		25.0	36.4	F	ug/L		146	40 - 140
Vinyl chloride	ND		25.0	24.2		ug/L		97	58 - 140
m-Xylene & p-Xylene	ND		50.0	52.0		ug/L		104	60 - 140
o-Xylene	ND		25.0	27.0		ug/L		108	60 - 140
2,2-Dichloropropane	ND		25.0	28.2		ug/L		113	60 - 140

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	104		75 - 138
Toluene-d8 (Surr)	104		70 - 130

**Lab Sample ID: 720-41873-1 MSD**

**Matrix: Water**

**Analysis Batch: 112742**

**Client Sample ID: MW-1**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
Methyl tert-butyl ether	ND		25.0	28.8		ug/L		115	60 - 138	2	20
Acetone	ND		125	61.0	F	ug/L		49	60 - 140	6	20
Benzene	ND		25.0	26.2		ug/L		105	60 - 140	1	20
Dichlorobromomethane	ND		25.0	31.0		ug/L		124	60 - 140	3	20
Bromobenzene	ND		25.0	26.3		ug/L		105	60 - 140	3	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: 720-41873-1 MSD**

**Client Sample ID: MW-1**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 112742**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Chlorobromomethane	ND		25.0	27.9		ug/L		112	60 - 140	2	20
Bromoform	ND		25.0	28.4		ug/L		114	56 - 140	0	20
Bromomethane	ND		25.0	26.6		ug/L		106	23 - 140	0	20
2-Butanone (MEK)	ND		125	94.7		ug/L		76	60 - 140	4	20
n-Butylbenzene	ND		25.0	26.5		ug/L		106	60 - 140	1	20
sec-Butylbenzene	ND		25.0	25.6		ug/L		102	60 - 140	0	20
tert-Butylbenzene	ND		25.0	26.4		ug/L		106	60 - 140	0	20
Carbon disulfide	ND		25.0	24.8		ug/L		99	38 - 140	0	20
Carbon tetrachloride	ND		25.0	25.0		ug/L		100	60 - 140	1	20
Chlorobenzene	ND		25.0	26.9		ug/L		108	60 - 140	2	20
Chloroethane	ND		25.0	27.7		ug/L		111	51 - 140	1	20
Chloroform	ND		25.0	27.0		ug/L		108	60 - 140	1	20
Chloromethane	ND		25.0	24.6		ug/L		98	52 - 140	1	20
2-Chlorotoluene	ND		25.0	26.5		ug/L		106	60 - 140	1	20
4-Chlorotoluene	ND		25.0	26.2		ug/L		105	60 - 140	2	20
Chlorodibromomethane	ND		25.0	29.5		ug/L		118	60 - 140	3	20
1,2-Dichlorobenzene	ND		25.0	26.7		ug/L		107	60 - 140	1	20
1,3-Dichlorobenzene	ND		25.0	26.7		ug/L		107	60 - 140	1	20
1,4-Dichlorobenzene	ND		25.0	26.7		ug/L		107	60 - 140	1	20
1,3-Dichloropropane	ND		25.0	27.6		ug/L		110	60 - 140	3	20
1,1-Dichloropropene	ND		25.0	26.0		ug/L		104	60 - 140	0	20
1,2-Dibromo-3-Chloropropane	ND		25.0	23.0		ug/L		92	60 - 140	0	20
Ethylene Dibromide	ND		25.0	28.3		ug/L		113	60 - 140	3	20
Dibromomethane	ND		25.0	26.8		ug/L		107	60 - 140	3	20
Dichlorodifluoromethane	ND		25.0	19.8		ug/L		79	38 - 140	2	20
1,1-Dichloroethane	ND		25.0	26.6		ug/L		106	60 - 140	1	20
1,2-Dichloroethane	ND		25.0	27.0		ug/L		108	60 - 140	2	20
1,1-Dichloroethene	ND		25.0	24.4		ug/L		98	60 - 140	1	20
cis-1,2-Dichloroethene	ND		25.0	30.0		ug/L		120	60 - 140	1	20
trans-1,2-Dichloroethene	ND		25.0	22.7		ug/L		91	60 - 140	0	20
1,2-Dichloropropane	ND		25.0	28.0		ug/L		112	60 - 140	1	20
cis-1,3-Dichloropropene	ND		25.0	29.1		ug/L		116	60 - 140	2	20
trans-1,3-Dichloropropene	ND		25.0	26.9		ug/L		108	60 - 140	3	20
Ethylbenzene	ND		25.0	25.6		ug/L		102	60 - 140	3	20
Hexachlorobutadiene	ND		25.0	22.6		ug/L		90	60 - 140	4	20
2-Hexanone	ND		125	102		ug/L		82	60 - 140	5	20
Isopropylbenzene	ND		25.0	27.5		ug/L		110	60 - 140	3	20
4-Isopropyltoluene	ND		25.0	26.2		ug/L		105	60 - 140	0	20
Methylene Chloride	ND		25.0	25.5		ug/L		102	40 - 140	1	20
4-Methyl-2-pentanone (MIBK)	ND		125	125		ug/L		100	60 - 140	4	20
Naphthalene	ND		25.0	24.4		ug/L		98	56 - 140	1	20
N-Propylbenzene	ND		25.0	25.5		ug/L		102	60 - 140	1	20
Styrene	ND		25.0	28.5		ug/L		114	60 - 140	1	20
1,1,1,2-Tetrachloroethane	ND		25.0	28.8		ug/L		115	60 - 140	2	20
1,1,2,2-Tetrachloroethane	ND		25.0	26.4		ug/L		106	60 - 140	3	20
Tetrachloroethene	ND		25.0	26.0		ug/L		104	60 - 140	1	20
Toluene	ND		25.0	25.0		ug/L		100	60 - 140	3	20
1,2,3-Trichlorobenzene	ND		25.0	24.2		ug/L		97	60 - 140	1	20
1,2,4-Trichlorobenzene	ND		25.0	24.3		ug/L		97	60 - 140	1	20
1,1,1-Trichloroethane	ND		25.0	27.9		ug/L		112	60 - 140	0	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: 720-41873-1 MSD**

**Client Sample ID: MW-1**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 112742**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
1,1,2-Trichloroethane	ND		25.0	28.0		ug/L		112	60 - 140	3	20
Trichloroethene	ND		25.0	26.2		ug/L		105	60 - 140	1	20
Trichlorofluoromethane	ND		25.0	25.1		ug/L		100	60 - 140	2	20
1,2,3-Trichloropropane	ND		25.0	25.8		ug/L		103	60 - 140	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	27.0		ug/L		108	60 - 140	1	20
1,2,4-Trimethylbenzene	ND		25.0	26.5		ug/L		106	60 - 140	1	20
1,3,5-Trimethylbenzene	ND		25.0	27.0		ug/L		108	60 - 140	1	20
Vinyl acetate	ND		25.0	36.4	F	ug/L		146	40 - 140	0	20
Vinyl chloride	ND		25.0	25.2		ug/L		101	58 - 140	4	20
m-Xylene & p-Xylene	ND		50.0	53.5		ug/L		107	60 - 140	3	20
o-Xylene	ND		25.0	27.5		ug/L		110	60 - 140	2	20
2,2-Dichloropropane	ND		25.0	27.5		ug/L		110	60 - 140	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	105		67 - 130
1,2-Dichloroethane-d4 (Surr)	103		75 - 138
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: MB 720-112787/4**

**Client Sample ID: Method Blank**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 112787**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Methyl tert-butyl ether	ND		0.50		ug/L			05/01/12 08:17	1
Benzene	ND		0.50		ug/L			05/01/12 08:17	1
Dichlorobromomethane	ND		0.50		ug/L			05/01/12 08:17	1
Bromobenzene	ND		1.0		ug/L			05/01/12 08:17	1
Chlorobromomethane	ND		1.0		ug/L			05/01/12 08:17	1
Bromoform	ND		1.0		ug/L			05/01/12 08:17	1
Bromomethane	ND		1.0		ug/L			05/01/12 08:17	1
2-Butanone (MEK)	ND		50		ug/L			05/01/12 08:17	1
n-Butylbenzene	ND		1.0		ug/L			05/01/12 08:17	1
sec-Butylbenzene	ND		1.0		ug/L			05/01/12 08:17	1
tert-Butylbenzene	ND		1.0		ug/L			05/01/12 08:17	1
Carbon disulfide	ND		5.0		ug/L			05/01/12 08:17	1
Carbon tetrachloride	ND		0.50		ug/L			05/01/12 08:17	1
Chlorobenzene	ND		0.50		ug/L			05/01/12 08:17	1
Chloroethane	ND		1.0		ug/L			05/01/12 08:17	1
Chloroform	ND		1.0		ug/L			05/01/12 08:17	1
Chloromethane	ND		1.0		ug/L			05/01/12 08:17	1
2-Chlorotoluene	ND		0.50		ug/L			05/01/12 08:17	1
4-Chlorotoluene	ND		0.50		ug/L			05/01/12 08:17	1
Chlorodibromomethane	ND		0.50		ug/L			05/01/12 08:17	1
1,2-Dichlorobenzene	ND		0.50		ug/L			05/01/12 08:17	1
1,3-Dichlorobenzene	ND		0.50		ug/L			05/01/12 08:17	1
1,4-Dichlorobenzene	ND		0.50		ug/L			05/01/12 08:17	1
1,3-Dichloropropane	ND		1.0		ug/L			05/01/12 08:17	1
1,1-Dichloropropene	ND		0.50		ug/L			05/01/12 08:17	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/01/12 08:17	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-112787/4

Matrix: Water

Analysis Batch: 112787

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.50		ug/L			05/01/12 08:17	1
Dibromomethane	ND		0.50		ug/L			05/01/12 08:17	1
Dichlorodifluoromethane	ND		0.50		ug/L			05/01/12 08:17	1
1,1-Dichloroethane	ND		0.50		ug/L			05/01/12 08:17	1
1,2-Dichloroethane	ND		0.50		ug/L			05/01/12 08:17	1
1,1-Dichloroethene	ND		0.50		ug/L			05/01/12 08:17	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 08:17	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			05/01/12 08:17	1
1,2-Dichloropropane	ND		0.50		ug/L			05/01/12 08:17	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 08:17	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			05/01/12 08:17	1
Ethylbenzene	ND		0.50		ug/L			05/01/12 08:17	1
Hexachlorobutadiene	ND		1.0		ug/L			05/01/12 08:17	1
2-Hexanone	ND		50		ug/L			05/01/12 08:17	1
Isopropylbenzene	ND		0.50		ug/L			05/01/12 08:17	1
4-Isopropyltoluene	ND		1.0		ug/L			05/01/12 08:17	1
Methylene Chloride	ND		5.0		ug/L			05/01/12 08:17	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			05/01/12 08:17	1
Naphthalene	ND		1.0		ug/L			05/01/12 08:17	1
N-Propylbenzene	ND		1.0		ug/L			05/01/12 08:17	1
Styrene	ND		0.50		ug/L			05/01/12 08:17	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 08:17	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			05/01/12 08:17	1
Tetrachloroethene	ND		0.50		ug/L			05/01/12 08:17	1
Toluene	ND		0.50		ug/L			05/01/12 08:17	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			05/01/12 08:17	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/01/12 08:17	1
1,1,1-Trichloroethane	ND		0.50		ug/L			05/01/12 08:17	1
1,1,2-Trichloroethane	ND		0.50		ug/L			05/01/12 08:17	1
Trichloroethene	ND		0.50		ug/L			05/01/12 08:17	1
Trichlorofluoromethane	ND		1.0		ug/L			05/01/12 08:17	1
1,2,3-Trichloropropane	ND		0.50		ug/L			05/01/12 08:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			05/01/12 08:17	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			05/01/12 08:17	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			05/01/12 08:17	1
Vinyl acetate	ND		10		ug/L			05/01/12 08:17	1
Vinyl chloride	ND		0.50		ug/L			05/01/12 08:17	1
m-Xylene & p-Xylene	ND		1.0		ug/L			05/01/12 08:17	1
o-Xylene	ND		0.50		ug/L			05/01/12 08:17	1
Xylenes, Total	ND		1.0		ug/L			05/01/12 08:17	1
2,2-Dichloropropane	ND		0.50		ug/L			05/01/12 08:17	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			05/01/12 08:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		67 - 130		05/01/12 08:17	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 138		05/01/12 08:17	1
Toluene-d8 (Surr)	97		70 - 130		05/01/12 08:17	1



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-112787/7**

**Matrix: Water**

**Analysis Batch: 112787**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	446		ug/L		89	62 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	105		75 - 138
Toluene-d8 (Surr)	102		70 - 130

**Lab Sample ID: LCS 720-112787/9**

**Matrix: Water**

**Analysis Batch: 112787**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	29.6		ug/L		118	62 - 130
Benzene	25.0	27.5		ug/L		110	79 - 130
Dichlorobromomethane	25.0	30.2		ug/L		121	70 - 130
Bromobenzene	25.0	26.7		ug/L		107	70 - 130
Chlorobromomethane	25.0	28.9		ug/L		116	70 - 130
Bromoform	25.0	29.4		ug/L		118	68 - 136
Bromomethane	25.0	25.7		ug/L		103	43 - 151
2-Butanone (MEK)	125	156		ug/L		125	54 - 130
n-Butylbenzene	25.0	28.8		ug/L		115	70 - 142
sec-Butylbenzene	25.0	27.4		ug/L		110	70 - 134
tert-Butylbenzene	25.0	27.7		ug/L		111	70 - 135
Carbon disulfide	25.0	26.3		ug/L		105	58 - 130
Carbon tetrachloride	25.0	29.5		ug/L		118	70 - 146
Chlorobenzene	25.0	26.6		ug/L		106	70 - 130
Chloroethane	25.0	25.5		ug/L		102	62 - 138
Chloroform	25.0	27.6		ug/L		110	70 - 130
Chloromethane	25.0	23.0		ug/L		92	52 - 175
2-Chlorotoluene	25.0	27.7		ug/L		111	70 - 130
4-Chlorotoluene	25.0	27.4		ug/L		110	70 - 130
Chlorodibromomethane	25.0	29.4		ug/L		118	70 - 145
1,2-Dichlorobenzene	25.0	26.3		ug/L		105	70 - 130
1,3-Dichlorobenzene	25.0	27.3		ug/L		109	70 - 130
1,4-Dichlorobenzene	25.0	27.9		ug/L		112	70 - 130
1,3-Dichloropropane	25.0	28.5		ug/L		114	70 - 130
1,1-Dichloropropene	25.0	28.5		ug/L		114	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	28.1		ug/L		112	70 - 136
Ethylene Dibromide	25.0	30.9		ug/L		124	70 - 130
Dibromomethane	25.0	28.8		ug/L		115	70 - 130
Dichlorodifluoromethane	25.0	19.7		ug/L		79	34 - 132
1,1-Dichloroethane	25.0	27.3		ug/L		109	70 - 130
1,2-Dichloroethane	25.0	28.2		ug/L		113	61 - 132
1,1-Dichloroethene	25.0	25.5		ug/L		102	64 - 128
cis-1,2-Dichloroethene	25.0	31.0		ug/L		124	70 - 130
trans-1,2-Dichloroethene	25.0	24.1		ug/L		96	68 - 130
1,2-Dichloropropane	25.0	27.6		ug/L		110	70 - 130
cis-1,3-Dichloropropene	25.0	33.2	*	ug/L		133	70 - 130

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-112787/9**

**Matrix: Water**

**Analysis Batch: 112787**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
trans-1,3-Dichloropropene	25.0	32.6		ug/L		130	70 - 140	
Ethylbenzene	25.0	26.7		ug/L		107	80 - 120	
Hexachlorobutadiene	25.0	31.1		ug/L		124	70 - 130	
2-Hexanone	125	159		ug/L		127	60 - 164	
Isopropylbenzene	25.0	28.9		ug/L		116	70 - 130	
4-Isopropyltoluene	25.0	27.7		ug/L		111	70 - 130	
Methylene Chloride	25.0	26.0		ug/L		104	70 - 147	
4-Methyl-2-pentanone (MIBK)	125	158		ug/L		126	63 - 165	
Naphthalene	25.0	27.1		ug/L		108	70 - 130	
N-Propylbenzene	25.0	27.2		ug/L		109	70 - 130	
Styrene	25.0	28.6		ug/L		114	70 - 130	
1,1,1,2-Tetrachloroethane	25.0	29.0		ug/L		116	70 - 130	
1,1,2,2-Tetrachloroethane	25.0	28.8		ug/L		115	70 - 130	
Tetrachloroethene	25.0	28.5		ug/L		114	70 - 130	
Toluene	25.0	26.1		ug/L		104	78 - 120	
1,2,3-Trichlorobenzene	25.0	29.8		ug/L		119	70 - 130	
1,2,4-Trichlorobenzene	25.0	27.0		ug/L		108	70 - 130	
1,1,1-Trichloroethane	25.0	28.9		ug/L		116	70 - 130	
1,1,2-Trichloroethane	25.0	29.6		ug/L		118	70 - 130	
Trichloroethene	25.0	27.5		ug/L		110	70 - 130	
Trichlorofluoromethane	25.0	25.9		ug/L		104	66 - 132	
1,2,3-Trichloropropane	25.0	29.7		ug/L		119	70 - 130	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	28.9		ug/L		116	42 - 162	
1,2,4-Trimethylbenzene	25.0	27.5		ug/L		110	70 - 132	
1,3,5-Trimethylbenzene	25.0	28.2		ug/L		113	70 - 130	
Vinyl acetate	25.0	38.9		ug/L		156	43 - 163	
Vinyl chloride	25.0	24.3		ug/L		97	54 - 135	
m-Xylene & p-Xylene	50.0	56.3		ug/L		113	70 - 142	
o-Xylene	25.0	28.3		ug/L		113	70 - 130	
2,2-Dichloropropane	25.0	29.5		ug/L		118	70 - 140	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	103		75 - 138
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: LCSD 720-112787/10**

**Matrix: Water**

**Analysis Batch: 112787**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	Limit
Methyl tert-butyl ether	25.0	28.6		ug/L		114	62 - 130	3	20	
Benzene	25.0	27.3		ug/L		109	79 - 130	1	20	
Dichlorobromomethane	25.0	29.5		ug/L		118	70 - 130	2	20	
Bromobenzene	25.0	25.2		ug/L		101	70 - 130	6	20	
Chlorobromomethane	25.0	28.1		ug/L		112	70 - 130	3	20	
Bromoform	25.0	28.0		ug/L		112	68 - 136	5	20	
Bromomethane	25.0	24.8		ug/L		99	43 - 151	4	20	
2-Butanone (MEK)	125	151		ug/L		120	54 - 130	3	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-112787/10**

**Matrix: Water**

**Analysis Batch: 112787**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
n-Butylbenzene	25.0	27.2		ug/L		109	70 - 142	6	20
sec-Butylbenzene	25.0	26.2		ug/L		105	70 - 134	4	20
tert-Butylbenzene	25.0	26.4		ug/L		106	70 - 135	5	20
Carbon disulfide	25.0	26.1		ug/L		104	58 - 130	1	20
Carbon tetrachloride	25.0	29.1		ug/L		116	70 - 146	1	20
Chlorobenzene	25.0	25.9		ug/L		104	70 - 130	3	20
Chloroethane	25.0	25.4		ug/L		102	62 - 138	0	20
Chloroform	25.0	27.2		ug/L		109	70 - 130	1	20
Chloromethane	25.0	22.9		ug/L		92	52 - 175	0	20
2-Chlorotoluene	25.0	26.2		ug/L		105	70 - 130	6	20
4-Chlorotoluene	25.0	25.9		ug/L		104	70 - 130	6	20
Chlorodibromomethane	25.0	28.5		ug/L		114	70 - 145	3	20
1,2-Dichlorobenzene	25.0	24.9		ug/L		100	70 - 130	5	20
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130	6	20
1,4-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130	6	20
1,3-Dichloropropane	25.0	27.9		ug/L		112	70 - 130	2	20
1,1-Dichloropropene	25.0	28.2		ug/L		113	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	26.1		ug/L		104	70 - 136	7	20
Ethylene Dibromide	25.0	29.6		ug/L		118	70 - 130	4	20
Dibromomethane	25.0	28.4		ug/L		114	70 - 130	1	20
Dichlorodifluoromethane	25.0	19.5		ug/L		78	34 - 132	1	20
1,1-Dichloroethane	25.0	27.0		ug/L		108	70 - 130	1	20
1,2-Dichloroethane	25.0	27.4		ug/L		110	61 - 132	3	20
1,1-Dichloroethene	25.0	25.6		ug/L		102	64 - 128	0	20
cis-1,2-Dichloroethene	25.0	30.5		ug/L		122	70 - 130	2	20
trans-1,2-Dichloroethene	25.0	23.6		ug/L		94	68 - 130	2	20
1,2-Dichloropropane	25.0	27.1		ug/L		108	70 - 130	2	20
cis-1,3-Dichloropropene	25.0	32.2		ug/L		129	70 - 130	3	20
trans-1,3-Dichloropropene	25.0	31.5		ug/L		126	70 - 140	3	20
Ethylbenzene	25.0	26.2		ug/L		105	80 - 120	2	20
Hexachlorobutadiene	25.0	29.8		ug/L		119	70 - 130	4	20
2-Hexanone	125	152		ug/L		122	60 - 164	4	20
Isopropylbenzene	25.0	28.3		ug/L		113	70 - 130	2	20
4-Isopropyltoluene	25.0	26.2		ug/L		105	70 - 130	6	20
Methylene Chloride	25.0	25.6		ug/L		102	70 - 147	2	20
4-Methyl-2-pentanone (MIBK)	125	150		ug/L		120	63 - 165	5	20
Naphthalene	25.0	25.7		ug/L		103	70 - 130	5	20
N-Propylbenzene	25.0	26.1		ug/L		104	70 - 130	4	20
Styrene	25.0	27.8		ug/L		111	70 - 130	3	20
1,1,1,2-Tetrachloroethane	25.0	27.9		ug/L		112	70 - 130	4	20
1,1,1,2,2-Tetrachloroethane	25.0	27.0		ug/L		108	70 - 130	6	20
Tetrachloroethene	25.0	28.4		ug/L		114	70 - 130	0	20
Toluene	25.0	25.5		ug/L		102	78 - 120	2	20
1,2,3-Trichlorobenzene	25.0	28.1		ug/L		112	70 - 130	6	20
1,2,4-Trichlorobenzene	25.0	24.6		ug/L		98	70 - 130	9	20
1,1,1-Trichloroethane	25.0	28.8		ug/L		115	70 - 130	0	20
1,1,2-Trichloroethane	25.0	28.8		ug/L		115	70 - 130	3	20
Trichloroethene	25.0	27.5		ug/L		110	70 - 130	0	20
Trichlorofluoromethane	25.0	26.2		ug/L		105	66 - 132	1	20
1,2,3-Trichloropropane	25.0	27.2		ug/L		109	70 - 130	9	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-112787/10**

**Matrix: Water**

**Analysis Batch: 112787**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	28.1		ug/L		112	42 - 162	3	20
1,2,4-Trimethylbenzene	25.0	26.2		ug/L		105	70 - 132	5	20
1,3,5-Trimethylbenzene	25.0	26.9		ug/L		108	70 - 130	5	20
Vinyl acetate	25.0	36.8		ug/L		147	43 - 163	6	20
Vinyl chloride	25.0	24.2		ug/L		97	54 - 135	0	20
m-Xylene & p-Xylene	50.0	54.8		ug/L		110	70 - 142	3	20
o-Xylene	25.0	27.6		ug/L		110	70 - 130	3	20
2,2-Dichloropropane	25.0	31.9		ug/L		128	70 - 140	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	104		75 - 138
Toluene-d8 (Surr)	102		70 - 130

**Lab Sample ID: LCSD 720-112787/8**

**Matrix: Water**

**Analysis Batch: 112787**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	500	428		ug/L		86	62 - 120	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	103		75 - 138
Toluene-d8 (Surr)	102		70 - 130

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

**Lab Sample ID: MB 720-112814/1-A**

**Matrix: Water**

**Analysis Batch: 112784**

**Client Sample ID: Method Blank**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 112814**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		05/01/12 14:25	05/02/12 04:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0		0 - 5	05/01/12 14:25	05/02/12 04:16	1
p-Terphenyl	98		31 - 150	05/01/12 14:25	05/02/12 04:16	1

**Lab Sample ID: LCS 720-112814/2-A**

**Matrix: Water**

**Analysis Batch: 112784**

**Client Sample ID: Lab Control Sample**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 112814**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2500	1670		ug/L		67	32 - 119

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

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

**Lab Sample ID: LCS 720-112814/2-A**

**Matrix: Water**

**Analysis Batch: 112784**

**Client Sample ID: Lab Control Sample**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 112814**

<i>Surrogate</i>	<i>%Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
<i>p-Terphenyl</i>	82		31 - 150

**Lab Sample ID: LCSD 720-112814/3-A**

**Matrix: Water**

**Analysis Batch: 112784**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 112814**

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
Diesel Range Organics [C10-C28]	2500	1540		ug/L		62	32 - 119	8	35

<i>Surrogate</i>	<i>%Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
<i>p-Terphenyl</i>	72		31 - 150

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## GC/MS VOA

### Analysis Batch: 112742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41873-1	MW-1	Total/NA	Water	8260B/CA_LUFT	
720-41873-1 MS	MW-1	Total/NA	Water	MS	
720-41873-1 MSD	MW-1	Total/NA	Water	8260B/CA_LUFT	
720-41873-2	MW-2	Total/NA	Water	MS	
720-41873-3	MW-4	Total/NA	Water	8260B/CA_LUFT	
720-41873-4	MW-5	Total/NA	Water	MS	
LCS 720-112742/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
LCS 720-112742/9	Lab Control Sample	Total/NA	Water	MS	
LCSD 720-112742/10	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT	
LCSD 720-112742/8	Lab Control Sample Dup	Total/NA	Water	MS	
MB 720-112742/6	Method Blank	Total/NA	Water	8260B/CA_LUFT	
				MS	

### Analysis Batch: 112787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41873-2	MW-2	Total/NA	Water	8260B/CA_LUFT	
720-41873-4	MW-5	Total/NA	Water	MS	
LCS 720-112787/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
LCS 720-112787/9	Lab Control Sample	Total/NA	Water	MS	
LCSD 720-112787/10	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT	
LCSD 720-112787/8	Lab Control Sample Dup	Total/NA	Water	MS	
MB 720-112787/4	Method Blank	Total/NA	Water	8260B/CA_LUFT	
				MS	

## GC Semi VOA

### Analysis Batch: 112784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41873-1	MW-1	Silica Gel Cleanup	Water	8015B	112814
720-41873-2	MW-2	Silica Gel Cleanup	Water	8015B	112814
720-41873-3	MW-4	Silica Gel Cleanup	Water	8015B	112814
720-41873-4	MW-5	Silica Gel Cleanup	Water	8015B	112814
LCS 720-112814/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	112814
LCSD 720-112814/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	112814
MB 720-112814/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	112814

### Prep Batch: 112814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41873-1	MW-1	Silica Gel Cleanup	Water	3510C SGC	
720-41873-2	MW-2	Silica Gel Cleanup	Water	3510C SGC	



# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## GC Semi VOA (Continued)

### Prep Batch: 112814 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41873-3	MW-4	Silica Gel Cleanup	Water	3510C SGC	
720-41873-4	MW-5	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-112814/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-112814/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-112814/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

## Client Sample ID: MW-1

Lab Sample ID: 720-41873-1

Date Collected: 04/30/12 13:15

Matrix: Water

Date Received: 04/30/12 14:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	112742	05/01/12 00:16	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112814	05/01/12 14:25	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112784	05/02/12 01:51	WR	TAL SF

## Client Sample ID: MW-2

Lab Sample ID: 720-41873-2

Date Collected: 04/30/12 11:30

Matrix: Water

Date Received: 04/30/12 14:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	112742	05/01/12 00:45	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		10	112787	05/01/12 16:48	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112814	05/01/12 14:25	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112784	05/02/12 02:15	WR	TAL SF

## Client Sample ID: MW-4

Lab Sample ID: 720-41873-3

Date Collected: 04/30/12 10:20

Matrix: Water

Date Received: 04/30/12 14:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	112742	05/01/12 01:14	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112814	05/01/12 14:25	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112784	05/02/12 02:39	WR	TAL SF

## Client Sample ID: MW-5

Lab Sample ID: 720-41873-4

Date Collected: 04/30/12 12:15

Matrix: Water

Date Received: 04/30/12 14:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	112742	05/01/12 01:43	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		200	112787	05/01/12 17:18	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112814	05/01/12 14:25	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112784	05/02/12 03:03	WR	TAL SF

**Laboratory References:**

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

# Certification Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

---

Laboratory	Authority	Program	EPA Region	Certification ID
------------	-----------	---------	------------	------------------

---

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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Method Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTM S	8260B / CA LUFT MS	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF

**Protocol References:**

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

**Laboratory References:**

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



# Sample Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch

TestAmerica Job ID: 720-41873-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-41873-1	MW-1	Water	04/30/12 13:15	04/30/12 14:17
720-41873-2	MW-2	Water	04/30/12 11:30	04/30/12 14:17
720-41873-3	MW-4	Water	04/30/12 10:20	04/30/12 14:17
720-41873-4	MW-5	Water	04/30/12 12:15	04/30/12 14:17

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

**720-41873**

**Report To** **Analysis Request**

Attn: Richard Gandolfo/Morgan Johnson  
 Company: ENGEO  
 Address: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Bill To: on file Sampled By: \_\_\_\_\_  
 Attn: \_\_\_\_\_ Phone: \_\_\_\_\_

Sample ID	Date	Time	Mat In	Preserv	Volatile Organics GC/MS (VOCs) EPA 8260B	HVOCs by EPA 8260B	EPA 8260B: Gas <input type="checkbox"/> BTEX 5 Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol	TEPH EPA 8015B <input checked="" type="checkbox"/> Silica Gel <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other	SemiVolatile Organics GC/MS EPA 8270C	PNAPAH's by EPA 8270C <input type="checkbox"/> 8270C SIM	Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664/19071) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 PCBs <input type="checkbox"/> EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: <input type="checkbox"/> 6010B <input type="checkbox"/> 200.7 <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____	Metals: <input type="checkbox"/> 6020 <input type="checkbox"/> 200.8 (ICP-MS): _____	W.E.T (STLC) <input type="checkbox"/> TCLP	Hex. Chrom by EPA 7196 <input type="checkbox"/> or EPA 7199	pH <input type="checkbox"/> 9040 <input type="checkbox"/> SM4500	Spec. Cond. <input type="checkbox"/> Alkalinity TSS <input type="checkbox"/> SS <input type="checkbox"/> TDS	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Perchlorate by EPA 314.0	COD <input type="checkbox"/> EPA 410.4 <input type="checkbox"/> SM5220D Turbidity	Number of Containers		
MW-1	4-30	13:15	W		<input checked="" type="checkbox"/>																			5	
MW-2		11:30			<input checked="" type="checkbox"/>																				5
MW-4		10:20			<input checked="" type="checkbox"/>																				5
MW-5		12:15			<input checked="" type="checkbox"/>																				5

**Project Info** Project Name/ #: Jordan MW  
 PO#: 7828.000.001  
 Credit Card Y/N: 0 If yes, please call with payment information ASAP  
 TAT: 10 Day 5 Day 4 Day 3 Day 2 Day 1 Day Other: \_\_\_\_\_

1) Relinquished by: [Signature] 14:17  
 Signature: \_\_\_\_\_ Time: \_\_\_\_\_  
 Printed Name: Richard Gandolfo Date: 4/30  
 Company: ENGEO

2) Relinquished by:  
 Signature \_\_\_\_\_ Time \_\_\_\_\_  
 Printed Name \_\_\_\_\_ Date \_\_\_\_\_  
 Company \_\_\_\_\_

3) Relinquished by:  
 Signature \_\_\_\_\_ Time \_\_\_\_\_  
 Printed Name \_\_\_\_\_ Date \_\_\_\_\_  
 Company \_\_\_\_\_

Report:  Routine  Level 3  Level 4  EDD  EDF  
 Special Instructions / Comments:  Global ID \_\_\_\_\_  
 See Terms and Conditions on reverse

1) Received by: [Signature] 14:17  
 Signature: \_\_\_\_\_ Time: \_\_\_\_\_  
 Printed Name: T. Bullock Date: 4/30/12  
 Company: TAL-SF

2) Received by:  
 Signature \_\_\_\_\_ Time \_\_\_\_\_  
 Printed Name \_\_\_\_\_ Date \_\_\_\_\_  
 Company \_\_\_\_\_

3) Received by:  
 Signature \_\_\_\_\_ Time \_\_\_\_\_  
 Printed Name \_\_\_\_\_ Date \_\_\_\_\_  
 Company \_\_\_\_\_



## Login Sample Receipt Checklist

Client: Engeo, Inc.

Job Number: 720-41873-1

**Login Number: 41873**

**List Source: TestAmerica Pleasanton**

**List Number: 1**

**Creator: Apostol, Anita**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the 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.	N/A	
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	



July 6, 2012

Subject: Jordan Ranch Property – Former Leaking Underground Storage Tank  
Dublin, California

**PERJURY STATEMENT**

“I declare, that to the best of my knowledge at the present time, the information and/or recommendations contained in the attached document are true and correct.”

Submitted by Responsible Party:



ROBERT RADANOVICH  
BJP-ROF Jordan Ranch, LLC  
5000 Hopyard Road, #170  
Pleasanton, CA 94588