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

The logo for ENGEIO INCORPORATED is displayed in large, white, 3D-style block letters. The word "ENGEIO" is on the top line, and "INCORPORATED" is on the bottom line. The letters are set against a background of a green, rolling hillside with a few trees, and a rocky stream bed with water flowing over it. The entire logo is centered horizontally and partially overlaps a blue vertical bar on the left side of the page.

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**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

**November 6, 2012**

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Project No.  
**7828.000.001**

November 6, 2012

Ms. 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

## **FOURTH QUARTER 2012 GROUNDWATER MONITORING REPORT**

Dear Ms. Roe:

This letter summarizes the results of the October 2012 groundwater monitoring event completed for the Jordan Ranch – Parcel H (Site) located in Dublin, California. This is the fourth monitoring event following completion of the soil and groundwater remediation activities performed in fall 2011. The Site is located at the 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 October 4, 2012. The monitoring well locations are shown on Figure 2.

The depths to groundwater in the Site monitoring wells ranged from 11.51 feet below the TOC in MW-1 to 12.55 feet below the TOC in MW-4. During this sampling event, the direction of groundwater flow appeared to be towards the south at a gradient of approximately 0.026 foot 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:

- Recorded in-situ dissolved oxygen (DO) and oxidation reduction potential (ORP) prior to purging.
- Purged three well casing volumes from well MW-1 and approximately 100 gallons each from 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 drums.
- Obtained groundwater samples using new disposable bailers.
- 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), and volatile organic compounds (VOCs) by EPA Test Method 8260B, diesel (TPHd) by EPA Test Method 8015B, and silica gel by EPA Test Method 3630.

### Groundwater Analytical Results

Concentrations of petroleum hydrocarbons detected during the fourth 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)	Napthalene (ug/L)
MW-1	<50	<50	<0.5	<0.5	<0.5	<1	<0.5	<1
MW-2	250	1,300	16	3	150	120	11	46
MW-4	<50	<50	<0.5	<0.5	<0.5	<1	3.9	<1
MW-5	2,100	29,000	750	1,500	2,400	760	140	690

In-situ DO measurements for wells ranged from 0.8 to 4.1 mg/l; and ORP readings ranged from negative 27 to positive 188 mV. MW-5 exhibited anaerobic conditions and MW-1 through MW-4 exhibited aerobic conditions.

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. The laboratory reported a qualifier for the TPHd detections, stating they are representative of a weathered gasoline fraction and are not consistent with the typical diesel chromatogram. It should also be noted that naphthalene is a constituent of gasoline as well as diesel.

## FINDINGS

During the fourth quarter 2012 monitoring event, the purge volumes were increased to evaluate subsurface hydraulic conductivity and contaminant fate and transport. We purged approximately 100 gallons at a constant rate of 2 gallons per minute from wells MW-2, MW-4, and MW-5 prior to sample collection. During purging, we noted that the water level in the casing exhibited drawdown of approximately 10 feet; however, the wells were not fully dewatered while purging.

The groundwater samples that were collected following this increased purging event exhibited a significant decrease in concentrations compared to prior events. One potential explanation for the decreased concentrations is that natural groundwater flow is limited in the perched, thin, discontinuous groundwater bearing lenses; therefore, groundwater impacts are likely confined and concentrations are not decreasing due to advection and dispersion. The increased purging may have partially removed “historic” impacts that have been confined in the relatively discontinuous lenses in the immediate vicinity of the wells.

A comparison of pre- and post-remediation groundwater data is provided in the table below. The data generally depicts notable decreases in TPHg, benzene, and MTBE concentrations, although an increased MTBE concentration was noted in MW-5.

Well Location	August 2010 (Pre)			October 2012 (Post)			Percent Increase/Decrease		
	TPHg	Benzene	MTBE	TPHg	Benzene	MTBE	TPHg	Benzene	MTBE
MW-1	<50	<0.5	<0.5	<50	<0.5	<0.5	---	---	---
MW-2	15,000	780	170	1,300	16	11	-91%	-98%	-94%
MW-4	<50	<0.5	80	<50	<0.5	3.9	---	---	-95%
MW-5	74,000	7,500	100	29,000	750	140	-61%	-90%	+40%

## FUTURE WORK

We submitted a workplan for a supplemental groundwater assessment to ACEH on October 5, 2012. The purpose of the workplan is to address data gaps associated with the inferred lateral limits of the groundwater plume and the vertical distribution of contaminant concentrations in the variable perched groundwater lenses.

## 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.

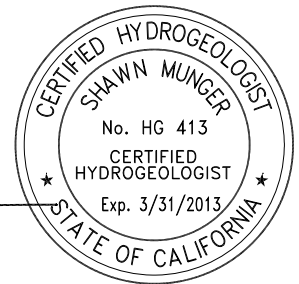
If you have any questions or comments regarding this report, please call and we will be glad to discuss them with you.

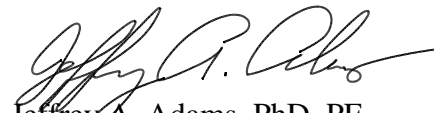
Sincerely,

ENGEO Incorporated

  
Morgan Johnson  
Environmental Scientist

  
Shawn Munger, CHG  
Principal



  
Jeffrey A. Adams, PhD, PE  
Associate  
mj/sm/jaa/jf

Attachments: Figure 1 – Vicinity Map  
Figure 2 – Groundwater Elevation Contour Map - October 2012  
Figure 3 – Concentrations of Petroleum Hydrocarbons in Groundwater – October 2012  
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

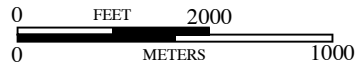
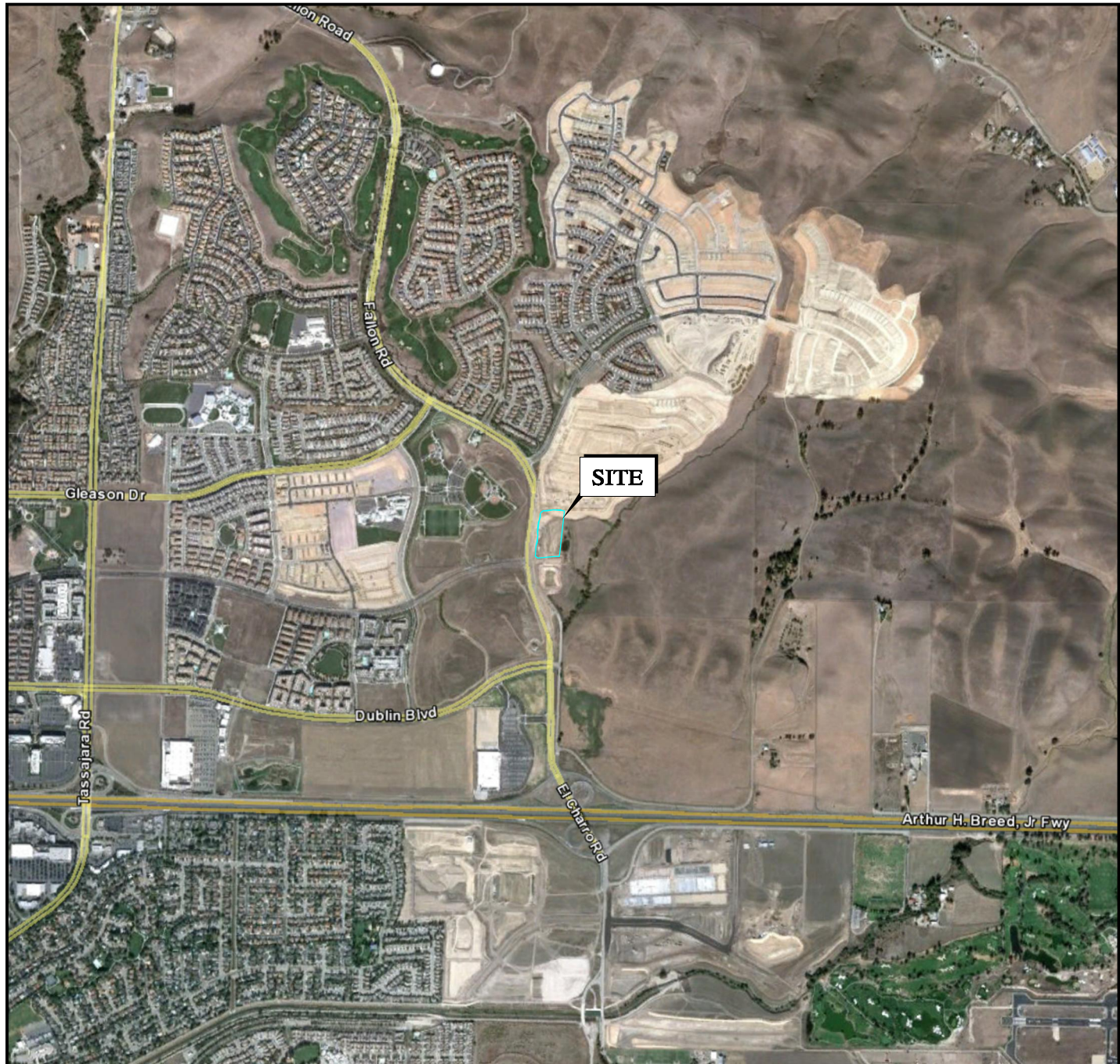
**FIGURES**

**Figure 1 – Vicinity Map**

**Figure 2 – Groundwater Elevation Contour Map**

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

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BASE MAP SOURCE: GOOGLE EARTH



VICINITY MAP  
JORDAN RANCH - PARCEL H  
DUBLIN, CALIFORNIA

PROJECT NO.: 7828.000.001

DATE: AS SHOWN

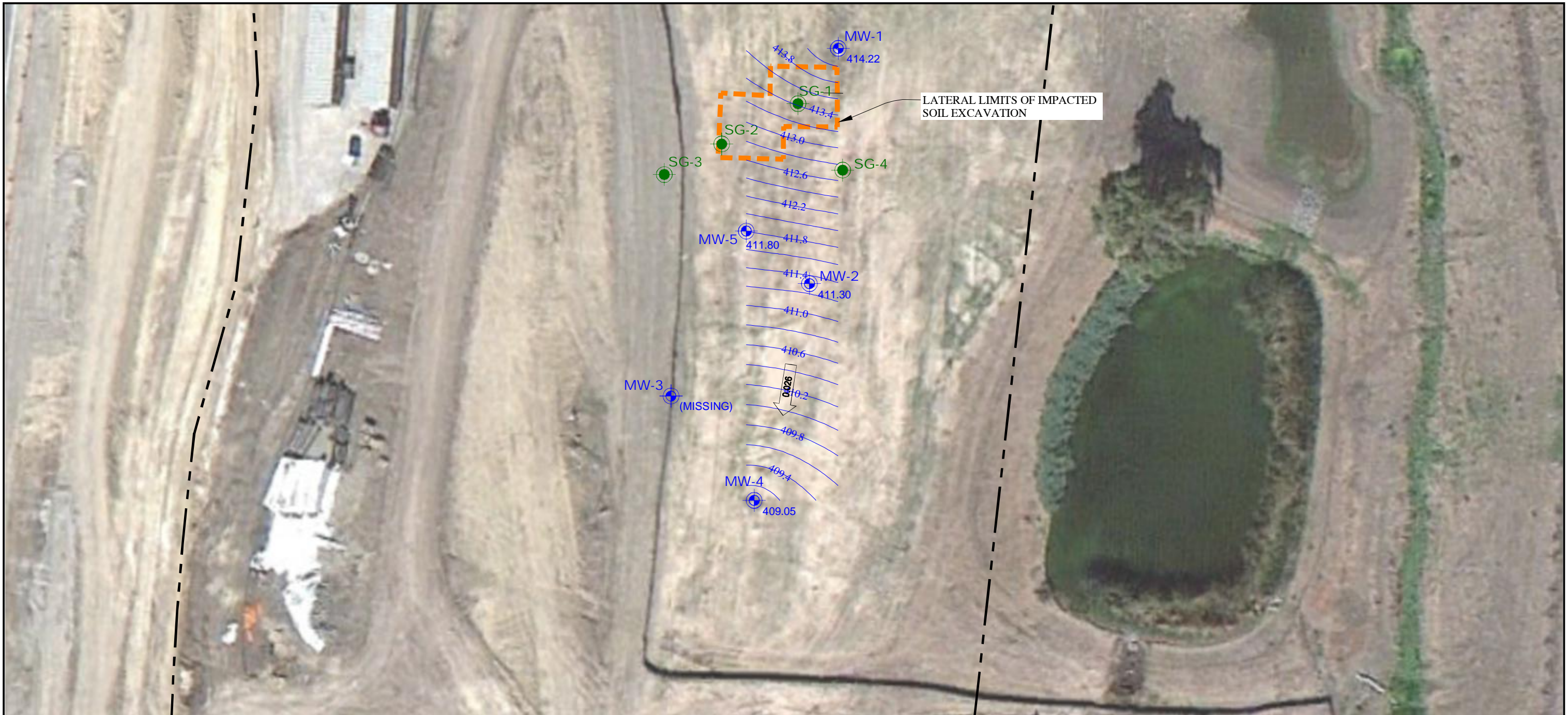
DRAWN BY: SRP

CHECKED BY: SM

FIGURE NO.

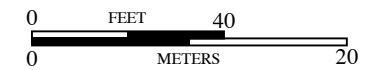
1

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**EXPLANATION**

- MW-5 APPROXIMATE LOCATION OF MONITORING WELL
- SG-4 APPROXIMATE LOCATION OF SOIL GAS WELL
- 0.026 GROUNDWATER FLOW DIRECTION



BASE MAP SOURCE: GOOGLE EARTH, ST. ANTON



**GROUNDWATER ELEVATION COUNTOUR MAP - OCTOBER 2012**  
 JORDAN RANCH - PARCEL H  
 DUBLIN, CALIFORNIA

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

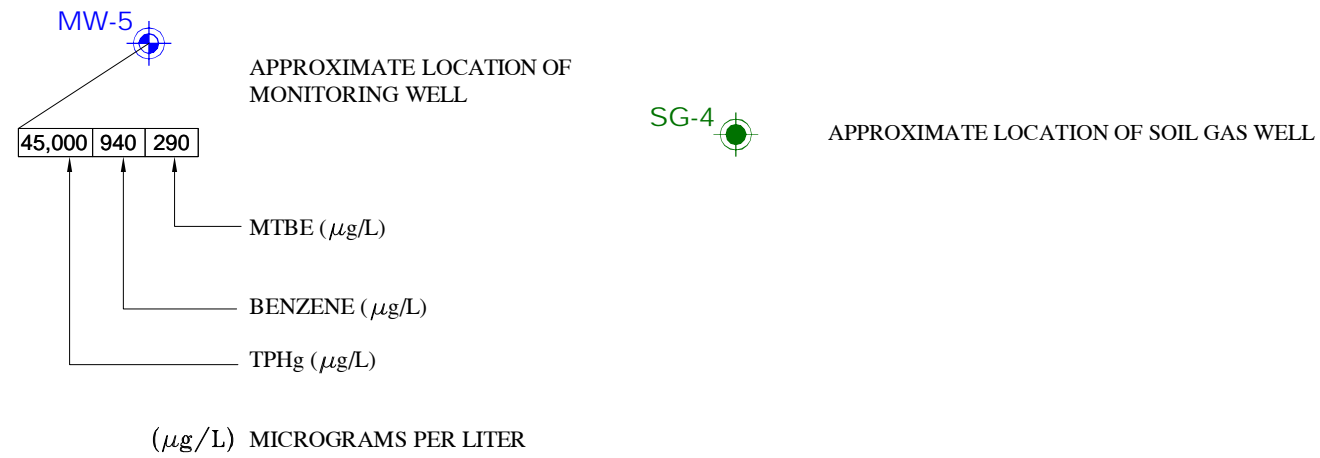
FIGURE NO.  
**2**



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**EXPLANATION**



BASE MAP SOURCE: GOOGLE EARTH, ST. ANTON



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

PROJECT NO.: 7828.000.001	
SCALE: AS SHOWN	
DRAWN BY: DLB	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
	7/26/2012	10.58	425.73	415.15
	10/4/2012	11.51	425.73	414.22
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	424.98	412.78
	7/26/2012	12.60	424.98	412.38
	10/4/2012	13.68	424.98	411.30
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	421.60	410.08
	7/26/2012	11.80	421.60	409.80
	10/4/2012	12.55	421.60	409.05
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	424.04	413.54
	7/26/2012	10.85	424.04	413.19
	10/4/2012	12.24	424.04	411.80

**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.

**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)	Napthalene (ug/L)	
MW-1	12/6/2005	NA	<b>64</b>	<b>2</b>	<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	<0.5	
	4/10/2008	NA	<50	<0.5	<0.5	<0.5	<0.5	<50	NA	
	8/24/2010	<50	<50	<0.5	<0.5	<0.5	<1.0	<0.5	NA	
	1/10/2012	<50	<50	<1	<b>1.1</b>	<b>1.1</b>	<b>2.4</b>	<4	NA	
	4/30/2012	<50	<50	<0.5	<0.5	<0.5	<1	<0.5	NA	
	7/26/2012	<50	<50	<0.5	<0.5	<0.5	<1	<0.5	NA	
	10/4/2012	<50	<50	<0.5	<0.5	<0.5	<1	<0.5	<1	
MW-2	12/6/2005	NA	<b>3,400</b>	<b>470</b>	<25	<b>55</b>	<b>120</b>	<b>800</b>	<b>60</b>	
	7/26/2006	<b>150</b>	<b>650</b>	<b>130</b>	<0.5	<0.5	<0.5	<b>510</b>	<b>15</b>	
	4/10/2008	NA	<b>8,700</b>	<b>1,600</b>	<b>350</b>	<b>370</b>	<b>790</b>	<b>810</b>	NA	
	8/24/2010	<50	<b>15,000</b>	<b>780</b>	<b>93</b>	<b>1,200</b>	<b>2,600</b>	<b>170</b>	NA	
	1/10/2012	<b>1,100</b>	<b>4,200</b>	<b>32</b>	<b>10</b>	<b>210</b>	<b>337</b>	<4	NA	
	4/30/2012	<b>620</b>	<b>4,100</b>	<b>14</b>	<b>10</b>	<b>340</b>	<b>660</b>	<b>21</b>	NA	
	7/26/2012	<b>1,200</b>	<b>15,000</b>	<b>73</b>	<b>71</b>	<b>980</b>	<b>1,900</b>	<b>260</b>	NA	
	10/4/2012	<b>250</b>	<b>1,300</b>	<b>16</b>	<b>3</b>	<b>150</b>	<b>120</b>	<b>11</b>	<b>46</b>	
MW-3	12/6/2005	NA	<50	<0.5	<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	<0.5	
	4/10/2008	NA	<b>430</b>	<b>45</b>	<b>34</b>	<b>22</b>	<b>90</b>	<0.5	NA	
	8/24/2010	<50	<50	<0.5	<0.5	<0.5	<1.0	<0.5	NA	
	1/10/2012	Well inadvertently covered by grading operations								NA
MW-4	12/6/2005	NA	<b>70</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
	7/26/2006	<50	<50	<0.5	<0.5	<0.5	<0.5	<5	<0.5	
	4/10/2008	NA	<b>830</b>	<b>29</b>	<b>19</b>	<b>16</b>	<b>54</b>	<b>1,200</b>	NA	
	8/24/2010	<50	<50	<0.5	<0.5	<0.5	<1.0	<b>80</b>	NA	
	1/10/2012	Obstruction in well casing								NA
	4/30/2012	<50	<50	<0.5	<0.5	<0.5	<1.0	<b>14</b>	NA	
	7/26/2012	<50	<50	<0.5	<0.5	<0.5	<1.0	<b>14</b>	NA	
	10/4/2012	<50	<50	<0.5	<0.5	<0.5	<1.0	<b>3.9</b>	<1	
MW-5	12/6/2005	NA	<b>53,000</b>	<b>13,000</b>	<b>1,300</b>	<b>930</b>	<b>4,400</b>	<b>7,000</b>	<b>560</b>	
	7/26/2006	<b>560</b>	<b>15,000</b>	<b>4,100</b>	<b>580</b>	<b>200</b>	<b>870</b>	<b>2,200</b>	<b>130</b>	
	4/10/2008	NA	<b>66,000</b>	<b>24,000</b>	<b>7,600</b>	<b>2,200</b>	<b>9,200</b>	<130	NA	
	8/24/2010	<50	<b>74,000</b>	<b>7,500</b>	<b>11,000</b>	<b>2,700</b>	<b>13,000</b>	<b>100</b>	NA	
	1/10/2012	<b>2,100</b>	<b>60,000</b>	<b>1,600</b>	<b>3,700</b>	<b>1,800</b>	<b>5,400</b>	<4	NA	
	4/30/2012	<b>2,600</b>	<b>37,000</b>	<b>880</b>	<b>2,500</b>	<b>3,200</b>	<b>15,000</b>	<b>140</b>	NA	
	7/26/2012	<b>2,200</b>	<b>45,000</b>	<b>940</b>	<b>2,300</b>	<b>3,300</b>	<b>14,000</b>	<b>290</b>	NA	
	10/4/2012	<b>2,100</b>	<b>29,000</b>	<b>750</b>	<b>1,500</b>	<b>2,400</b>	<b>760</b>	<b>140</b>	<b>690</b>	

**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

----- Remedial excavation and groundwater remediation implemented Fall 2011.

**Monitoring Well Sampling Logs**

# MONITORING WELL FIELD SAMPLING LOG



<b>Project:</b> Jordan Ranch	<b>Well ID</b>	<b>MW-1</b>						
<b>Project No.:</b> 7828.000.001								
<b>Location:</b> Dublin, CA								
<b>Technician:</b> SJ, RP, AU								
<b>Activity:</b> <input checked="" type="checkbox"/> Quarterly Sampling <input type="checkbox"/> Develop/Sample								
<b>WELL SECURITY</b>		<b>Date</b> 10/4/2012						
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> 10/4/2012						
<b>Well Type</b> <input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Extraction Well with Pump <input type="checkbox"/> Other								
<b>Well Diameter (in)</b> 2	<b>Free Product Measurement</b>							
<b>BOC (fbtoc)</b> 29.40	(Enter measurements for wells with free product history)							
<b>DTW = Depth to Water</b> 11.51	Enter "0.0" if no measurable free product →	<b>WCV Factors</b>						
<b>WC (f)</b> 17.89	DTFP (fbtoc) _____	2" = 0.17						
<b>WCV (gal)</b> 3.0	DTW (fbtoc) _____	4" = 0.66						
<b>3 X WCV (Purge Vol)</b> 9.1	FPT (ft) _____	6" = 1.50						
<b>PURGING, SAMPLING AND DECON EQUIPMENT</b>		<b>Date</b> 10/4/2012						
<b>Purging:</b> <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> 12-V Pump <input checked="" type="checkbox"/> Subm. Pump	<b>Comments</b>							
<b>Sampling:</b> <input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> 12-V Pump <input type="checkbox"/> Subm. Pump <input type="checkbox"/> Other _____								
<b>Decon:</b> Was purge pump decontaminated before and after this use? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
Decon Product: <input checked="" type="checkbox"/> TSP/Alconox	Decon Rinse: _____							
<b>PURGE WATER STORAGE/DISPOSAL (For Last Well Sampled Only)</b>		<b>Date</b> 10/4/2012						
<b>Drums Onsite Arrival</b> 5	<b>Drums All Labeled?</b> Yes							
<b>Drums Used This Event</b> 7	<b>Drums Leaking?</b> No	<b>Gallons</b>						
<b>Total Drums Onsite Now</b> 12	<b>Purge Water Processed Through GWTS?</b>	<input type="checkbox"/> No						
<b>PHYSICAL PARAMETERS</b>		<b>Date</b> 10/4/2012						
<b>Time</b>	<b>Volume Purged (gal)</b>	<b>Temp (C degrees)</b>	<b>pH</b>	<b>EC (mS/cm)</b>	<b>DO (mg/L)</b>	<b>Salinity (%)</b>	<b>Turbidity (NTU)</b>	<b>Other</b>
10:30	0	20.6	7.55	1084	3.40			ORP=188
	3	20.4	7.30	1111	3.62			176
	6	20.4	7.05	1110	3.42			190
	9	20.2	7.01	1116	3.38			193
	10	20.1	6.90	1126	3.32			197
<input type="checkbox"/> Sample collected through groundwater treatment system using active extraction pump; no purging required.								
<b>LABORATORY ANALYSIS</b>								
<b>Number/Type Containers</b>		3	VOA's	2	1-liter Ambers	0	500ml Plastic	
<b>Preservative:</b>		HCl						
<b>Analysis:</b>		TPH-g; VOCs, TPH-d, w/silica gel clean up						
<b>Laboratory/TAT:</b>		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-2</b>
Project No. <u>7828.000.001</u>		
Location: <u>Dublin, CA</u>		
Technician: <u>SJ, RP, AU</u>		
Activity: <input checked="" type="checkbox"/> Quarterly Sampling <input type="checkbox"/> Develop/Sample		

<b>WELL SECURITY</b>		<b>Date</b>	10/4/2012
Well Box Set in Concrete?	Yes	<b>Comments</b>	
Box Cover Equipped With Bolts and Gasket?	Yes		
Well Casing Equipped With Well Seal and Lock?	No		

<b>WELL CONSTRUCTION AND WATER LEVEL DETAILS</b>		<b>Date</b>	10/4/2012
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)	29.60	(Enter measurements for wells with free product history)	
DTW = Depth to Water	13.68	Enter "0.0" if no measurable free product	▶ <input style="width: 50px;" type="text"/>
WC (f)	15.92	DTFP (fbtoc)	_____
WCV (gal)	2.7	DTW (fbtoc)	_____
<b>3 X WCV (Purge Vol)</b>	<b>8.1</b>	FPT (ft)	_____
		2" =	0.17
		4" =	0.66
		6" =	1.50

<b>PURGING, SAMPLING AND DECON EQUIPMENT</b>		<b>Date</b>	10/4/2012
Purging:	<input type="checkbox"/> Disposable Bailer <input type="checkbox"/> 12-V Pump <input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
	Decon Product: <input checked="" type="checkbox"/> TSP/Alconox Decon Rinse: _____		

<b>PURGE WATER STORAGE/DISPOSAL (For Last Well Sampled Only)</b>		<b>Date</b>	10/4/2012
Drums Onsite Arrival	5	Drums All Labeled?	Yes
Drums Used This Event	7	Drums Leaking?	No
Total Drums Onsite Now	12	Purge Water Processed Through GWTS?	No
		<b>Gallons</b>	

<b>PHYSICAL PARAMETERS</b>							<b>Date</b>	10/4/2012
Time	Volume Purged (gal)	Temp (C degrees)	pH	EC (mS/cm)	DO (mg/L)	Salinity (%)	Turbidity (NTU)	Other
13:00	0	21.34	6.37	8	4.12			ORP-94, TPH Odor
	3	21.10	7.01	1170	1.34		slightly murky	-11
	5	20.10	6.71	1158	1.16		slightly murky	-12
	8	19.71	6.61	1154	0.98		slightly murky	-4
	25	20.11	6.62	1163	1.06			1
	50	20.52	6.71	1156	1.18		clearer	0
	75	19.75	6.55	1162	1.20		clear	-37
	100	20.36	6.90	1162	1.18		clear	-63

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-4</b>
Project No. <u>7828.000.001</u>		
Location: <u>Dublin, CA</u>		
Technician: <u>SJ, RP, AU</u>		
Activity: <input checked="" type="checkbox"/> Quarterly Sampling <input type="checkbox"/> Develop/Sample		

<b>WELL SECURITY</b>		<b>Date</b>	10/4/2012
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			

<b>WELL CONSTRUCTION AND WATER LEVEL DETAILS</b>		<b>Date</b>	10/4/2012
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)	27.91	(Enter measurements for wells with free product history)	
DTW = Depth to Water	12.55	Enter "0.0" if no measurable free product →	
WC (f)	15.36	DTFP (fbtoc) _____	<b>WCV Factors</b>
WCV (gal)	2.6	DTW (fbtoc) _____	2" = 0.17
<b>3 X WCV (Purge Vol)</b>	<b>7.8</b>	FPT (ft) _____	4" = 0.66
			6" = 1.50

<b>PURGING, SAMPLING AND DECON EQUIPMENT</b>		<b>Date</b>	10/4/2012
Purging: <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> 12-V Pump <input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
	Decon Product: <input checked="" type="checkbox"/> TSP/Alconox Decon Rinse: _____		

<b>PURGE WATER STORAGE/DISPOSAL (For Last Well Sampled Only)</b>		<b>Date</b>	10/4/2012
Drums Onsite Arrival	5	Drums All Labeled?	Yes
Drums Used This Event	7	Drums Leaking?	No
Total Drums Onsite Now	12	Purge Water Processed Through GWTS?	No

<b>PHYSICAL PARAMETERS</b>							<b>Date</b>	10/4/2012
Time	Volume Purged (gal)	Temp (C degrees)	pH	EC (mS/cm)	DO (mg/L)	Salinity (%)	Turbidity (NTU)	Other
12:15	0	20.80	7.20	1337	3.21			ORP=138
	3	20.79	7.22	1358	1.88		clear	143
	5	19.65	6.83	1225	1.30		clear	158
	8	19.32	7.12	1354	1.28		clear	143
	20	18.86	6.79	1332	1.91		clear	151
	50	19.20	6.59	1317	3.74		clearer	194
	80	19.39	7.07	1313	3.73		clear	98
	100	19.81	7.11	1312	5.48		clear	99

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  
 BOC = Bottom of Well Casing  
 DTFP = Depth to Free Product  
 FPT = Free Product Thickness

fbtoc = feet below top of casing  
 WC = Water Column Height  
 WCV = Water Column Volume (gallons) = WC X WCV Factor



# MONITORING WELL FIELD SAMPLING LOG



Project: <u>Jordan Ranch</u> Project No.: <u>7828.000.001</u> Location: <u>Dublin, CA</u> Technician: <u>SJ, RP, AU</u>	<b>Well ID</b>	<b>MW-5</b>
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Activity:  Quarterly Sampling  Develop/Sample

<b>WELL SECURITY</b>		<b>Date</b>	10/4/2012
Well Box Set in Concrete?	Yes	<b>Comments</b>  _____ _____ _____	
Box Cover Equipped With Bolts and Gasket?	Yes		
Well Casing Equipped With Well Seal and Lock?	No		

<b>WELL CONSTRUCTION AND WATER LEVEL DETAILS</b>		<b>Date</b>	10/4/2012
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Well Type <input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Extraction Well with Pump <input type="checkbox"/> Other	
Well Diameter (in)	2
BOC (fbtoc)	29.48
DTW = Depth to Water	12.24
WC (f)	17.24
WCV (gal)	2.9
<b>3 X WCV (Purge Vol)</b>	<b>8.8</b>

**Free Product Measurement**

(Enter measurements for wells with free product history)

Enter "0.0" if no measurable free product →      **WCV Factors**

DTFP (fbtoc) _____	2" = 0.17
DTW (fbtoc) _____	4" = 0.66
FPT (ft) _____	6" = 1.50

<b>PURGING, SAMPLING AND DECON EQUIPMENT</b>		<b>Date</b>	10/4/2012
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Purging:	<input type="checkbox"/>	Disposable Bailer	<input type="checkbox"/>	12-V Pump	<input checked="" 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			
								Other _____	
Decon:	Was purge pump decontaminated before and after this use?					<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Decon Product:		<input checked="" type="checkbox"/>	TSP/Alconox	Decon Rinse:					

<b>PURGE WATER STORAGE/DISPOSAL (For Last Well Sampled Only)</b>		<b>Date</b>	10/4/2012
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Drums Onsite Arrival	5	Drums All Labeled?	Yes	Gallons  _____
Drums Used This Event	7	Drums Leaking?	No	
Total Drums Onsite Now	12	Purge Water Processed Through GWTS?	No	

<b>PHYSICAL PARAMETERS</b>		<b>Date</b>	10/4/2012
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Time	Volume Purged (gal)	Temp (C degrees)	pH	EC (mS/cm)	DO (mg/L)	Salinity (%)	Turbidity (NTU)	Other
15:30	0	21.00	6.80	1194	0.80			ORP=-27
	3	20.77	6.51	1193	1.55			-35
	5	19.97	6.44	1206	1.51			-17
	9	19.58	6.45	1217	2.76			-17
	25	20.24	6.86	1243	1.10			-64
	50	19.63	6.65	1229	1.93			-46
	75	19.95	6.73	1239	2.52			-51
	100	19.74	6.74	1234	2.66			-38

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  
November 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: 720-45047-1  
Client Project/Site: Jordan Ranch-Parcel H

For:  
Engeo, Inc.  
2010 Crow Canyon Place  
Suite 250  
San Ramon, California 94583

Attn: Ms. Morgan Johnson



---

Authorized for release by:  
10/15/2012 3:36:55 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.*

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## Definitions/Glossary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

### 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-Parcel H

TestAmerica Job ID: 720-45047-1

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**Job ID: 720-45047-1**

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**Laboratory: TestAmerica Pleasanton**

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**Narrative**

**Job Narrative**  
**720-45047-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 10/4/2012 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9° C.

**GC/MS VOA**

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch #122607 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

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.

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# Detection Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

## Client Sample ID: MW-1

Lab Sample ID: 720-45047-1

No Detections

## Client Sample ID: MW-2

Lab Sample ID: 720-45047-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	16		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Benzene	11		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
n-Butylbenzene	9.7		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
sec-Butylbenzene	6.7		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
tert-Butylbenzene	1.4		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	150		1.0		ug/L	2		8260B/CA_LUFT MS	Total/NA
Isopropylbenzene	13		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
4-Isopropyltoluene	1.8		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	46		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
N-Propylbenzene	28		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	2.9		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
1,2,4-Trimethylbenzene	37		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
1,3,5-Trimethylbenzene	11		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	120		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	1300		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Diesel Range Organics [C10-C28]	250		51		ug/L	1		8015B	Silica Gel Cleanup

## Client Sample ID: MW-4

Lab Sample ID: 720-45047-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	3.9		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

## Client Sample ID: MW-5

Lab Sample ID: 720-45047-4

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	750		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
n-Butylbenzene	46		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
Chloroform	2.2		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
1,2-Dichloroethane	0.71		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

# Detection Summary

Client: Engeo, Inc.  
 Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: 720-45047-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	2400		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
Isopropylbenzene	72		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
4-Isopropyltoluene	6.5		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	690		100		ug/L	100		8260B/CA_LUFT MS	Total/NA
N-Propylbenzene	140		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Styrene	6.0		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	1500		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
1,2,4-Trimethylbenzene	1400		50		ug/L	100		8260B/CA_LUFT MS	Total/NA
1,3,5-Trimethylbenzene	190		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	760		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	29000		5000		ug/L	100		8260B/CA_LUFT MS	Total/NA
Diesel Range Organics [C10-C28]	2100		50		ug/L	1		8015B	Silica Gel Cleanup



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Client Sample ID: MW-1**  
**Date Collected: 10/04/12 11:00**  
**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			10/09/12 17:27	1
Acetone	ND		50		ug/L			10/09/12 17:27	1
Benzene	ND		0.50		ug/L			10/09/12 17:27	1
Dichlorobromomethane	ND		0.50		ug/L			10/09/12 17:27	1
Bromobenzene	ND		1.0		ug/L			10/09/12 17:27	1
Chlorobromomethane	ND		1.0		ug/L			10/09/12 17:27	1
Bromoform	ND		1.0		ug/L			10/09/12 17:27	1
Bromomethane	ND		1.0		ug/L			10/09/12 17:27	1
2-Butanone (MEK)	ND		50		ug/L			10/09/12 17:27	1
n-Butylbenzene	ND		1.0		ug/L			10/09/12 17:27	1
sec-Butylbenzene	ND		1.0		ug/L			10/09/12 17:27	1
tert-Butylbenzene	ND		1.0		ug/L			10/09/12 17:27	1
Carbon disulfide	ND		5.0		ug/L			10/09/12 17:27	1
Carbon tetrachloride	ND		0.50		ug/L			10/09/12 17:27	1
Chlorobenzene	ND		0.50		ug/L			10/09/12 17:27	1
Chloroethane	ND		1.0		ug/L			10/09/12 17:27	1
Chloroform	ND		1.0		ug/L			10/09/12 17:27	1
Chloromethane	ND		1.0		ug/L			10/09/12 17:27	1
2-Chlorotoluene	ND		0.50		ug/L			10/09/12 17:27	1
4-Chlorotoluene	ND		0.50		ug/L			10/09/12 17:27	1
Chlorodibromomethane	ND		0.50		ug/L			10/09/12 17:27	1
1,2-Dichlorobenzene	ND		0.50		ug/L			10/09/12 17:27	1
1,3-Dichlorobenzene	ND		0.50		ug/L			10/09/12 17:27	1
1,4-Dichlorobenzene	ND		0.50		ug/L			10/09/12 17:27	1
1,3-Dichloropropane	ND		1.0		ug/L			10/09/12 17:27	1
1,1-Dichloropropene	ND		0.50		ug/L			10/09/12 17:27	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			10/09/12 17:27	1
Ethylene Dibromide	ND		0.50		ug/L			10/09/12 17:27	1
Dibromomethane	ND		0.50		ug/L			10/09/12 17:27	1
Dichlorodifluoromethane	ND		0.50		ug/L			10/09/12 17:27	1
1,1-Dichloroethane	ND		0.50		ug/L			10/09/12 17:27	1
1,2-Dichloroethane	ND		0.50		ug/L			10/09/12 17:27	1
1,1-Dichloroethene	ND		0.50		ug/L			10/09/12 17:27	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 17:27	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 17:27	1
1,2-Dichloropropane	ND		0.50		ug/L			10/09/12 17:27	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 17:27	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 17:27	1
Ethylbenzene	ND		0.50		ug/L			10/09/12 17:27	1
Hexachlorobutadiene	ND		1.0		ug/L			10/09/12 17:27	1
2-Hexanone	ND		50		ug/L			10/09/12 17:27	1
Isopropylbenzene	ND		0.50		ug/L			10/09/12 17:27	1
4-Isopropyltoluene	ND		1.0		ug/L			10/09/12 17:27	1
Methylene Chloride	ND		5.0		ug/L			10/09/12 17:27	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			10/09/12 17:27	1
Naphthalene	ND		1.0		ug/L			10/09/12 17:27	1
N-Propylbenzene	ND		1.0		ug/L			10/09/12 17:27	1
Styrene	ND		0.50		ug/L			10/09/12 17:27	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			10/09/12 17:27	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/09/12 17:27	1
Tetrachloroethene	ND		0.50		ug/L			10/09/12 17:27	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Client Sample ID: MW-1**  
**Date Collected: 10/04/12 11:00**  
**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			10/09/12 17:27	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/09/12 17:27	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/09/12 17:27	1
1,1,1-Trichloroethane	ND		0.50		ug/L			10/09/12 17:27	1
1,1,2-Trichloroethane	ND		0.50		ug/L			10/09/12 17:27	1
Trichloroethene	ND		0.50		ug/L			10/09/12 17:27	1
Trichlorofluoromethane	ND		1.0		ug/L			10/09/12 17:27	1
1,2,3-Trichloropropane	ND		0.50		ug/L			10/09/12 17:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			10/09/12 17:27	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			10/09/12 17:27	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			10/09/12 17:27	1
Vinyl acetate	ND		10		ug/L			10/09/12 17:27	1
Vinyl chloride	ND		0.50		ug/L			10/09/12 17:27	1
Xylenes, Total	ND		1.0		ug/L			10/09/12 17:27	1
2,2-Dichloropropane	ND		0.50		ug/L			10/09/12 17:27	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/09/12 17:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		67 - 130					10/09/12 17:27	1
1,2-Dichloroethane-d4 (Surr)	92		75 - 138					10/09/12 17:27	1
Toluene-d8 (Surr)	96		70 - 130					10/09/12 17:27	1

**Client Sample ID: MW-2**  
**Date Collected: 10/04/12 16:30**  
**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Methyl tert-butyl ether</b>	<b>16</b>		0.50		ug/L			10/09/12 17:58	1
Acetone	ND		50		ug/L			10/09/12 17:58	1
<b>Benzene</b>	<b>11</b>		0.50		ug/L			10/09/12 17:58	1
Dichlorobromomethane	ND		0.50		ug/L			10/09/12 17:58	1
Bromobenzene	ND		1.0		ug/L			10/09/12 17:58	1
Chlorobromomethane	ND		1.0		ug/L			10/09/12 17:58	1
Bromoform	ND		1.0		ug/L			10/09/12 17:58	1
Bromomethane	ND		1.0		ug/L			10/09/12 17:58	1
2-Butanone (MEK)	ND		50		ug/L			10/09/12 17:58	1
<b>n-Butylbenzene</b>	<b>9.7</b>		1.0		ug/L			10/09/12 17:58	1
<b>sec-Butylbenzene</b>	<b>6.7</b>		1.0		ug/L			10/09/12 17:58	1
<b>tert-Butylbenzene</b>	<b>1.4</b>		1.0		ug/L			10/09/12 17:58	1
Carbon disulfide	ND		5.0		ug/L			10/09/12 17:58	1
Carbon tetrachloride	ND		0.50		ug/L			10/09/12 17:58	1
Chlorobenzene	ND		0.50		ug/L			10/09/12 17:58	1
Chloroethane	ND		1.0		ug/L			10/09/12 17:58	1
Chloroform	ND		1.0		ug/L			10/09/12 17:58	1
Chloromethane	ND		1.0		ug/L			10/09/12 17:58	1
2-Chlorotoluene	ND		0.50		ug/L			10/09/12 17:58	1
4-Chlorotoluene	ND		0.50		ug/L			10/09/12 17:58	1
Chlorodibromomethane	ND		0.50		ug/L			10/09/12 17:58	1
1,2-Dichlorobenzene	ND		0.50		ug/L			10/09/12 17:58	1
1,3-Dichlorobenzene	ND		0.50		ug/L			10/09/12 17:58	1
1,4-Dichlorobenzene	ND		0.50		ug/L			10/09/12 17:58	1
1,3-Dichloropropane	ND		1.0		ug/L			10/09/12 17:58	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Client Sample ID: MW-2**  
**Date Collected: 10/04/12 16:30**  
**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		0.50		ug/L			10/09/12 17:58	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			10/09/12 17:58	1
Ethylene Dibromide	ND		0.50		ug/L			10/09/12 17:58	1
Dibromomethane	ND		0.50		ug/L			10/09/12 17:58	1
Dichlorodifluoromethane	ND		0.50		ug/L			10/09/12 17:58	1
1,1-Dichloroethane	ND		0.50		ug/L			10/09/12 17:58	1
1,2-Dichloroethane	ND		0.50		ug/L			10/09/12 17:58	1
1,1-Dichloroethene	ND		0.50		ug/L			10/09/12 17:58	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 17:58	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 17:58	1
1,2-Dichloropropane	ND		0.50		ug/L			10/09/12 17:58	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 17:58	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 17:58	1
<b>Ethylbenzene</b>	<b>150</b>		1.0		ug/L			10/11/12 15:33	2
Hexachlorobutadiene	ND		1.0		ug/L			10/09/12 17:58	1
2-Hexanone	ND		50		ug/L			10/09/12 17:58	1
<b>Isopropylbenzene</b>	<b>13</b>		0.50		ug/L			10/09/12 17:58	1
<b>4-Isopropyltoluene</b>	<b>1.8</b>		1.0		ug/L			10/09/12 17:58	1
Methylene Chloride	ND		5.0		ug/L			10/09/12 17:58	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			10/09/12 17:58	1
<b>Naphthalene</b>	<b>46</b>		1.0		ug/L			10/09/12 17:58	1
<b>N-Propylbenzene</b>	<b>28</b>		1.0		ug/L			10/09/12 17:58	1
Styrene	ND		0.50		ug/L			10/09/12 17:58	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			10/09/12 17:58	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/09/12 17:58	1
Tetrachloroethene	ND		0.50		ug/L			10/09/12 17:58	1
<b>Toluene</b>	<b>2.9</b>		0.50		ug/L			10/09/12 17:58	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/09/12 17:58	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/09/12 17:58	1
1,1,1-Trichloroethane	ND		0.50		ug/L			10/09/12 17:58	1
1,1,2-Trichloroethane	ND		0.50		ug/L			10/09/12 17:58	1
Trichloroethene	ND		0.50		ug/L			10/09/12 17:58	1
Trichlorofluoromethane	ND		1.0		ug/L			10/09/12 17:58	1
1,2,3-Trichloropropane	ND		0.50		ug/L			10/09/12 17:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			10/09/12 17:58	1
<b>1,2,4-Trimethylbenzene</b>	<b>37</b>		0.50		ug/L			10/09/12 17:58	1
<b>1,3,5-Trimethylbenzene</b>	<b>11</b>		0.50		ug/L			10/09/12 17:58	1
Vinyl acetate	ND		10		ug/L			10/09/12 17:58	1
Vinyl chloride	ND		0.50		ug/L			10/09/12 17:58	1
<b>Xylenes, Total</b>	<b>120</b>		1.0		ug/L			10/09/12 17:58	1
2,2-Dichloropropane	ND		0.50		ug/L			10/09/12 17:58	1
<b>Gasoline Range Organics (GRO)</b>	<b>1300</b>		50		ug/L			10/09/12 17:58	1
<b>-C5-C12</b>									

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	112		67 - 130		10/09/12 17:58	1
4-Bromofluorobenzene	105		67 - 130		10/11/12 15:33	2
1,2-Dichloroethane-d4 (Surr)	95		75 - 138		10/09/12 17:58	1
1,2-Dichloroethane-d4 (Surr)	91		75 - 138		10/11/12 15:33	2
Toluene-d8 (Surr)	102		70 - 130		10/09/12 17:58	1
Toluene-d8 (Surr)	101		70 - 130		10/11/12 15:33	2

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Client Sample ID: MW-4**  
**Date Collected: 10/04/12 14:00**  
**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Methyl tert-butyl ether</b>	<b>3.9</b>		0.50		ug/L			10/09/12 18:28	1
Acetone	ND		50		ug/L			10/09/12 18:28	1
Benzene	ND		0.50		ug/L			10/09/12 18:28	1
Dichlorobromomethane	ND		0.50		ug/L			10/09/12 18:28	1
Bromobenzene	ND		1.0		ug/L			10/09/12 18:28	1
Chlorobromomethane	ND		1.0		ug/L			10/09/12 18:28	1
Bromoform	ND		1.0		ug/L			10/09/12 18:28	1
Bromomethane	ND		1.0		ug/L			10/09/12 18:28	1
2-Butanone (MEK)	ND		50		ug/L			10/09/12 18:28	1
n-Butylbenzene	ND		1.0		ug/L			10/09/12 18:28	1
sec-Butylbenzene	ND		1.0		ug/L			10/09/12 18:28	1
tert-Butylbenzene	ND		1.0		ug/L			10/09/12 18:28	1
Carbon disulfide	ND		5.0		ug/L			10/09/12 18:28	1
Carbon tetrachloride	ND		0.50		ug/L			10/09/12 18:28	1
Chlorobenzene	ND		0.50		ug/L			10/09/12 18:28	1
Chloroethane	ND		1.0		ug/L			10/09/12 18:28	1
Chloroform	ND		1.0		ug/L			10/09/12 18:28	1
Chloromethane	ND		1.0		ug/L			10/09/12 18:28	1
2-Chlorotoluene	ND		0.50		ug/L			10/09/12 18:28	1
4-Chlorotoluene	ND		0.50		ug/L			10/09/12 18:28	1
Chlorodibromomethane	ND		0.50		ug/L			10/09/12 18:28	1
1,2-Dichlorobenzene	ND		0.50		ug/L			10/09/12 18:28	1
1,3-Dichlorobenzene	ND		0.50		ug/L			10/09/12 18:28	1
1,4-Dichlorobenzene	ND		0.50		ug/L			10/09/12 18:28	1
1,3-Dichloropropane	ND		1.0		ug/L			10/09/12 18:28	1
1,1-Dichloropropene	ND		0.50		ug/L			10/09/12 18:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			10/09/12 18:28	1
Ethylene Dibromide	ND		0.50		ug/L			10/09/12 18:28	1
Dibromomethane	ND		0.50		ug/L			10/09/12 18:28	1
Dichlorodifluoromethane	ND		0.50		ug/L			10/09/12 18:28	1
1,1-Dichloroethane	ND		0.50		ug/L			10/09/12 18:28	1
1,2-Dichloroethane	ND		0.50		ug/L			10/09/12 18:28	1
1,1-Dichloroethene	ND		0.50		ug/L			10/09/12 18:28	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 18:28	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 18:28	1
1,2-Dichloropropane	ND		0.50		ug/L			10/09/12 18:28	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 18:28	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 18:28	1
Ethylbenzene	ND		0.50		ug/L			10/11/12 16:03	1
Hexachlorobutadiene	ND		1.0		ug/L			10/09/12 18:28	1
2-Hexanone	ND		50		ug/L			10/09/12 18:28	1
Isopropylbenzene	ND		0.50		ug/L			10/09/12 18:28	1
4-Isopropyltoluene	ND		1.0		ug/L			10/09/12 18:28	1
Methylene Chloride	ND		5.0		ug/L			10/09/12 18:28	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			10/09/12 18:28	1
Naphthalene	ND		1.0		ug/L			10/09/12 18:28	1
N-Propylbenzene	ND		1.0		ug/L			10/09/12 18:28	1
Styrene	ND		0.50		ug/L			10/09/12 18:28	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			10/09/12 18:28	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/09/12 18:28	1
Tetrachloroethene	ND		0.50		ug/L			10/09/12 18:28	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Client Sample ID: MW-4**

**Date Collected: 10/04/12 14:00**

**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			10/09/12 18:28	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/09/12 18:28	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/09/12 18:28	1
1,1,1-Trichloroethane	ND		0.50		ug/L			10/09/12 18:28	1
1,1,2-Trichloroethane	ND		0.50		ug/L			10/09/12 18:28	1
Trichloroethene	ND		0.50		ug/L			10/09/12 18:28	1
Trichlorofluoromethane	ND		1.0		ug/L			10/09/12 18:28	1
1,2,3-Trichloropropane	ND		0.50		ug/L			10/09/12 18:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			10/09/12 18:28	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			10/09/12 18:28	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			10/09/12 18:28	1
Vinyl acetate	ND		10		ug/L			10/09/12 18:28	1
Vinyl chloride	ND		0.50		ug/L			10/09/12 18:28	1
Xylenes, Total	ND		1.0		ug/L			10/09/12 18:28	1
2,2-Dichloropropane	ND		0.50		ug/L			10/09/12 18:28	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/09/12 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		67 - 130		10/09/12 18:28	1
4-Bromofluorobenzene	93		67 - 130		10/11/12 16:03	1
1,2-Dichloroethane-d4 (Surr)	86		75 - 138		10/09/12 18:28	1
1,2-Dichloroethane-d4 (Surr)	92		75 - 138		10/11/12 16:03	1
Toluene-d8 (Surr)	96		70 - 130		10/09/12 18:28	1
Toluene-d8 (Surr)	96		70 - 130		10/11/12 16:03	1

**Client Sample ID: MW-5**

**Date Collected: 10/04/12 18:00**

**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-4**

**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			10/09/12 18:58	1
Acetone	ND		50		ug/L			10/09/12 18:58	1
<b>Benzene</b>	<b>750</b>		50		ug/L			10/11/12 14:47	100
Dichlorobromomethane	ND		0.50		ug/L			10/09/12 18:58	1
Bromobenzene	ND		1.0		ug/L			10/09/12 18:58	1
Chlorobromomethane	ND		1.0		ug/L			10/09/12 18:58	1
Bromoform	ND		1.0		ug/L			10/09/12 18:58	1
Bromomethane	ND		1.0		ug/L			10/09/12 18:58	1
2-Butanone (MEK)	ND		50		ug/L			10/09/12 18:58	1
<b>n-Butylbenzene</b>	<b>46</b>		1.0		ug/L			10/09/12 18:58	1
<b>sec-Butylbenzene</b>	<b>13</b>		1.0		ug/L			10/09/12 18:58	1
<b>tert-Butylbenzene</b>	<b>2.9</b>		1.0		ug/L			10/09/12 18:58	1
Carbon disulfide	ND		5.0		ug/L			10/09/12 18:58	1
Carbon tetrachloride	ND		0.50		ug/L			10/09/12 18:58	1
Chlorobenzene	ND		0.50		ug/L			10/09/12 18:58	1
Chloroethane	ND		1.0		ug/L			10/09/12 18:58	1
<b>Chloroform</b>	<b>2.2</b>		1.0		ug/L			10/09/12 18:58	1
Chloromethane	ND		1.0		ug/L			10/09/12 18:58	1
2-Chlorotoluene	ND		0.50		ug/L			10/09/12 18:58	1
4-Chlorotoluene	ND		0.50		ug/L			10/09/12 18:58	1
Chlorodibromomethane	ND		0.50		ug/L			10/09/12 18:58	1
1,2-Dichlorobenzene	ND		0.50		ug/L			10/09/12 18:58	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Client Sample ID: MW-5**

**Date Collected: 10/04/12 18:00**

**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-4**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		0.50		ug/L			10/09/12 18:58	1
1,4-Dichlorobenzene	ND		0.50		ug/L			10/09/12 18:58	1
1,3-Dichloropropane	ND		1.0		ug/L			10/09/12 18:58	1
1,1-Dichloropropene	ND		0.50		ug/L			10/09/12 18:58	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			10/09/12 18:58	1
Ethylene Dibromide	ND		0.50		ug/L			10/09/12 18:58	1
Dibromomethane	ND		0.50		ug/L			10/09/12 18:58	1
Dichlorodifluoromethane	ND		0.50		ug/L			10/09/12 18:58	1
1,1-Dichloroethane	ND		0.50		ug/L			10/09/12 18:58	1
<b>1,2-Dichloroethane</b>	<b>0.71</b>		0.50		ug/L			10/09/12 18:58	1
1,1-Dichloroethene	ND		0.50		ug/L			10/09/12 18:58	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 18:58	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 18:58	1
1,2-Dichloropropane	ND		0.50		ug/L			10/09/12 18:58	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 18:58	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 18:58	1
<b>Ethylbenzene</b>	<b>2400</b>		50		ug/L			10/11/12 14:47	100
Hexachlorobutadiene	ND		1.0		ug/L			10/09/12 18:58	1
2-Hexanone	ND		50		ug/L			10/09/12 18:58	1
<b>Isopropylbenzene</b>	<b>72</b>		0.50		ug/L			10/09/12 18:58	1
<b>4-Isopropyltoluene</b>	<b>6.5</b>		1.0		ug/L			10/09/12 18:58	1
Methylene Chloride	ND		5.0		ug/L			10/09/12 18:58	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			10/09/12 18:58	1
<b>Naphthalene</b>	<b>690</b>		100		ug/L			10/11/12 14:47	100
<b>N-Propylbenzene</b>	<b>140</b>		1.0		ug/L			10/09/12 18:58	1
<b>Styrene</b>	<b>6.0</b>		0.50		ug/L			10/09/12 18:58	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			10/09/12 18:58	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/09/12 18:58	1
Tetrachloroethene	ND		0.50		ug/L			10/09/12 18:58	1
<b>Toluene</b>	<b>1500</b>		50		ug/L			10/11/12 14:47	100
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/09/12 18:58	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/09/12 18:58	1
1,1,1-Trichloroethane	ND		0.50		ug/L			10/09/12 18:58	1
1,1,2-Trichloroethane	ND		0.50		ug/L			10/09/12 18:58	1
Trichloroethene	ND		0.50		ug/L			10/09/12 18:58	1
Trichlorofluoromethane	ND		1.0		ug/L			10/09/12 18:58	1
1,2,3-Trichloropropane	ND		0.50		ug/L			10/09/12 18:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			10/09/12 18:58	1
<b>1,2,4-Trimethylbenzene</b>	<b>1400</b>		50		ug/L			10/11/12 14:47	100
<b>1,3,5-Trimethylbenzene</b>	<b>190</b>		0.50		ug/L			10/09/12 18:58	1
Vinyl acetate	ND		10		ug/L			10/09/12 18:58	1
Vinyl chloride	ND		0.50		ug/L			10/09/12 18:58	1
<b>Xylenes, Total</b>	<b>760</b>		1.0		ug/L			10/09/12 18:58	1
2,2-Dichloropropane	ND		0.50		ug/L			10/09/12 18:58	1
<b>Gasoline Range Organics (GRO)</b>	<b>29000</b>		5000		ug/L			10/11/12 14:47	100
<b>-C5-C12</b>									

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	114		67 - 130		10/09/12 18:58	1
4-Bromofluorobenzene	102		67 - 130		10/11/12 14:47	100
1,2-Dichloroethane-d4 (Surr)	89		75 - 138		10/09/12 18:58	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

Client Sample ID: MW-5  
Date Collected: 10/04/12 18:00  
Date Received: 10/04/12 18:45

Lab Sample ID: 720-45047-4  
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		75 - 138		10/11/12 14:47	100
Toluene-d8 (Surr)	104		70 - 130		10/09/12 18:58	1
Toluene-d8 (Surr)	100		70 - 130		10/11/12 14:47	100

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Client Sample ID: MW-1**

**Date Collected: 10/04/12 11:00**

**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		10/09/12 14:57	10/12/12 19:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.004		0 - 5				10/09/12 14:57	10/12/12 19:40	1
p-Terphenyl	67		31 - 150				10/09/12 14:57	10/12/12 19:40	1

**Client Sample ID: MW-2**

**Date Collected: 10/04/12 16:30**

**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-2**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	250		51		ug/L		10/09/12 14:57	10/12/12 20:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.002		0 - 5				10/09/12 14:57	10/12/12 20:05	1
p-Terphenyl	80		31 - 150				10/09/12 14:57	10/12/12 20:05	1

**Client Sample ID: MW-4**

**Date Collected: 10/04/12 14:00**

**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		10/09/12 14:57	10/12/12 20:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.02		0 - 5				10/09/12 14:57	10/12/12 20:29	1
p-Terphenyl	95		31 - 150				10/09/12 14:57	10/12/12 20:29	1

**Client Sample ID: MW-5**

**Date Collected: 10/04/12 18:00**

**Date Received: 10/04/12 18:45**

**Lab Sample ID: 720-45047-4**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2100		50		ug/L		10/09/12 14:57	10/12/12 20:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0		0 - 5				10/09/12 14:57	10/12/12 20:53	1
p-Terphenyl	89		31 - 150				10/09/12 14:57	10/12/12 20:53	1



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: MB 720-122607/5**

**Matrix: Water**

**Analysis Batch: 122607**

**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			10/09/12 09:55	1
Acetone	ND		50		ug/L			10/09/12 09:55	1
Benzene	ND		0.50		ug/L			10/09/12 09:55	1
Dichlorobromomethane	ND		0.50		ug/L			10/09/12 09:55	1
Bromobenzene	ND		1.0		ug/L			10/09/12 09:55	1
Chlorobromomethane	ND		1.0		ug/L			10/09/12 09:55	1
Bromoform	ND		1.0		ug/L			10/09/12 09:55	1
Bromomethane	ND		1.0		ug/L			10/09/12 09:55	1
2-Butanone (MEK)	ND		50		ug/L			10/09/12 09:55	1
n-Butylbenzene	ND		1.0		ug/L			10/09/12 09:55	1
sec-Butylbenzene	ND		1.0		ug/L			10/09/12 09:55	1
tert-Butylbenzene	ND		1.0		ug/L			10/09/12 09:55	1
Carbon disulfide	ND		5.0		ug/L			10/09/12 09:55	1
Carbon tetrachloride	ND		0.50		ug/L			10/09/12 09:55	1
Chlorobenzene	ND		0.50		ug/L			10/09/12 09:55	1
Chloroethane	ND		1.0		ug/L			10/09/12 09:55	1
Chloroform	ND		1.0		ug/L			10/09/12 09:55	1
Chloromethane	ND		1.0		ug/L			10/09/12 09:55	1
2-Chlorotoluene	ND		0.50		ug/L			10/09/12 09:55	1
4-Chlorotoluene	ND		0.50		ug/L			10/09/12 09:55	1
Chlorodibromomethane	ND		0.50		ug/L			10/09/12 09:55	1
1,2-Dichlorobenzene	ND		0.50		ug/L			10/09/12 09:55	1
1,3-Dichlorobenzene	ND		0.50		ug/L			10/09/12 09:55	1
1,4-Dichlorobenzene	ND		0.50		ug/L			10/09/12 09:55	1
1,3-Dichloropropane	ND		1.0		ug/L			10/09/12 09:55	1
1,1-Dichloropropene	ND		0.50		ug/L			10/09/12 09:55	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			10/09/12 09:55	1
Ethylene Dibromide	ND		0.50		ug/L			10/09/12 09:55	1
Dibromomethane	ND		0.50		ug/L			10/09/12 09:55	1
Dichlorodifluoromethane	ND		0.50		ug/L			10/09/12 09:55	1
1,1-Dichloroethane	ND		0.50		ug/L			10/09/12 09:55	1
1,2-Dichloroethane	ND		0.50		ug/L			10/09/12 09:55	1
1,1-Dichloroethene	ND		0.50		ug/L			10/09/12 09:55	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 09:55	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			10/09/12 09:55	1
1,2-Dichloropropane	ND		0.50		ug/L			10/09/12 09:55	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 09:55	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			10/09/12 09:55	1
Ethylbenzene	ND		0.50		ug/L			10/09/12 09:55	1
Hexachlorobutadiene	ND		1.0		ug/L			10/09/12 09:55	1
2-Hexanone	ND		50		ug/L			10/09/12 09:55	1
Isopropylbenzene	ND		0.50		ug/L			10/09/12 09:55	1
4-Isopropyltoluene	ND		1.0		ug/L			10/09/12 09:55	1
Methylene Chloride	ND		5.0		ug/L			10/09/12 09:55	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			10/09/12 09:55	1
Naphthalene	ND		1.0		ug/L			10/09/12 09:55	1
N-Propylbenzene	ND		1.0		ug/L			10/09/12 09:55	1
Styrene	ND		0.50		ug/L			10/09/12 09:55	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			10/09/12 09:55	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: MB 720-122607/5**

**Matrix: Water**

**Analysis Batch: 122607**

**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			10/09/12 09:55	1
Tetrachloroethene	ND		0.50		ug/L			10/09/12 09:55	1
Toluene	ND		0.50		ug/L			10/09/12 09:55	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/09/12 09:55	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/09/12 09:55	1
1,1,1-Trichloroethane	ND		0.50		ug/L			10/09/12 09:55	1
1,1,2-Trichloroethane	ND		0.50		ug/L			10/09/12 09:55	1
Trichloroethene	ND		0.50		ug/L			10/09/12 09:55	1
Trichlorofluoromethane	ND		1.0		ug/L			10/09/12 09:55	1
1,2,3-Trichloropropane	ND		0.50		ug/L			10/09/12 09:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			10/09/12 09:55	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			10/09/12 09:55	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			10/09/12 09:55	1
Vinyl acetate	ND		10		ug/L			10/09/12 09:55	1
Vinyl chloride	ND		0.50		ug/L			10/09/12 09:55	1
Xylenes, Total	ND		1.0		ug/L			10/09/12 09:55	1
2,2-Dichloropropane	ND		0.50		ug/L			10/09/12 09:55	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/09/12 09:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	103		67 - 130		10/09/12 09:55	1
1,2-Dichloroethane-d4 (Surr)	99		75 - 138		10/09/12 09:55	1
Toluene-d8 (Surr)	95		70 - 130		10/09/12 09:55	1

**Lab Sample ID: LCS 720-122607/6**

**Matrix: Water**

**Analysis Batch: 122607**

**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	26.7		ug/L		107	62 - 130
Acetone	125	115		ug/L		92	26 - 180
Benzene	25.0	23.8		ug/L		95	79 - 130
Dichlorobromomethane	25.0	27.7		ug/L		111	70 - 130
Bromobenzene	25.0	24.9		ug/L		99	70 - 130
Chlorobromomethane	25.0	23.4		ug/L		94	70 - 130
Bromoform	25.0	24.2		ug/L		97	68 - 136
Bromomethane	25.0	25.8		ug/L		103	43 - 151
2-Butanone (MEK)	125	144		ug/L		115	54 - 130
n-Butylbenzene	25.0	28.8		ug/L		115	70 - 142
sec-Butylbenzene	25.0	26.7		ug/L		107	70 - 134
tert-Butylbenzene	25.0	27.0		ug/L		108	70 - 135
Carbon disulfide	25.0	27.4		ug/L		110	58 - 130
Carbon tetrachloride	25.0	25.5		ug/L		102	70 - 146
Chlorobenzene	25.0	24.3		ug/L		97	70 - 130
Chloroethane	25.0	21.9		ug/L		88	62 - 138
Chloroform	25.0	24.3		ug/L		97	70 - 130
Chloromethane	25.0	17.3		ug/L		69	52 - 175
2-Chlorotoluene	25.0	29.8		ug/L		119	70 - 130
4-Chlorotoluene	25.0	29.5		ug/L		118	70 - 130

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: LCS 720-122607/6**

**Matrix: Water**

**Analysis Batch: 122607**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorodibromomethane	25.0	25.5		ug/L		102	70 - 145
1,2-Dichlorobenzene	25.0	24.9		ug/L		100	70 - 130
1,3-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	25.3		ug/L		101	70 - 130
1,3-Dichloropropane	25.0	26.0		ug/L		104	70 - 130
1,1-Dichloropropene	25.0	24.3		ug/L		97	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.2		ug/L		93	70 - 136
Ethylene Dibromide	25.0	25.9		ug/L		104	70 - 130
Dibromomethane	25.0	25.6		ug/L		102	70 - 130
Dichlorodifluoromethane	25.0	14.3		ug/L		57	34 - 132
1,1-Dichloroethane	25.0	23.0		ug/L		92	70 - 130
1,2-Dichloroethane	25.0	23.0		ug/L		92	61 - 132
1,1-Dichloroethene	25.0	22.9		ug/L		92	64 - 128
cis-1,2-Dichloroethene	25.0	23.9		ug/L		96	70 - 130
trans-1,2-Dichloroethene	25.0	24.6		ug/L		98	68 - 130
1,2-Dichloropropane	25.0	24.1		ug/L		96	70 - 130
cis-1,3-Dichloropropene	25.0	28.2		ug/L		113	70 - 130
trans-1,3-Dichloropropene	25.0	26.0		ug/L		104	70 - 140
Ethylbenzene	25.0	25.1		ug/L		100	80 - 120
Hexachlorobutadiene	25.0	22.6		ug/L		90	70 - 130
2-Hexanone	125	123		ug/L		98	60 - 164
Isopropylbenzene	25.0	25.2		ug/L		101	70 - 130
4-Isopropyltoluene	25.0	26.3		ug/L		105	70 - 130
Methylene Chloride	25.0	24.7		ug/L		99	70 - 147
4-Methyl-2-pentanone (MIBK)	125	127		ug/L		102	58 - 130
Naphthalene	25.0	24.1		ug/L		97	70 - 130
N-Propylbenzene	25.0	29.9		ug/L		120	70 - 130
Styrene	25.0	26.4		ug/L		106	70 - 130
1,1,1,2-Tetrachloroethane	25.0	25.2		ug/L		101	70 - 130
1,1,1,2,2-Tetrachloroethane	25.0	31.0		ug/L		124	70 - 130
Tetrachloroethene	25.0	20.8		ug/L		83	70 - 130
Toluene	25.0	25.5		ug/L		102	78 - 120
1,2,3-Trichlorobenzene	25.0	20.8		ug/L		83	70 - 130
1,2,4-Trichlorobenzene	25.0	21.3		ug/L		85	70 - 130
1,1,1-Trichloroethane	25.0	27.2		ug/L		109	70 - 130
1,1,2-Trichloroethane	25.0	26.5		ug/L		106	70 - 130
Trichloroethene	25.0	20.5		ug/L		82	70 - 130
Trichlorofluoromethane	25.0	20.3		ug/L		81	66 - 132
1,2,3-Trichloropropane	25.0	29.1		ug/L		117	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	22.9		ug/L		92	42 - 162
1,2,4-Trimethylbenzene	25.0	27.6		ug/L		110	70 - 132
1,3,5-Trimethylbenzene	25.0	27.7		ug/L		111	70 - 130
Vinyl acetate	25.0	38.1		ug/L		152	43 - 163
Vinyl chloride	25.0	19.0		ug/L		76	54 - 135
m-Xylene & p-Xylene	50.0	52.4		ug/L		105	70 - 142
o-Xylene	25.0	27.0		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	27.2		ug/L		109	70 - 140

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

Lab Sample ID: LCS 720-122607/6

Matrix: Water

Analysis Batch: 122607

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	109		67 - 130
1,2-Dichloroethane-d4 (Surr)	96		75 - 138
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCS 720-122607/8

Matrix: Water

Analysis Batch: 122607

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	459		ug/L		92	62 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	105		67 - 130
1,2-Dichloroethane-d4 (Surr)	89		75 - 138
Toluene-d8 (Surr)	98		70 - 130

Lab Sample ID: LCSD 720-122607/7

Matrix: Water

Analysis Batch: 122607

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	27.1		ug/L		108	62 - 130	1	20
Acetone	125	115		ug/L		92	26 - 180	0	30
Benzene	25.0	24.3		ug/L		97	79 - 130	2	20
Dichlorobromomethane	25.0	27.5		ug/L		110	70 - 130	1	20
Bromobenzene	25.0	25.0		ug/L		100	70 - 130	0	20
Chlorobromomethane	25.0	24.2		ug/L		97	70 - 130	3	20
Bromoform	25.0	24.3		ug/L		97	68 - 136	0	20
Bromomethane	25.0	25.4		ug/L		101	43 - 151	2	20
2-Butanone (MEK)	125	147		ug/L		117	54 - 130	2	20
n-Butylbenzene	25.0	28.7		ug/L		115	70 - 142	0	20
sec-Butylbenzene	25.0	27.0		ug/L		108	70 - 134	1	20
tert-Butylbenzene	25.0	27.1		ug/L		108	70 - 135	0	20
Carbon disulfide	25.0	27.7		ug/L		111	58 - 130	1	20
Carbon tetrachloride	25.0	25.2		ug/L		101	70 - 146	1	20
Chlorobenzene	25.0	24.7		ug/L		99	70 - 130	1	20
Chloroethane	25.0	21.4		ug/L		86	62 - 138	2	20
Chloroform	25.0	23.8		ug/L		95	70 - 130	2	20
Chloromethane	25.0	16.9		ug/L		68	52 - 175	2	20
2-Chlorotoluene	25.0	29.8		ug/L		119	70 - 130	0	20
4-Chlorotoluene	25.0	29.4		ug/L		118	70 - 130	0	20
Chlorodibromomethane	25.0	25.6		ug/L		102	70 - 145	0	20
1,2-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130	2	20
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130	1	20
1,4-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130	1	20
1,3-Dichloropropane	25.0	26.3		ug/L		105	70 - 130	1	20
1,1-Dichloropropene	25.0	24.6		ug/L		98	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	24.8		ug/L		99	70 - 136	7	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: LCSD 720-1226077**

**Matrix: Water**

**Analysis Batch: 122607**

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

**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Added	Result	Qualifier				Limits		
Ethylene Dibromide	25.0	26.0		ug/L		104	70 - 130	0	20
Dibromomethane	25.0	26.0		ug/L		104	70 - 130	2	20
Dichlorodifluoromethane	25.0	13.6		ug/L		54	34 - 132	5	20
1,1-Dichloroethane	25.0	23.2		ug/L		93	70 - 130	1	20
1,2-Dichloroethane	25.0	22.9		ug/L		92	61 - 132	0	20
1,1-Dichloroethene	25.0	23.0		ug/L		92	64 - 128	1	20
cis-1,2-Dichloroethene	25.0	24.1		ug/L		96	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	25.0		ug/L		100	68 - 130	2	20
1,2-Dichloropropane	25.0	24.3		ug/L		97	70 - 130	1	20
cis-1,3-Dichloropropene	25.0	28.5		ug/L		114	70 - 130	1	20
trans-1,3-Dichloropropene	25.0	25.6		ug/L		103	70 - 140	1	20
Ethylbenzene	25.0	25.3		ug/L		101	80 - 120	1	20
Hexachlorobutadiene	25.0	22.8		ug/L		91	70 - 130	1	20
2-Hexanone	125	123		ug/L		99	60 - 164	1	20
Isopropylbenzene	25.0	25.1		ug/L		100	70 - 130	0	20
4-Isopropyltoluene	25.0	26.5		ug/L		106	70 - 130	1	20
Methylene Chloride	25.0	25.1		ug/L		101	70 - 147	2	20
4-Methyl-2-pentanone (MIBK)	125	130		ug/L		104	58 - 130	2	20
Naphthalene	25.0	25.9		ug/L		104	70 - 130	7	20
N-Propylbenzene	25.0	30.2		ug/L		121	70 - 130	1	20
Styrene	25.0	26.6		ug/L		106	70 - 130	1	20
1,1,1,2-Tetrachloroethane	25.0	25.3		ug/L		101	70 - 130	0	20
1,1,1,2,2-Tetrachloroethane	25.0	32.2		ug/L		129	70 - 130	4	20
Tetrachloroethene	25.0	20.8		ug/L		83	70 - 130	0	20
Toluene	25.0	26.3		ug/L		105	78 - 120	3	20
1,2,3-Trichlorobenzene	25.0	21.8		ug/L		87	70 - 130	5	20
1,2,4-Trichlorobenzene	25.0	21.9		ug/L		88	70 - 130	3	20
1,1,1-Trichloroethane	25.0	26.8		ug/L		107	70 - 130	1	20
1,1,2-Trichloroethane	25.0	27.0		ug/L		108	70 - 130	2	20
Trichloroethene	25.0	20.9		ug/L		83	70 - 130	2	20
Trichlorofluoromethane	25.0	19.9		ug/L		79	66 - 132	2	20
1,2,3-Trichloropropane	25.0	30.2		ug/L		121	70 - 130	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	22.7		ug/L		91	42 - 162	1	20
1,2,4-Trimethylbenzene	25.0	27.5		ug/L		110	70 - 132	0	20
1,3,5-Trimethylbenzene	25.0	27.7		ug/L		111	70 - 130	0	20
Vinyl acetate	25.0	39.2		ug/L		157	43 - 163	3	20
Vinyl chloride	25.0	18.7		ug/L		75	54 - 135	2	20
m-Xylene & p-Xylene	50.0	52.3		ug/L		105	70 - 142	0	20
o-Xylene	25.0	27.0		ug/L		108	70 - 130	0	20
2,2-Dichloropropane	25.0	26.1		ug/L		104	70 - 140	4	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	106		67 - 130
1,2-Dichloroethane-d4 (Surr)	94		75 - 138
Toluene-d8 (Surr)	100		70 - 130

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: LCSD 720-122607/9**

**Matrix: Water**

**Analysis Batch: 122607**

**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	432		ug/L		86	62 - 120	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	103		67 - 130
1,2-Dichloroethane-d4 (Surr)	90		75 - 138
Toluene-d8 (Surr)	100		70 - 130

**Lab Sample ID: MB 720-122806/4**

**Matrix: Water**

**Analysis Batch: 122806**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50		ug/L			10/11/12 10:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130		10/11/12 10:58	1
1,2-Dichloroethane-d4 (Surr)	104		75 - 138		10/11/12 10:58	1
Toluene-d8 (Surr)	98		70 - 130		10/11/12 10:58	1

**Lab Sample ID: LCS 720-122806/5**

**Matrix: Water**

**Analysis Batch: 122806**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	25.0	23.3		ug/L		93	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	114		67 - 130
1,2-Dichloroethane-d4 (Surr)	102		75 - 138
Toluene-d8 (Surr)	105		70 - 130

**Lab Sample ID: LCS 720-122806/7**

**Matrix: Water**

**Analysis Batch: 122806**

**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	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	92		75 - 138
Toluene-d8 (Surr)	101		70 - 130

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: LCSD 720-122806/6**

**Matrix: Water**

**Analysis Batch: 122806**

**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
Ethylbenzene	25.0	25.2		ug/L		101	80 - 120	8	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene	103		67 - 130						
1,2-Dichloroethane-d4 (Surr)	101		75 - 138						
Toluene-d8 (Surr)	120		70 - 130						

**Lab Sample ID: LCSD 720-122806/8**

**Matrix: Water**

**Analysis Batch: 122806**

**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	434		ug/L		87	62 - 120	3	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene	103		67 - 130						
1,2-Dichloroethane-d4 (Surr)	94		75 - 138						
Toluene-d8 (Surr)	101		70 - 130						

**Lab Sample ID: MB 720-122830/4**

**Matrix: Water**

**Analysis Batch: 122830**

**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			10/11/12 12:13	1
Acetone	ND		50		ug/L			10/11/12 12:13	1
Benzene	ND		0.50		ug/L			10/11/12 12:13	1
Dichlorobromomethane	ND		0.50		ug/L			10/11/12 12:13	1
Bromobenzene	ND		1.0		ug/L			10/11/12 12:13	1
Chlorobromomethane	ND		1.0		ug/L			10/11/12 12:13	1
Bromoform	ND		1.0		ug/L			10/11/12 12:13	1
Bromomethane	ND		1.0		ug/L			10/11/12 12:13	1
2-Butanone (MEK)	ND		50		ug/L			10/11/12 12:13	1
n-Butylbenzene	ND		1.0		ug/L			10/11/12 12:13	1
sec-Butylbenzene	ND		1.0		ug/L			10/11/12 12:13	1
tert-Butylbenzene	ND		1.0		ug/L			10/11/12 12:13	1
Carbon disulfide	ND		5.0		ug/L			10/11/12 12:13	1
Carbon tetrachloride	ND		0.50		ug/L			10/11/12 12:13	1
Chlorobenzene	ND		0.50		ug/L			10/11/12 12:13	1
Chloroethane	ND		1.0		ug/L			10/11/12 12:13	1
Chloroform	ND		1.0		ug/L			10/11/12 12:13	1
Chloromethane	ND		1.0		ug/L			10/11/12 12:13	1
2-Chlorotoluene	ND		0.50		ug/L			10/11/12 12:13	1
4-Chlorotoluene	ND		0.50		ug/L			10/11/12 12:13	1
Chlorodibromomethane	ND		0.50		ug/L			10/11/12 12:13	1
1,2-Dichlorobenzene	ND		0.50		ug/L			10/11/12 12:13	1
1,3-Dichlorobenzene	ND		0.50		ug/L			10/11/12 12:13	1
1,4-Dichlorobenzene	ND		0.50		ug/L			10/11/12 12:13	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

Lab Sample ID: MB 720-122830/4

Matrix: Water

Analysis Batch: 122830

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		1.0		ug/L			10/11/12 12:13	1
1,1-Dichloropropene	ND		0.50		ug/L			10/11/12 12:13	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			10/11/12 12:13	1
Ethylene Dibromide	ND		0.50		ug/L			10/11/12 12:13	1
Dibromomethane	ND		0.50		ug/L			10/11/12 12:13	1
Dichlorodifluoromethane	ND		0.50		ug/L			10/11/12 12:13	1
1,1-Dichloroethane	ND		0.50		ug/L			10/11/12 12:13	1
1,2-Dichloroethane	ND		0.50		ug/L			10/11/12 12:13	1
1,1-Dichloroethene	ND		0.50		ug/L			10/11/12 12:13	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			10/11/12 12:13	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			10/11/12 12:13	1
1,2-Dichloropropane	ND		0.50		ug/L			10/11/12 12:13	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			10/11/12 12:13	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			10/11/12 12:13	1
Ethylbenzene	ND		0.50		ug/L			10/11/12 12:13	1
Hexachlorobutadiene	ND		1.0		ug/L			10/11/12 12:13	1
2-Hexanone	ND		50		ug/L			10/11/12 12:13	1
Isopropylbenzene	ND		0.50		ug/L			10/11/12 12:13	1
4-Isopropyltoluene	ND		1.0		ug/L			10/11/12 12:13	1
Methylene Chloride	ND		5.0		ug/L			10/11/12 12:13	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			10/11/12 12:13	1
Naphthalene	ND		1.0		ug/L			10/11/12 12:13	1
N-Propylbenzene	ND		1.0		ug/L			10/11/12 12:13	1
Styrene	ND		0.50		ug/L			10/11/12 12:13	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			10/11/12 12:13	1
1,1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			10/11/12 12:13	1
Tetrachloroethene	ND		0.50		ug/L			10/11/12 12:13	1
Toluene	ND		0.50		ug/L			10/11/12 12:13	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			10/11/12 12:13	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			10/11/12 12:13	1
1,1,1-Trichloroethane	ND		0.50		ug/L			10/11/12 12:13	1
1,1,2-Trichloroethane	ND		0.50		ug/L			10/11/12 12:13	1
Trichloroethene	ND		0.50		ug/L			10/11/12 12:13	1
Trichlorofluoromethane	ND		1.0		ug/L			10/11/12 12:13	1
1,2,3-Trichloropropane	ND		0.50		ug/L			10/11/12 12:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			10/11/12 12:13	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			10/11/12 12:13	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			10/11/12 12:13	1
Vinyl acetate	ND		10		ug/L			10/11/12 12:13	1
Vinyl chloride	ND		0.50		ug/L			10/11/12 12:13	1
Xylenes, Total	ND		1.0		ug/L			10/11/12 12:13	1
2,2-Dichloropropane	ND		0.50		ug/L			10/11/12 12:13	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			10/11/12 12:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		67 - 130		10/11/12 12:13	1
1,2-Dichloroethane-d4 (Surr)	107		75 - 138		10/11/12 12:13	1
Toluene-d8 (Surr)	100		70 - 130		10/11/12 12:13	1



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: LCS 720-122830/5**

**Matrix: Water**

**Analysis Batch: 122830**

**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	26.8		ug/L		107	62 - 130
Acetone	125	161		ug/L		129	26 - 180
Benzene	25.0	24.8		ug/L		99	79 - 130
Dichlorobromomethane	25.0	28.2		ug/L		113	70 - 130
Bromobenzene	25.0	25.6		ug/L		103	70 - 130
Chlorobromomethane	25.0	25.3		ug/L		101	70 - 130
Bromoform	25.0	28.8		ug/L		115	68 - 136
Bromomethane	25.0	24.1		ug/L		96	43 - 151
2-Butanone (MEK)	125	154		ug/L		123	54 - 130
n-Butylbenzene	25.0	26.2		ug/L		105	70 - 142
sec-Butylbenzene	25.0	26.1		ug/L		105	70 - 134
tert-Butylbenzene	25.0	26.2		ug/L		105	70 - 135
Carbon disulfide	25.0	28.1		ug/L		113	58 - 130
Carbon tetrachloride	25.0	29.0		ug/L		116	70 - 146
Chlorobenzene	25.0	25.3		ug/L		101	70 - 130
Chloroethane	25.0	23.8		ug/L		95	62 - 138
Chloroform	25.0	25.1		ug/L		100	70 - 130
Chloromethane	25.0	20.4		ug/L		82	52 - 175
2-Chlorotoluene	25.0	26.1		ug/L		105	70 - 130
4-Chlorotoluene	25.0	25.5		ug/L		102	70 - 130
Chlorodibromomethane	25.0	28.3		ug/L		113	70 - 145
1,2-Dichlorobenzene	25.0	25.9		ug/L		104	70 - 130
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130
1,4-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130
1,3-Dichloropropane	25.0	26.1		ug/L		104	70 - 130
1,1-Dichloropropene	25.0	26.4		ug/L		106	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	29.7		ug/L		119	70 - 136
Ethylene Dibromide	25.0	27.5		ug/L		110	70 - 130
Dibromomethane	25.0	26.4		ug/L		106	70 - 130
Dichlorodifluoromethane	25.0	15.8		ug/L		63	34 - 132
1,1-Dichloroethane	25.0	25.7		ug/L		103	70 - 130
1,2-Dichloroethane	25.0	25.5		ug/L		102	61 - 132
1,1-Dichloroethene	25.0	26.1		ug/L		104	64 - 128
cis-1,2-Dichloroethene	25.0	25.8		ug/L		103	70 - 130
trans-1,2-Dichloroethene	25.0	25.5		ug/L		102	68 - 130
1,2-Dichloropropane	25.0	26.3		ug/L		105	70 - 130
cis-1,3-Dichloropropene	25.0	29.7		ug/L		119	70 - 130
trans-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 140
Ethylbenzene	25.0	24.3		ug/L		97	80 - 120
Hexachlorobutadiene	25.0	25.8		ug/L		103	70 - 130
2-Hexanone	125	156		ug/L		125	60 - 164
Isopropylbenzene	25.0	26.2		ug/L		105	70 - 130
4-Isopropyltoluene	25.0	25.8		ug/L		103	70 - 130
Methylene Chloride	25.0	24.9		ug/L		100	70 - 147
4-Methyl-2-pentanone (MIBK)	125	150		ug/L		120	58 - 130
Naphthalene	25.0	28.9		ug/L		116	70 - 130
N-Propylbenzene	25.0	26.8		ug/L		107	70 - 130
Styrene	25.0	25.0		ug/L		100	70 - 130
1,1,1,2-Tetrachloroethane	25.0	26.7		ug/L		107	70 - 130

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: LCS 720-122830/5**

**Matrix: Water**

**Analysis Batch: 122830**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	25.0	27.9		ug/L		112	70 - 130
Tetrachloroethene	25.0	25.5		ug/L		102	70 - 130
Toluene	25.0	23.9		ug/L		96	78 - 120
1,2,3-Trichlorobenzene	25.0	26.1		ug/L		104	70 - 130
1,2,4-Trichlorobenzene	25.0	25.8		ug/L		103	70 - 130
1,1,1-Trichloroethane	25.0	27.5		ug/L		110	70 - 130
1,1,2-Trichloroethane	25.0	27.5		ug/L		110	70 - 130
Trichloroethene	25.0	26.4		ug/L		105	70 - 130
Trichlorofluoromethane	25.0	24.3		ug/L		97	66 - 132
1,2,3-Trichloropropane	25.0	28.7		ug/L		115	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	28.0		ug/L		112	42 - 162
1,2,4-Trimethylbenzene	25.0	25.4		ug/L		101	70 - 132
1,3,5-Trimethylbenzene	25.0	25.9		ug/L		103	70 - 130
Vinyl acetate	25.0	33.9		ug/L		136	43 - 163
Vinyl chloride	25.0	21.2		ug/L		85	54 - 135
m-Xylene & p-Xylene	50.0	46.3		ug/L		93	70 - 142
o-Xylene	25.0	25.2		ug/L		101	70 - 130
2,2-Dichloropropane	25.0	28.8		ug/L		115	70 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	98		75 - 138
Toluene-d8 (Surr)	100		70 - 130

**Lab Sample ID: LCS 720-122830/7**

**Matrix: Water**

**Analysis Batch: 122830**

**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	468		ug/L		94	62 - 120

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

**Lab Sample ID: LCSD 720-122830/6**

**Matrix: Water**

**Analysis Batch: 122830**

**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	26.3		ug/L		105	62 - 130	2	20
Acetone	125	140		ug/L		112	26 - 180	14	30
Benzene	25.0	24.8		ug/L		99	79 - 130	0	20
Dichlorobromomethane	25.0	28.1		ug/L		112	70 - 130	0	20
Bromobenzene	25.0	25.8		ug/L		103	70 - 130	1	20
Chlorobromomethane	25.0	25.5		ug/L		102	70 - 130	1	20
Bromoform	25.0	27.7		ug/L		111	68 - 136	4	20

# QC Sample Results

Client: Engeo, Inc.  
 Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

Lab Sample ID: LCSD 720-122830/6

Matrix: Water

Analysis Batch: 122830

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits	RPD	RPD	Limit
Bromomethane	25.0	24.8		ug/L		99	43 - 151	3	20	
2-Butanone (MEK)	125	136		ug/L		109	54 - 130	12	20	
n-Butylbenzene	25.0	25.8		ug/L		103	70 - 142	2	20	
sec-Butylbenzene	25.0	25.6		ug/L		102	70 - 134	2	20	
tert-Butylbenzene	25.0	25.7		ug/L		103	70 - 135	2	20	
Carbon disulfide	25.0	28.0		ug/L		112	58 - 130	1	20	
Carbon tetrachloride	25.0	28.5		ug/L		114	70 - 146	1	20	
Chlorobenzene	25.0	25.6		ug/L		102	70 - 130	1	20	
Chloroethane	25.0	24.4		ug/L		98	62 - 138	2	20	
Chloroform	25.0	25.4		ug/L		102	70 - 130	1	20	
Chloromethane	25.0	20.6		ug/L		82	52 - 175	1	20	
2-Chlorotoluene	25.0	25.9		ug/L		104	70 - 130	1	20	
4-Chlorotoluene	25.0	25.3		ug/L		101	70 - 130	1	20	
Chlorodibromomethane	25.0	28.4		ug/L		114	70 - 145	0	20	
1,2-Dichlorobenzene	25.0	26.0		ug/L		104	70 - 130	1	20	
1,3-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130	0	20	
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130	0	20	
1,3-Dichloropropane	25.0	25.6		ug/L		102	70 - 130	2	20	
1,1-Dichloropropene	25.0	26.1		ug/L		104	70 - 130	1	20	
1,2-Dibromo-3-Chloropropane	25.0	27.0		ug/L		108	70 - 136	10	20	
Ethylene Dibromide	25.0	26.9		ug/L		108	70 - 130	2	20	
Dibromomethane	25.0	25.8		ug/L		103	70 - 130	2	20	
Dichlorodifluoromethane	25.0	15.5		ug/L		62	34 - 132	2	20	
1,1-Dichloroethane	25.0	25.9		ug/L		104	70 - 130	1	20	
1,2-Dichloroethane	25.0	25.6		ug/L		102	61 - 132	0	20	
1,1-Dichloroethene	25.0	25.5		ug/L		102	64 - 128	2	20	
cis-1,2-Dichloroethene	25.0	26.1		ug/L		105	70 - 130	1	20	
trans-1,2-Dichloroethene	25.0	25.8		ug/L		103	68 - 130	1	20	
1,2-Dichloropropane	25.0	26.5		ug/L		106	70 - 130	1	20	
cis-1,3-Dichloropropene	25.0	30.3		ug/L		121	70 - 130	2	20	
trans-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 140	0	20	
Ethylbenzene	25.0	24.2		ug/L		97	80 - 120	0	20	
Hexachlorobutadiene	25.0	26.0		ug/L		104	70 - 130	1	20	
2-Hexanone	125	139		ug/L		111	60 - 164	12	20	
Isopropylbenzene	25.0	26.1		ug/L		104	70 - 130	1	20	
4-Isopropyltoluene	25.0	25.8		ug/L		103	70 - 130	0	20	
Methylene Chloride	25.0	25.2		ug/L		101	70 - 147	1	20	
4-Methyl-2-pentanone (MIBK)	125	134		ug/L		108	58 - 130	11	20	
Naphthalene	25.0	27.2		ug/L		109	70 - 130	6	20	
N-Propylbenzene	25.0	26.2		ug/L		105	70 - 130	2	20	
Styrene	25.0	25.4		ug/L		102	70 - 130	2	20	
1,1,1,2-Tetrachloroethane	25.0	26.5		ug/L		106	70 - 130	0	20	
1,1,2,2-Tetrachloroethane	25.0	25.7		ug/L		103	70 - 130	8	20	
Tetrachloroethene	25.0	25.3		ug/L		101	70 - 130	1	20	
Toluene	25.0	23.9		ug/L		96	78 - 120	0	20	
1,2,3-Trichlorobenzene	25.0	26.1		ug/L		104	70 - 130	0	20	
1,2,4-Trichlorobenzene	25.0	25.8		ug/L		103	70 - 130	0	20	
1,1,1-Trichloroethane	25.0	27.4		ug/L		110	70 - 130	0	20	
1,1,2-Trichloroethane	25.0	26.9		ug/L		108	70 - 130	2	20	
Trichloroethene	25.0	26.2		ug/L		105	70 - 130	0	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: LCSD 720-122830/6**

**Matrix: Water**

**Analysis Batch: 122830**

**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
Trichlorofluoromethane	25.0	24.4		ug/L		97	66 - 132	0	20
1,2,3-Trichloropropane	25.0	26.6		ug/L		106	70 - 130	8	20
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	27.2		ug/L		109	42 - 162	3	20
1,2,4-Trimethylbenzene	25.0	25.4		ug/L		102	70 - 132	0	20
1,3,5-Trimethylbenzene	25.0	25.7		ug/L		103	70 - 130	1	20
Vinyl acetate	25.0	33.7		ug/L		135	43 - 163	1	20
Vinyl chloride	25.0	21.2		ug/L		85	54 - 135	0	20
m-Xylene & p-Xylene	50.0	46.1		ug/L		92	70 - 142	0	20
o-Xylene	25.0	25.3		ug/L		101	70 - 130	0	20
2,2-Dichloropropane	25.0	29.4		ug/L		118	70 - 140	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	99		75 - 138
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: LCSD 720-122830/8**

**Matrix: Water**

**Analysis Batch: 122830**

**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	464		ug/L		93	62 - 120	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	104		75 - 138
Toluene-d8 (Surr)	100		70 - 130

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

**Lab Sample ID: MB 720-122645/1-A**

**Matrix: Water**

**Analysis Batch: 122915**

**Client Sample ID: Method Blank**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 122645**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		10/09/12 14:57	10/12/12 19:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.006		0 - 5	10/09/12 14:57	10/12/12 19:16	1
p-Terphenyl	78		31 - 150	10/09/12 14:57	10/12/12 19:16	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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

**Lab Sample ID: LCS 720-122645/2-A**

**Matrix: Water**

**Analysis Batch: 122915**

**Client Sample ID: Lab Control Sample**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 122645**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2500	2140		ug/L		86	32 - 119
<b>Surrogate</b>		<b>LCS %Recovery</b>	<b>LCS Qualifier</b>				<b>Limits</b>
<i>p-Terphenyl</i>		97					31 - 150

**Lab Sample ID: LCSD 720-122645/3-A**

**Matrix: Water**

**Analysis Batch: 122915**

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

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 122645**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Diesel Range Organics [C10-C28]	2500	1960		ug/L		78	32 - 119	9	35
<b>Surrogate</b>		<b>LCSD %Recovery</b>	<b>LCSD Qualifier</b>				<b>Limits</b>		
<i>p-Terphenyl</i>		84					31 - 150		

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

## GC/MS VOA

### Analysis Batch: 122607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-45047-1	MW-1	Total/NA	Water	8260B/CA_LUFT MS	
720-45047-2	MW-2	Total/NA	Water	8260B/CA_LUFT MS	
720-45047-3	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
720-45047-4	MW-5	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-122607/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-122607/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-122607/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-122607/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-122607/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

### Analysis Batch: 122806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-45047-2	MW-2	Total/NA	Water	8260B/CA_LUFT MS	
720-45047-3	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-122806/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-122806/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-122806/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-122806/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-122806/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

### Analysis Batch: 122830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-45047-4	MW-5	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-122830/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-122830/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-122830/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-122830/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-122830/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

## GC Semi VOA

### Prep Batch: 122645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-45047-1	MW-1	Silica Gel Cleanup	Water	3510C SGC	
720-45047-2	MW-2	Silica Gel Cleanup	Water	3510C SGC	

# QC Association Summary

Client: Engeo, Inc.  
 Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

## GC Semi VOA (Continued)

### Prep Batch: 122645 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-45047-3	MW-4	Silica Gel Cleanup	Water	3510C SGC	
720-45047-4	MW-5	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-122645/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-122645/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-122645/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

### Analysis Batch: 122915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-45047-1	MW-1	Silica Gel Cleanup	Water	8015B	122645
720-45047-2	MW-2	Silica Gel Cleanup	Water	8015B	122645
720-45047-3	MW-4	Silica Gel Cleanup	Water	8015B	122645
720-45047-4	MW-5	Silica Gel Cleanup	Water	8015B	122645
LCS 720-122645/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	122645
LCSD 720-122645/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	122645
MB 720-122645/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	122645



# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

## Client Sample ID: MW-1

Lab Sample ID: 720-45047-1

Date Collected: 10/04/12 11:00

Matrix: Water

Date Received: 10/04/12 18:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	122607	10/09/12 17:27	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			122645	10/09/12 14:57	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	122915	10/12/12 19:40	JZ	TAL SF

## Client Sample ID: MW-2

Lab Sample ID: 720-45047-2

Date Collected: 10/04/12 16:30

Matrix: Water

Date Received: 10/04/12 18:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	122607	10/09/12 17:58	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		2	122806	10/11/12 15:33	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			122645	10/09/12 14:57	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	122915	10/12/12 20:05	JZ	TAL SF

## Client Sample ID: MW-4

Lab Sample ID: 720-45047-3

Date Collected: 10/04/12 14:00

Matrix: Water

Date Received: 10/04/12 18:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	122607	10/09/12 18:28	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	122806	10/11/12 16:03	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			122645	10/09/12 14:57	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	122915	10/12/12 20:29	JZ	TAL SF

## Client Sample ID: MW-5

Lab Sample ID: 720-45047-4

Date Collected: 10/04/12 18:00

Matrix: Water

Date Received: 10/04/12 18:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	122607	10/09/12 18:58	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		100	122830	10/11/12 14:47	LL	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			122645	10/09/12 14:57	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	122915	10/12/12 20:53	JZ	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-Parcel H

TestAmerica Job ID: 720-45047-1

## Laboratory: TestAmerica Pleasanton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

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

# Method Summary

Client: Engeo, Inc.  
Project/Site: Jordan Ranch-Parcel H

TestAmerica Job ID: 720-45047-1

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-Parcel H

TestAmerica Job ID: 720-45047-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-45047-1	MW-1	Water	10/04/12 11:00	10/04/12 18:45
720-45047-2	MW-2	Water	10/04/12 16:30	10/04/12 18:45
720-45047-3	MW-4	Water	10/04/12 14:00	10/04/12 18:45
720-45047-4	MW-5	Water	10/04/12 18:00	10/04/12 18:45

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# CHAIN OF CUSTODY RECORD

## 720-45047

141312

PROJECT NUMBER: <b>7828.000.001</b>	PROJECT NAME: <b>Jordan Ranch - Parcel H</b>
SAMPLED BY: (SIGNATURE/PRINT) <i>SJA / Scott Johns</i>	
PROJECT MANAGER: <b>Morgan Johnson</b>	
ROUTING: E-MAIL <b>sjohns@engeo.com</b>   <b>mjohnson@engeo.com</b>   <b>Hard Copy</b>   <b>Scott Johns</b>	

SAMPLE NUMBER	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CONTAINER SIZE	PRESERVATIVE	VOC's TPHg	TPHd	Silica gel	REMARKS REQUIRED DETECTION LIMITS
MW-1	10/4/12	11:00	water	3 VOA 2 AMBER		HCl/ice	X	X	X	
MW-2	10/4/12	16:30	water	3 VOA 2 AMBER		HCl/ice	X	X	X	
MW-4	10/4/12	14:00	water	3 VOA 2 AMBER		HCl/ice	X	X	X	
MW-5	10/4/12	18:00	water	3 VOA 2 AMBER		HCl/ice	X	X	X	

RELINQUISHED BY: (SIGNATURE) <i>SJA</i>	DATE/TIME <b>10/4/12 18:25</b>	RECEIVED BY: (SIGNATURE) <i>AMM</i>	DATE/TIME <b>10/4/12 18:25</b>	RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>Scott Johns</i>	DATE/TIME <b>10-4-12 18:45</b>
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6399 SAN IGNACIO AVENUE, SUITE 150  
SAN JOSE, CALIFORNIA 95119  
(408) 574-4900 FAX (888) 279-2698  
WWW.ENGEO.COM

5-DAY TAT

5.9e

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## Login Sample Receipt Checklist

Client: Engeo, Inc.

Job Number: 720-45047-1

**Login Number: 45047**

**List Number: 1**

**Creator: Mullen, Joan**

**List Source: TestAmerica Pleasanton**

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


November 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