

Project No.  
**7380.000.003**

October 3, 2011

Mr. Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6540

**RECEIVED**

10:22 am, Oct 06, 2011  
Alameda County  
Environmental Health

Subject: 1000 North Vasco Road  
Livermore, California  
ACEH Case No. RO0003073

### **ADDITIONAL REMOVAL ACTION REPORT**

Dear Mr. Wickham:

We have prepared this Additional Removal Action Report for remediation of soil impacts associated with the former leaking underground storage tank and dispenser systems at 1000 North Vasco Road in Livermore, California (Site). The additional removal action follows interim removal action activities and was performed under the direction and comments provided in your directive letter dated September 9, 2011.

Work was performed in general conformance with the Additional Removal Action Plan developed for the Site dated September 16, 2011. Excavation and backfill activities, as well as related sampling and analysis of in-situ and excavated soils were performed between September 20, 2011 and September 28, 2011. Excavation backfill operations are underway and will be completed by the end of September 2011.

### **BACKGROUND**

#### **Site Description**

The Site is located between North Vasco Road and Central Avenue and south of a flood control channel in Livermore, California. According to a published USGS topographic map, the 5.8-acre Site slopes gently westward at an elevation of approximately 525 feet above mean sea level (msl). The eastern two-thirds of the Site is currently occupied by a former gasoline station and car wash complex, a restaurant, two metal buildings and a paved parking lot. The western one-third of the Site is undeveloped. The Site is currently an active Leaking Underground Storage Tank case (LUST) under the oversight of Alameda County Environmental Health (ACEH) (Case No. RO0003073).

#### **Nature and Source of Contamination**

Petroleum hydrocarbons (TPH-d and TPH-g) have been identified as the constituents of concern (COC) in soil and groundwater at the Site. The soil and groundwater impacts are associated with three of the four former UST locations and two of the three former dispenser locations, all located within the northeast portion of the Site.

## Previous Activity and Extent of Impact

The first phase of soil excavation activities were performed in July and August 2011. Soils exhibiting suspected or confirmed soil contamination were removed from five areas (identified as Areas #1 through #5). During excavation operations within Areas #2 and #5, backfill materials were encountered, consisting primarily of recycled aggregate base material. Samples collected from these materials exhibited elevated concentrations of TPH-d and TPH-mo, which was likely caused by the presence of asphalt materials. Additional testing supported the opinion that elevated TPH concentrations were the result of the presence of asphalt materials. Additional excavation was performed to remove the recycled aggregate base material. A description of the excavation operations is presented in a later section of this report.

## CLEANUP GOALS

The following numeric cleanup goals as established by the San Francisco Bay Regional Water Quality Control Board were proposed and have been generally applied to the remediation activity. Specifically, we used Environmental Screening Levels (ESLs) for soil assuming a residential land use scenario where groundwater is considered a potential drinking water source<sup>1</sup>. These proposed cleanup goals are provided in the table below:

**TABLE 1**  
Proposed Cleanup Goals

Analyte	Soil (mg/kg)
TPH-g	83
TPH-d	83
TPH-mo	370
Benzene	0.044
Toluene	2.9
Ethylbenzene	2.3
Xylenes	2.3
MTBE	0.023

## SOIL EXCAVATION AND CONFIRMATION SAMPLING

Prior to the commencement of remediation activities, ENGEO personnel worked with the abatement contractor to mark the excavation areas corresponding to Areas #2 and #5 by pacing from existing surface features.

Soil excavation activities commenced on September 22, 2011 and continued through September 27, 2011. Photographs of excavation operations are presented in Figure 2. The excavation activities began with the removal of overlying pavement to expose the areas

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<sup>1</sup> SFRWQCB ESLs, 2008: Table A-1 – Shallow Soil Screening Levels for Residential Land Use where Groundwater is a Potential Drinking Water Source.

designated for remediation. The recycled aggregate base material was removed from Areas #2 and #5, exposing soil materials within the excavation sidewalls. Underlying base materials consisted of both clayey soil and pea gravel.

Once the recycled aggregate base material was removed, sidewalls and base materials were observed for soil staining, discoloration, and/or odors that would be indicative of petroleum hydrocarbon impacts. The excavations were screened using a photoionization detector (PID). Following excavation, confirmation samples were collected from the sidewalls of each excavation. Additionally, as described below, samples were also collected from the base of the completed excavation in Area #5. Samples were collected from base materials suspected of exhibiting impact from Area #2. These base materials were subsequently excavated and transported to an appropriate disposal facility. Excavated recycled aggregate base material was transported and returned to Vulcan Materials in Pleasanton, California. Excess soil materials that were suspected of exhibiting environmental impact were stockpiled and characterized for disposal purposes.

Confirmation samples were collected directly from excavation bases and sidewalls or from a representative bulk sample excavated from the desired base or sidewall location. Samples were collected in clean stainless steel sample sleeves. The sample sleeves were sealed using Teflon® sheets secured by tight-fitting plastic end caps. Upon collection of samples, a sample label was placed on the sample and included a unique sample number, sample location, time/date collected, lab analysis and the sampler's identification. The soil samples were placed in an ice-cooled chest and submitted under documented chain-of-custody to TestAmerica Laboratories, Inc. in Pleasanton, California. The submitted soil samples were analyzed for the following target analytes:

- Total petroleum hydrocarbons as gasoline (TPH-g) and Volatile Organic Compounds by EPA Method 8260B.
- Total petroleum hydrocarbons as diesel (TPH-d) and motor oil (TPH-mo) by EPA Method 8015B with silica gel cleanup.
- LUFT metals by EPA Method 6010B (off-haul stockpile samples only).

The specific soil excavation activities for each “area of concern” are summarized as follows (Figure 3). The complete laboratory reports are presented in Appendix A.

Area #2 – Diesel UST removed in 2011. Excavation activities were performed in this area between September 22 and 23, 2011. The original Area #2 excavation area (which had been excavated in July and August 2011) was extended in all directions. Approximately 215 cubic yards (in addition to the 35 cubic yards removed during initial excavation activities) were excavated. The final excavation extended across a length of 44 feet and a width of 17 feet. During excavation, soil vapor well SG-6 as well as adjacent soils were removed.

The initial excavation extended to a depth between 4.5 and 6 feet below the ground surface, which resulted in the removal of the recycled aggregate base material. Upon removal, the excavation sidewalls and base were observed for staining and odors. Although neither the

sidewalls nor the base materials exhibited evidence of impact, the PID screening of base materials indicated the potential presence of elevated COCs. Three samples of the base material were collected and submitted for laboratory analysis. As presented in Table 2, these samples exhibited TPH concentrations in excess of respective cleanup goals. These base materials were subsequently excavated and stockpiled for transport and disposal at an appropriate waste facility.

**TABLE 2**  
 Area #2 – Preliminary Base Soil Samples

Sample	Type	TPH-g µg/kg	TPH-d mg/kg	TPH-mo mg/kg	MBTEX and Other VOCs µg/kg
BA-4.5'	Base	670	200	ND<99	ND
BB-4.5'	Base	ND<240	290	1000	ND
BC-6'	Base	ND<250	180	220	ND

These impacted base materials were excavated, resulting in a new approximate excavation depth of 9 feet below the ground surface. This depth corresponded to the confirmation sampling depth (9.3 feet) performed in January 2011 at the time of UST removal. Following the additional excavation, the excavation sidewalls and base were observed for staining and odors. Neither the sidewalls nor the base materials exhibited evidence of impact. PID screening of sidewall and base materials did not identify the potential presence of COCs. A total of eight sidewall samples (one sample each from the west and east sidewalls, and three samples each from the north and south sidewalls, respectively) were collected from the locations shown on Figure 3. The sidewall samples were collected from a depth of 6 feet below the ground surface, corresponding to a depth of two-thirds of the corresponding sidewall height. Because the confirmation samples collected from the base of the excavation in January 2011 did not exhibit detectable concentrations of target analytes, additional base sampling was not performed.

A summary of the laboratory analysis of the confirmation samples is presented in Table 3 below. As presented in the table, none of the samples exhibited detectable concentrations of target analytes. The laboratory report is presented in its entirety in Appendix A.

**TABLE 3**  
 Area #2 – Confirmation Soil Samples

Sample	Type	TPH-g µg/kg	TPH-d mg/kg	TPH-mo mg/kg	MBTEX and Other VOCs µg/kg
SWW-6'	Sidewall	ND<250	ND<0.98	ND<49	ND
SWSA-6'	Sidewall	ND<240	ND<1	ND<50	ND
SWSB-6'	Sidewall	ND<240	ND<0.99	ND<49	ND
SWSC-6'	Sidewall	ND<250	ND<0.99	ND<49	ND
SWE-6'	Sidewall	ND<240	ND<1	ND<50	ND
SWNA-6'	Sidewall	ND<240	ND<1	ND<50	ND
SWNB-6'	Sidewall	ND<230	ND<0.99	ND<49	ND
SWNC-6'	Sidewall	ND<250	ND<0.99	ND<50	ND

Area #5 – Gasoline USTs removed in 2011. Excavation activities were performed in this area between September 26 and 27, 2011. As with Area #2, the original Area #5 excavation area (which had been excavated in July and August 2011) was extended in all directions. The final excavation extended across a length of 30 feet and a width of 30 feet. Approximately 155 cubic yards (in addition to the 45 cubic yards removed during initial excavation activities) were excavated. During excavation, soil vapor well SG-1 as well as adjacent native and backfill soils were removed.

The excavation extended to an approximate depth of 6 feet below the ground surface, which resulted in the removal of the recycled aggregate base material. Upon removal, the excavation sidewalls and base were observed for staining and odors. Neither the sidewalls nor the base materials exhibited evidence of impact. PID screening of sidewall and base materials did not identify the potential presence of COCs.

Sidewall confirmation samples were collected from the excavation. Because the excavation did not extend to the depth of base confirmation sampling (9.3 feet) completed at the time of tank removal, base confirmation samples were also collected from the excavation. A total of eight sidewall samples (two from each sidewall) and four base samples were collected from the locations shown on Figure 3. The sidewall samples were collected from a depth of 4 feet below the ground surface, corresponding to a depth of two-thirds of the corresponding sidewall height.

A summary of the laboratory analysis of the confirmation samples is presented in Table 4 below. As presented in the table, several samples exhibited detectable TPH-d concentrations below the respective cleanup goal. None of the other target analytes were detected within the confirmation samples. The laboratory report is presented in its entirety in Appendix A.

**TABLE 4**  
 Area #5 – Confirmation Soil Samples

Sample	Type	TPH-g µg/kg	TPH-d mg/kg	TPH-mo mg/kg	MBTEX and Other VOCs µg/kg
PIT 1-B-SW	Base	ND<230	4.6	ND<49	ND
PIT 1-B-NW	Base	ND<230	4.7	ND<49	ND
PIT 1-B-NE	Base	ND<220	11	ND<50	ND
PIT 1-B-SE	Base	ND<240	6.2	ND<49	ND
PIT 1-SW-E1	Sidewall	ND<250	1.1	ND<50	ND
PIT 1-SW-E2	Sidewall	ND<230	3.1	ND<50	ND
PIT 1-SW-N1	Sidewall	ND<240	ND<1	ND<50	ND
PIT 1-SW-N2	Sidewall	ND<210	ND<0.99	ND<50	ND
PIT 1-SW-S1	Sidewall	ND<240	ND<0.99	ND<49	ND
PIT 1-SW-S2	Sidewall	ND<250	ND<0.99	ND<49	ND
PIT 1-SW-W1	Sidewall	ND<240	ND<0.99	ND<49	ND
PIT 1-SW-W2	Sidewall	ND<240	ND<0.98	ND<49	ND

## STOCKPILE SOILS AND BASE MATERIALS

Approximately 600 cubic yards of stockpiled soil are located at the western portion of the Site. Although not required by ACEH, additional soil samples were collected and analyzed for the presence of COCs at the request of the project developer. Six soil samples were recovered from the stockpile footprints using glass jars from randomly selected locations of the stockpile as shown in Figure 4. Because of the jar size, two samples were collected from each location but were analyzed as one composite sample. The sample jars were sealed with a tight-fitting lid. Upon collection of samples, a sample label was placed on the sample and included a unique sample number, sample location, time/date collected, lab analysis and the sampler's identification. The soil samples were placed in an ice-cooled chest and submitted under documented chain-of-custody to TestAmerica Laboratories, Inc. in Pleasanton, California. The submitted soil samples were analyzed for the following target analytes:

- Total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, methylbenzene, and xylene(s) (BTEX) (EPA 8260B).
- Total petroleum hydrocarbons as diesel and motor oil using silica gel cleanup (EPA 8015B).

**TABLE 5**  
 On-Site Stockpile Analysis Summary

Sample	TPH-g µg/kg	TPH-d mg/kg	TPH-mo mg/kg	BTEX µg/kg
2-SP1-A,B COMPOSITE	ND<250	1.3	ND<50	ND
2-SP2-A,B COMPOSITE	ND<240	1.6	ND<50	ND
2-SP3-A,B COMPOSITE	ND<240	ND<0.99	ND<49	ND
2-SP4-A,B COMPOSITE	ND<240	9.3	ND<49	ND
2-SP5-A,B COMPOSITE	ND<250	3.2	ND<49	ND
2-SP6-A,B COMPOSITE	ND<240	ND<0.99	ND<50	ND

As presented in Table 5, four of the six samples exhibited detectable TPH-d concentrations, but these were below the respective cleanup goal. None of the other target analytes were detected within the confirmation samples. The laboratory report is presented in its entirety in Appendix A.

Prior to the removal of the stockpiled soils, the underlying base soils were sampled to determine if these underlying soils had been impacted during the residence of the soil stockpiles. A shovel was used to remove overlying stockpiled soils and expose the underlying base soil in each sample location. Samples were collected in clean stainless steel sample sleeves. The sample sleeves were sealed using Teflon® sheets secured by tight-fitting plastic end caps. Upon collection of samples, a sample label was placed on the sample and included a unique sample number, sample location, time/date collected, lab analysis and the sampler's identification. The soil samples were placed in an ice-cooled chest and submitted under documented chain-of-custody to TestAmerica Laboratories, Inc. in Pleasanton, California. The submitted soil samples were analyzed for the following target analytes:



- Total petroleum hydrocarbons as gasoline (TPH-g), methyl-tert butyl ether (MTBE), benzene, toluene, ethylbenzene, and xylene(s) (BTEX) and fuel oxygenates (EPA 8260B).
- Total petroleum hydrocarbons as diesel and motor oil using silica gel cleanup (EPA 8015B).
- CAM-17 metals (EPA Methods 6010B and 7471).

A summary of the laboratory analysis of the base soil samples is presented in Tables 6A and 6B below. As presented in the table, seven of the eight samples exhibited detectable TPH-d concentrations below the respective cleanup goal. None of the samples exhibited detectable concentrations TPH-g, TPH-d, TPH-mo, BTEX, or fuel oxygenates. Detected metallic analytes were within typical background concentrations. Sample 2-SPB-6 exhibited a TPH-d concentration of 85 mg/kg, in excess of the cleanup goal of 83 mg/kg. As a result, approximately two cubic yards were excavated from the area of base soil from which Sample 2-SPB-6 had been collected. Following this soil removal, an additional sample, SP2-BASE-6, was collected from the base of the removal area. This sample exhibited a TPH-d concentration of 4 mg/kg, below the respective cleanup goal. Not other VOC or petroleum-related analytes were detected, indicating that the remaining base soils did not exhibit environmental impact. Detected metallic analytes were within typical background concentrations. The laboratory report is presented in its entirety in Appendix A.

**TABLE 6A**  
 Stockpile Base Soil Analysis Summary

Sample	TPH-g µg/kg	TPH-d mg/kg	TPH-mo mg/kg	BTEX and Oxygenates µg/kg
2-SPB-1	ND<250	1.7	ND<49	ND
2-SPB-2	ND<230	3.8	ND<50	ND
2-SPB-3	ND<250	3.9	ND<49	ND
2-SPB-4	ND<240	1.0	ND<49	ND
2-SPB-5	ND<250	3.8	ND<49	ND
2-SPB-6	ND<250	85	200	ND
2-SPB-7	ND<240	3.9	ND<50	ND
2-SPB-8	ND<240	2.8	ND<50	ND
SP2-BASE-6	ND<240	4.0	ND<50	ND

**TABLE 6B**  
 Stockpile Base Soil Analysis Summary

Analyte	2-SPB-1	2-SPB-2	2-SPB-3	2-SPB-4	2-SPB-5	2-SPB-6	2-SPB-7	2-SPB-8	SP2-BASE-6
Antimony	ND<1.9	ND<1.7	ND<1.7	ND<2.0	ND<1.7	ND<1.9	ND<1.9	ND<2.0	ND<1.8
Arsenic	5.1	4.4	4.0	4.4	4.0	5.3	5.5	5.1	4.4
Barium	250	210	180	210	180	280	250	240	160
Beryllium	ND<0.39	ND<0.33	ND<0.34	ND<0.33	ND<0.34	ND<0.40	0.43	ND<0.40	ND<0.37
Cadmium	ND<0.49	ND<0.42	ND<0.42	ND<0.42	ND<0.42	ND<0.48	ND<0.47	ND<0.50	ND<0.46
Chromium	29	26	25	26	25	28	32	34	25
Cobalt	9.9	8.7	9.0	8.7	9.0	10	15	13	11

Analyte	2-SPB-1	2-SPB-2	2-SPB-3	2-SPB-4	2-SPB-5	2-SPB-6	2-SPB-7	2-SPB-8	SP2-BASE-6
Copper	21	19	22	19	22	36	29	30	14
Lead	5.9	6.1	6.2	6.1	6.2	25	12	21	10
Mercury	0.029	0.026	0.043	0.042	0.040	0.11	0.038	0.064	0.067
Molybdenum	ND<1.9	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.9	ND<1.9	ND<2.0	ND<1.8
Nickel	33	29	32	29	32	28	36	39	30
Selenium	ND<3.9	ND<3.3	ND<3.4	ND<3.3	ND<3.4	ND<3.8	ND<3.7	ND<4.0	ND<3.7
Silver	ND<0.97	ND<0.83	ND<0.85	ND<0.83	ND<0.85	ND<0.95	ND<0.93	ND<0.99	ND<0.92
Thallium	ND<1.9	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.9	ND<1.9	ND<2.0	ND<1.8
Vanadium	43	39	37	39	37	48	48	45	ND<33
Zinc	40	36	39	36	39	65	100	60	ND<41

## BACKFILL OPERATIONS

Backfill operations commenced on September 20, 2011. Backfill material was derived from two sources – imported drain rock and on-site stockpiled soil material.

Because groundwater had been exposed within excavation Areas #1 and #3, imported, clean drain rock was placed within these excavations. This material was placed in a lift measuring approximately 3 feet in thickness. A description of the drain rock material is presented in Appendix B.

Fabric material was placed over the drain rock material within Areas #1 and #3. It was also placed over exposed base material within Areas #2, #4 and #5. On-site stockpiled soil that had been previously tested and determined to exhibit non-detectable COC concentrations or concentrations below cleanup goals was also used as fill material. As stockpiled soil was transported and placed, ENGEEO environmental personnel provided full-time screening using a PID as well as observation for evidence of impact, such as discoloration, staining or odor. None of the soil material exhibited evidence of impact. The soil was placed on top of the fabric and brought to the ground surface. Photographs of backfill operations are presented in Figure 2.

## DISCUSSION

Suspected and/or confirmed soil impacts within Areas #2 and #5 have been remediated through the described excavation activities. Confirmation sampling has confirmed that remaining soils exhibit non-detectable COC concentrations or concentrations below the cleanup goals. The resulting excavations have been backfilled with on-site fill material exhibiting non-detectable COC concentrations or COC concentrations below respective cleanup goals. Backfill operations utilizing these on-site materials were observed on a full-time basis by ENGEEO environmental personnel. No evidence of COC impact was observed within these materials during backfill activities. Additionally, clean drain rock materials were placed as backfill at the exposed groundwater table within Areas #1 and #3.




Upon excavation, recycled class II aggregate base material was returned to its point of origin, Vulcan Materials in Pleasanton, California. Additional materials removed from Area #2 that were deemed to exhibit COC concentrations in excess of cleanup goals were transported and disposed of at an off-site disposal facility.

Following the removal of impacted soils from the excavation areas resulting from historic releases at the Site, the results of confirmation sampling indicate that in-place soils do not contain detectable COCs or COCs at concentrations that would pose a threat to the environment or future land users. Therefore, we request that case closure and a No Further Action (NFA) determination for unrestricted land use be issued for the Site.


If you have any questions regarding this report, please do not hesitate to contact us.

Sincerely,

ENGEO Incorporated

  
Jeffrey A. Adams, PhD, PE, REA I



  
Shawn Munger, CHG, REAII

Attachments: List of Selected References  
Figures  
Appendix A – Laboratory Analysis Reports  
Appendix B – Drain Rock Certification and Commentary

cc: 1 - Mr. Scott Menard, Arbor Development Group (e-mail only)

## SELECTED REFERENCES

Alameda County Environmental Health Services; Conditional Work Plan Approval for Fuel Leak Case No. RO0003073 and GeoTracker Global ID T10000002919, Geno Country Store, 1000 North Vasco Road, Livermore, CA 94551, April 4, 2011.

Alameda County Environmental Health Services; Review of Site Characterization Report for Fuel Leak Case No. RO0003073 and GeoTracker Global ID T10000002919, Geno Country Store, 1000 North Vasco Road, Livermore, CA 94551, July 7, 2011.

Alameda County Environmental Health Services; Conditional Approval of Interim Removal Action Work Plan for Fuel Leak Case No. RO0003073 and GeoTracker Global ID T10000002919, Geno Country Store, 1000 North Vasco Road, Livermore, CA 94551, August 2, 2011.

Alameda County Environmental Health Services; Review of Case File for Fuel Leak Case No. RO0003073 and GeoTracker Global ID T10000002919, Geno Country Store, 1000 North Vasco Road, Livermore, CA 94551, September 9, 2011.

ENGEO; Modified Phase One Environmental Site Assessment, 1000 North Vasco Road, Livermore, California; October 27, 2006, Project No. 7380.1.001.02.

ENGEO; Supplemental Environmental Services, Shell Gas Station, 1000 North Vasco Road, Livermore, California; June 20, 2007, Project No. 7380.1.002.04.

ENGEO; Geotechnical Exploration, Macedo Property, 1000 North Vasco Road, Livermore, California; October 21, 2011, Project No. 7380.000.000.

ENGEO; Phase I Environmental Site Assessment Update, Macedo Property, 1000 North Vasco Road, Livermore, California; March 18, 2011, Project No. 7380.000.002.

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October 3, 2011

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Environmental Service, Tank Removal Closure Report, 1000 N. Vasco Road, Livermore, California, August 25, 2011, Project No. 2010-35.

Helley, E. J and Graymer, R.W., 1997, Quaternary Geology of Alameda County and Parts of Contra Costa, Santa Clara, San Mateo, San Francisco, Stanislaus, and San Joaquin Counties, California; USGS, Open File Report OF-97-97.

Krazan and Associates, Phase I Environmental Site Assessment, BOTW No. 09-510-02, Geno's Country Store, 1000 North Vasco Road, Livermore, California; April 3, 2009; Project No. 013-09074.

Krazan and Associates, Phase II Environmental Site Assessment, BOTW No. 09-510-02, Geno's Country Store, 1000 North Vasco Road, Livermore, California; September 28, 2009; Project No. 013-09074.

**FIGURES**

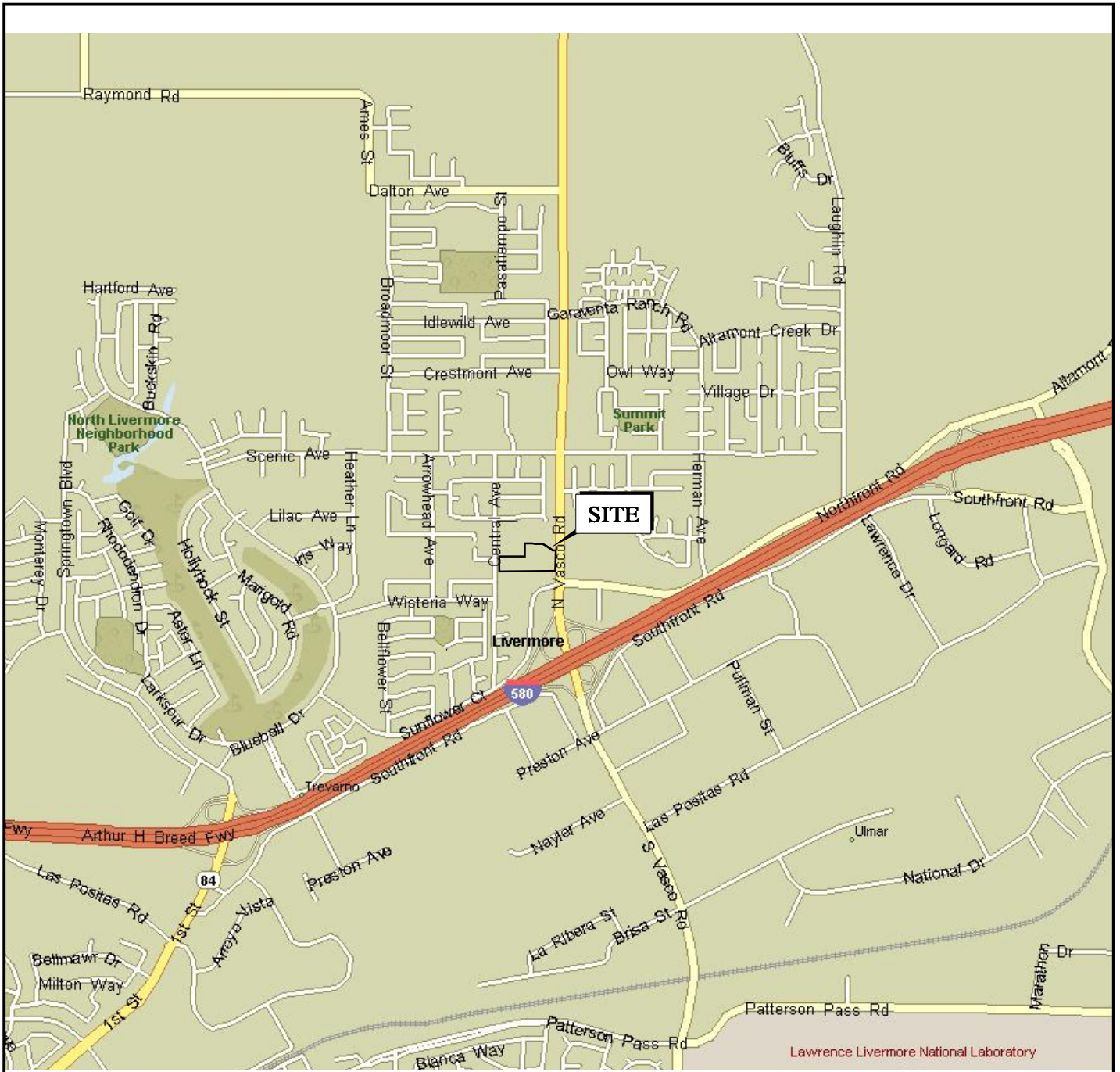
Figure 1 – Vicinity Map

Figure 2 – Site Photographs

Figure 3 – Excavation Areas 2 and 5

Figure 4 – Stockpile Base Sampling Locations

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BASE MAP SOURCE: MS STREETS AND TRIPS



VICINITY MAP  
 1000 NORTH VASCO ROAD  
 LIVERMORE, CALIFORNIA

PROJECT NO.: 7380.000.003

SCALE: AS SHOWN

DRAWN BY: DLB

CHECKED BY: SPM

FIGURE NO.

1





VIEW OF AREA #5 EXCAVATION



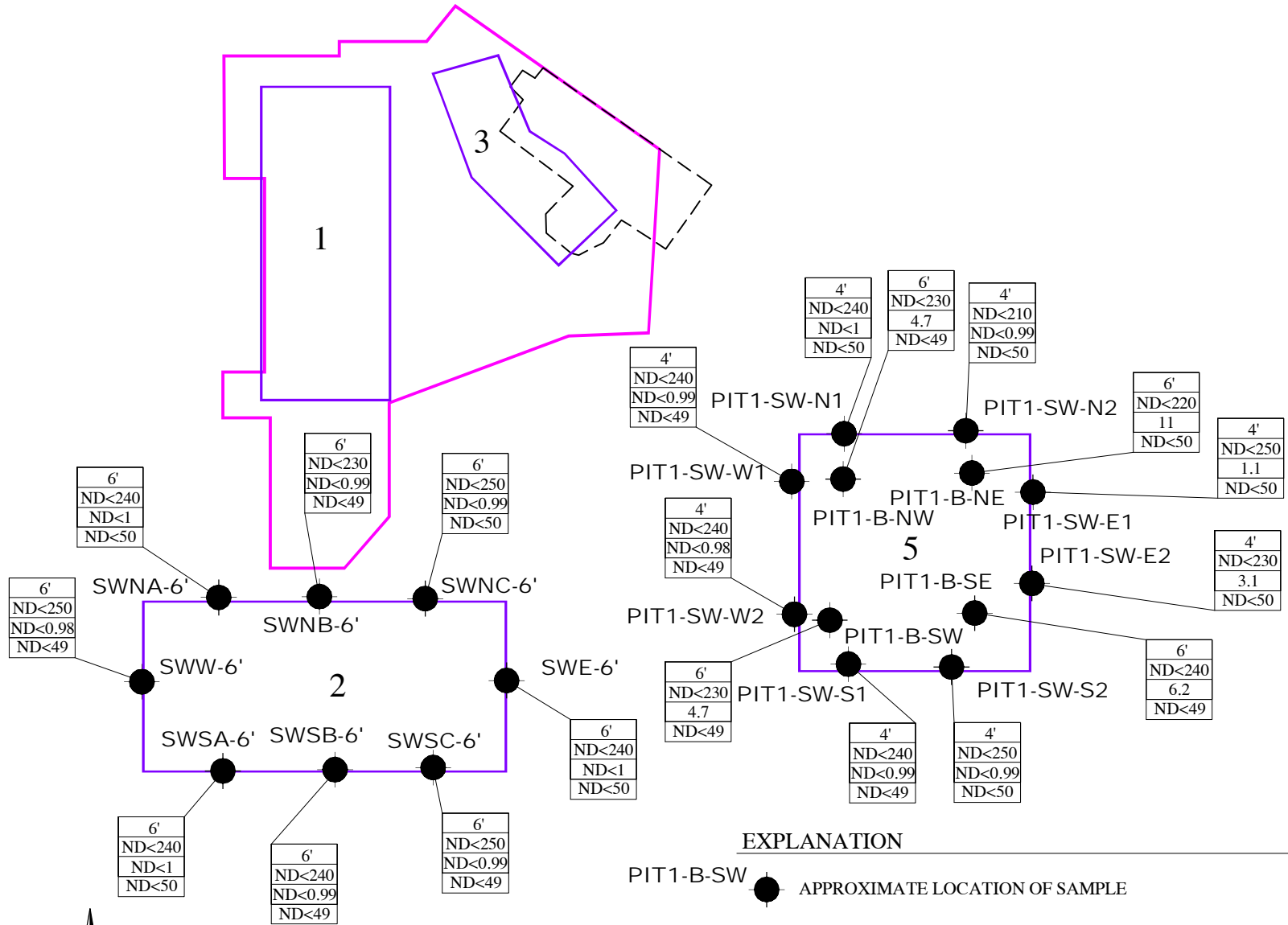
VIEW OF AREA #3 EXCAVATION



VIEW OF AREA #2 EXCAVATION

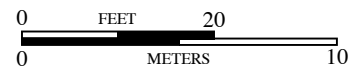


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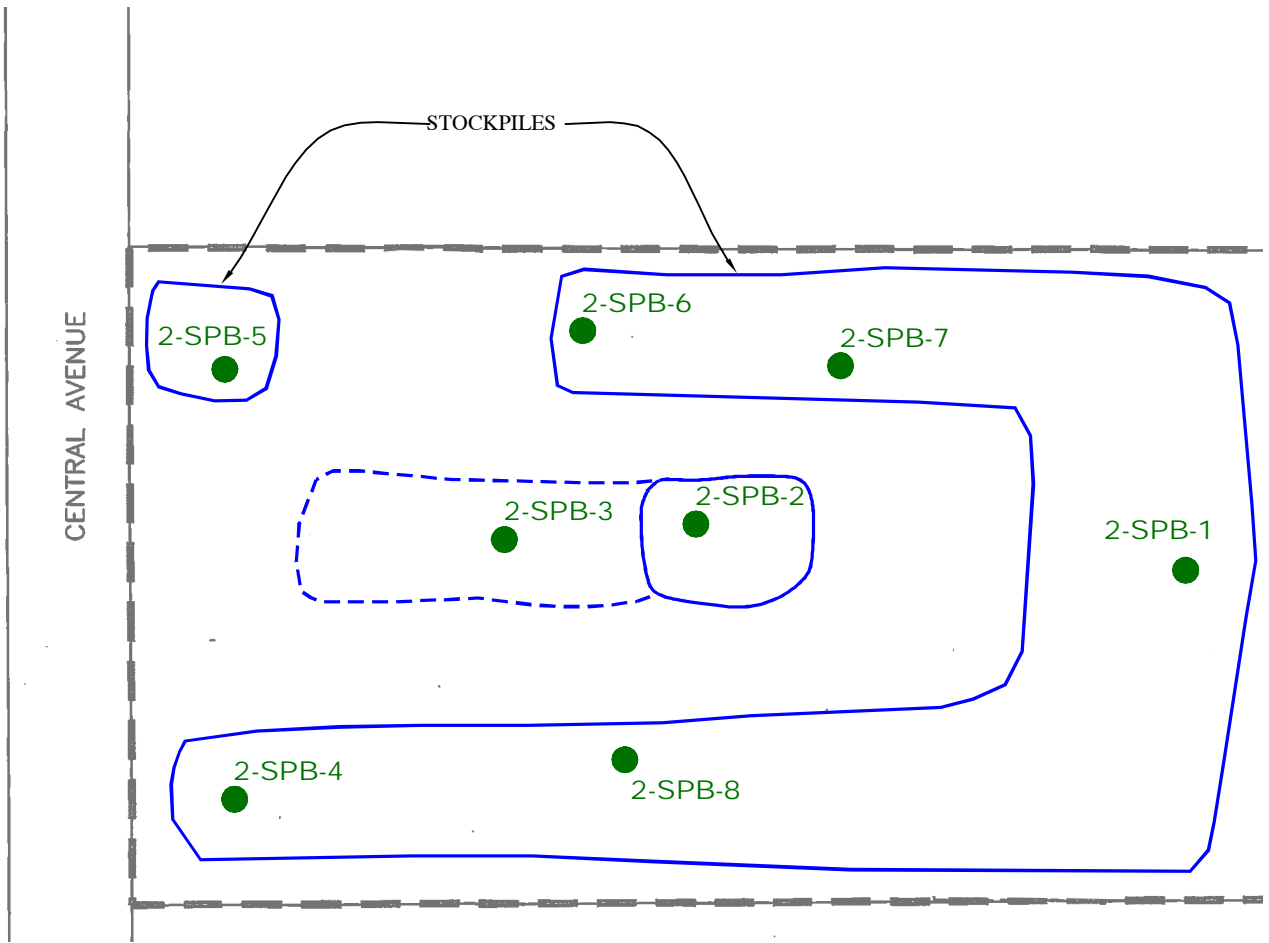
**EXPLANATION**

- PIT1-B-SW ● APPROXIMATE LOCATION OF SAMPLE
- 6' SAMPLE DEPTH
- ND<230 TPHg - TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (µg/L)
- 4.7 TPHd - TOTAL PETROLEUM HYDROCARBONS AS DIESEL (mg/L)
- ND<49 TPHmo - TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL (mg/L)



	<b>EXCAVATION AREAS 2 AND 5</b> 1000 NORTH VASCO ROAD LIVERMORE, CALIFORNIA		<b>PROJECT NO.:</b> 7380.000.003	<b>FIGURE NO.</b> <span style="font-size: 2em; font-weight: bold;">3</span>
			<b>SCALE:</b> AS SHOWN	
		<b>DRAWN BY:</b> SRP	<b>CHECKED BY:</b> BB	

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**EXPLANATION**

2-SPB-8 ● APPROXIMATE LOCATION OF STOCKPILE BASE SAMPLE



**STOCKPILE BASE SAMPLING LOCATIONS**  
 1000 NORTH VASCO ROAD  
 LIVERMORE, CALIFORNIA

PROJECT NO.: 7380.000.003

SCALE: AS SHOWN

DRAWN BY: SRP

CHECKED BY: BB

FIGURE NO.

4

**APPENDIX A**

Laboratory Analysis Reports

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 720-37634-1  
Client Project/Site: Macedo Property

For:  
Engeo, Inc.  
580 N Wilma Avenue  
Suite A  
Ripon, California 95366-9502

Attn: Mr. Richard Gandolfo



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Authorized for release by:  
09/27/2011 04:43:08 PM

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Project Manager I  
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# Definitions/Glossary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

## Qualifiers

### GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.

## 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
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
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: Macedo Property

TestAmerica Job ID: 720-37634-1

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**Job ID: 720-37634-1**

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**Laboratory: TestAmerica San Francisco**

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**Narrative**

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**Job Narrative**  
720-37634-1

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

No analytical or quality issues were noted.

**GC VOA**

No analytical or quality issues were noted.

**GC Semi VOA**

Method(s) 8015B: The method blank for preparation batch 99584 contained C10-C28 above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No other analytical or quality issues were noted.

**Organic Prep**

No analytical or quality issues were noted.



# Detection Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

**Client Sample ID: SWW-6'**

**Lab Sample ID: 720-37634-1**

No Detections

**Client Sample ID: SWSA-6'**

**Lab Sample ID: 720-37634-2**

No Detections

**Client Sample ID: SWSB-6'**

**Lab Sample ID: 720-37634-3**

No Detections

**Client Sample ID: SWSC-6'**

**Lab Sample ID: 720-37634-4**

No Detections

**Client Sample ID: SWE-6'**

**Lab Sample ID: 720-37634-5**

No Detections

**Client Sample ID: SWNA-6'**

**Lab Sample ID: 720-37634-6**

No Detections

**Client Sample ID: SWNB-6'**

**Lab Sample ID: 720-37634-7**

No Detections

**Client Sample ID: SWNC-6'**

**Lab Sample ID: 720-37634-8**

No Detections

- 1
- 2
- 3
- 4
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- 9
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# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWW-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Acetone	ND		50		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Benzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Dichlorobromomethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Bromobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Chlorobromomethane	ND		20		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Bromoform	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Bromomethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
2-Butanone (MEK)	ND		50		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
n-Butylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
sec-Butylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
tert-Butylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Carbon disulfide	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Carbon tetrachloride	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Chlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Chloroethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Chloroform	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Chloromethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
2-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
4-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Chlorodibromomethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,3-Dichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,1-Dichloropropene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Ethylene Dibromide	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Dibromomethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Dichlorodifluoromethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,1-Dichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,2-Dichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,1-Dichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Ethylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Hexachlorobutadiene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
2-Hexanone	ND		50		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Isopropylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
4-Isopropyltoluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Methylene Chloride	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Naphthalene	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
N-Propylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Styrene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWW-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Tetrachloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Toluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Trichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Trichlorofluoromethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Vinyl acetate	ND		50		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Vinyl chloride	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Xylenes, Total	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
2,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/23/11 15:00	09/23/11 15:25	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		45 - 131				09/23/11 15:00	09/23/11 15:25	1
1,2-Dichloroethane-d4 (Surr)	93		60 - 140				09/23/11 15:00	09/23/11 15:25	1
Toluene-d8 (Surr)	102		58 - 140				09/23/11 15:00	09/23/11 15:25	1

**Client Sample ID: SWSA-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-2**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Acetone	ND		49		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Benzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Dichlorobromomethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Bromobenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Chlorobromomethane	ND		20		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Bromoform	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Bromomethane	ND		9.8		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
2-Butanone (MEK)	ND		49		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
n-Butylbenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
sec-Butylbenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
tert-Butylbenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Carbon disulfide	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Carbon tetrachloride	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Chlorobenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Chloroethane	ND		9.8		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Chloroform	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Chloromethane	ND		9.8		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
2-Chlorotoluene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
4-Chlorotoluene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWSA-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-2**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorodibromomethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,3-Dichloropropane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,1-Dichloropropene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,2-Dibromo-3-Chloropropane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Ethylene Dibromide	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Dibromomethane	ND		9.8		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Dichlorodifluoromethane	ND		9.8		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,1-Dichloroethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,2-Dichloroethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,1-Dichloroethene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,2-Dichloropropane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Ethylbenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Hexachlorobutadiene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
2-Hexanone	ND		49		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Isopropylbenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
4-Isopropyltoluene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Methylene Chloride	ND		9.8		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
4-Methyl-2-pentanone (MIBK)	ND		49		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Naphthalene	ND		9.8		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
N-Propylbenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Styrene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Tetrachloroethene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Toluene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,2,3-Trichlorobenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Trichloroethene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Trichlorofluoromethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Vinyl acetate	ND		49		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Vinyl chloride	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Xylenes, Total	ND		9.8		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
2,2-Dichloropropane	ND		4.9		ug/Kg		09/23/11 15:00	09/23/11 15:54	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/23/11 15:00	09/23/11 15:54	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	105		45 - 131	09/23/11 15:00	09/23/11 15:54	1
1,2-Dichloroethane-d4 (Surr)	95		60 - 140	09/23/11 15:00	09/23/11 15:54	1
Toluene-d8 (Surr)	103		58 - 140	09/23/11 15:00	09/23/11 15:54	1

**Client Sample ID: SWSB-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-3**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Acetone	ND		48		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Benzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Dichlorobromomethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Bromobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Chlorobromomethane	ND		19		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Bromoform	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Bromomethane	ND		9.7		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
2-Butanone (MEK)	ND		48		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
n-Butylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
sec-Butylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
tert-Butylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Carbon disulfide	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Carbon tetrachloride	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Chlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Chloroethane	ND		9.7		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Chloroform	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Chloromethane	ND		9.7		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
2-Chlorotoluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
4-Chlorotoluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Chlorodibromomethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,2-Dichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,3-Dichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,4-Dichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,3-Dichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,1-Dichloropropene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,2-Dibromo-3-Chloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Ethylene Dibromide	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Dibromomethane	ND		9.7		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Dichlorodifluoromethane	ND		9.7		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,1-Dichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,2-Dichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,1-Dichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
cis-1,2-Dichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
trans-1,2-Dichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,2-Dichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
cis-1,3-Dichloropropene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
trans-1,3-Dichloropropene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Ethylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Hexachlorobutadiene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
2-Hexanone	ND		48		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Isopropylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
4-Isopropyltoluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Methylene Chloride	ND		9.7		ug/Kg		09/23/11 15:00	09/23/11 16:23	1



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWSB-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-3**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		48		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Naphthalene	ND		9.7		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
N-Propylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Styrene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,1,1,2-Tetrachloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,1,2,2-Tetrachloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Tetrachloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Toluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,2,3-Trichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,2,4-Trichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,1,1-Trichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,1,2-Trichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Trichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Trichlorofluoromethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,2,3-Trichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,2,4-Trimethylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
1,3,5-Trimethylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Vinyl acetate	ND		48		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Vinyl chloride	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Xylenes, Total	ND		9.7		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
2,2-Dichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/23/11 15:00	09/23/11 16:23	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	103		45 - 131				09/23/11 15:00	09/23/11 16:23	1
1,2-Dichloroethane-d4 (Surr)	95		60 - 140				09/23/11 15:00	09/23/11 16:23	1
Toluene-d8 (Surr)	102		58 - 140				09/23/11 15:00	09/23/11 16:23	1

**Client Sample ID: SWSC-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-4**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Acetone	ND		50		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Benzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Dichlorobromomethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Bromobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Chlorobromomethane	ND		20		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Bromoform	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Bromomethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
2-Butanone (MEK)	ND		50		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
n-Butylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
sec-Butylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
tert-Butylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Carbon disulfide	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Carbon tetrachloride	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Chlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWSC-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-4**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Chloroform	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Chloromethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
2-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
4-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Chlorodibromomethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,3-Dichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,1-Dichloropropene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Ethylene Dibromide	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Dibromomethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Dichlorodifluoromethane	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,1-Dichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,2-Dichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,1-Dichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Ethylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Hexachlorobutadiene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
2-Hexanone	ND		50		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Isopropylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
4-Isopropyltoluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Methylene Chloride	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Naphthalene	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
N-Propylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Styrene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Tetrachloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Toluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Trichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Trichlorofluoromethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Vinyl acetate	ND		50		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Vinyl chloride	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWSC-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-4**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		9.9		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
2,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/23/11 15:00	09/23/11 16:52	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		45 - 131				09/23/11 15:00	09/23/11 16:52	1
1,2-Dichloroethane-d4 (Surr)	98		60 - 140				09/23/11 15:00	09/23/11 16:52	1
Toluene-d8 (Surr)	103		58 - 140				09/23/11 15:00	09/23/11 16:52	1

**Client Sample ID: SWE-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-5**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Acetone	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Benzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Dichlorobromomethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Bromobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Chlorobromomethane	ND		19		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Bromoform	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Bromomethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
2-Butanone (MEK)	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
n-Butylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
sec-Butylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
tert-Butylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Carbon disulfide	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Carbon tetrachloride	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Chlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Chloroethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Chloroform	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Chloromethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
2-Chlorotoluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
4-Chlorotoluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Chlorodibromomethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,2-Dichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,3-Dichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,4-Dichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,3-Dichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,1-Dichloropropene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,2-Dibromo-3-Chloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Ethylene Dibromide	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Dibromomethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Dichlorodifluoromethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,1-Dichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,2-Dichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,1-Dichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
cis-1,2-Dichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
trans-1,2-Dichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWE-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-5**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
cis-1,3-Dichloropropene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
trans-1,3-Dichloropropene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Ethylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Hexachlorobutadiene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
2-Hexanone	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Isopropylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
4-Isopropyltoluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Methylene Chloride	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
4-Methyl-2-pentanone (MIBK)	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Naphthalene	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
N-Propylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Styrene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,1,1,2-Tetrachloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,1,2,2-Tetrachloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Tetrachloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Toluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,2,3-Trichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,2,4-Trichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,1,1-Trichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,1,2-Trichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Trichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Trichlorofluoromethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,2,3-Trichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,2,4-Trimethylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
1,3,5-Trimethylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Vinyl acetate	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Vinyl chloride	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Xylenes, Total	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
2,2-Dichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:20	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/23/11 15:00	09/23/11 17:20	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		45 - 131	09/23/11 15:00	09/23/11 17:20	1
1,2-Dichloroethane-d4 (Surr)	96		60 - 140	09/23/11 15:00	09/23/11 17:20	1
Toluene-d8 (Surr)	103		58 - 140	09/23/11 15:00	09/23/11 17:20	1

**Client Sample ID: SWNA-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-6**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Acetone	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Benzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Dichlorobromomethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Bromobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Chlorobromomethane	ND		19		ug/Kg		09/23/11 15:00	09/23/11 17:49	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWNA-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-6**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Bromomethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
2-Butanone (MEK)	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
n-Butylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
sec-Butylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
tert-Butylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Carbon disulfide	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Carbon tetrachloride	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Chlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Chloroethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Chloroform	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Chloromethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
2-Chlorotoluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
4-Chlorotoluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Chlorodibromomethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,2-Dichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,3-Dichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,4-Dichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,3-Dichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,1-Dichloropropene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,2-Dibromo-3-Chloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Ethylene Dibromide	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Dibromomethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Dichlorodifluoromethane	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,1-Dichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,2-Dichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,1-Dichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
cis-1,2-Dichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
trans-1,2-Dichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,2-Dichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
cis-1,3-Dichloropropene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
trans-1,3-Dichloropropene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Ethylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Hexachlorobutadiene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
2-Hexanone	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Isopropylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
4-Isopropyltoluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Methylene Chloride	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
4-Methyl-2-pentanone (MIBK)	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Naphthalene	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
N-Propylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Styrene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,1,1,2-Tetrachloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,1,2,2-Tetrachloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Tetrachloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Toluene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,2,3-Trichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,2,4-Trichlorobenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,1,1-Trichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWNA-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-6**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Trichloroethene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Trichlorofluoromethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,2,3-Trichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,2,4-Trimethylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
1,3,5-Trimethylbenzene	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Vinyl acetate	ND		48		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Vinyl chloride	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Xylenes, Total	ND		9.6		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
2,2-Dichloropropane	ND		4.8		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/23/11 15:00	09/23/11 17:49	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	104		45 - 131				09/23/11 15:00	09/23/11 17:49	1
1,2-Dichloroethane-d4 (Surr)	101		60 - 140				09/23/11 15:00	09/23/11 17:49	1
Toluene-d8 (Surr)	102		58 - 140				09/23/11 15:00	09/23/11 17:49	1

**Client Sample ID: SWNB-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-7**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Acetone	ND		47		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Benzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Dichlorobromomethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Bromobenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Chlorobromomethane	ND		19		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Bromoform	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Bromomethane	ND		9.3		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
2-Butanone (MEK)	ND		47		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
n-Butylbenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
sec-Butylbenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
tert-Butylbenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Carbon disulfide	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Carbon tetrachloride	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Chlorobenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Chloroethane	ND		9.3		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Chloroform	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Chloromethane	ND		9.3		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
2-Chlorotoluene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
4-Chlorotoluene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Chlorodibromomethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,3-Dichloropropane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,1-Dichloropropene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWNB-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-7**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Ethylene Dibromide	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Dibromomethane	ND		9.3		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Dichlorodifluoromethane	ND		9.3		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,1-Dichloroethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,2-Dichloroethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,1-Dichloroethene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,2-Dichloropropane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Ethylbenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Hexachlorobutadiene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
2-Hexanone	ND		47		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Isopropylbenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
4-Isopropyltoluene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Methylene Chloride	ND		9.3		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
4-Methyl-2-pentanone (MIBK)	ND		47		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Naphthalene	ND		9.3		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
N-Propylbenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Styrene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Tetrachloroethene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Toluene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Trichloroethene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Trichlorofluoromethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Vinyl acetate	ND		47		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Vinyl chloride	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Xylenes, Total	ND		9.3		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
2,2-Dichloropropane	ND		4.7		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Gasoline Range Organics (GRO) -C5-C12	ND		230		ug/Kg		09/23/11 15:00	09/23/11 18:18	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		45 - 131				09/23/11 15:00	09/23/11 18:18	1
1,2-Dichloroethane-d4 (Surr)	99		60 - 140				09/23/11 15:00	09/23/11 18:18	1
Toluene-d8 (Surr)	103		58 - 140				09/23/11 15:00	09/23/11 18:18	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWNC-6'**  
**Date Collected: 09/23/11 12:00**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-8**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Acetone	ND		50		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Benzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Dichlorobromomethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Bromobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Chlorobromomethane	ND		20		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Bromoform	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Bromomethane	ND		10		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
2-Butanone (MEK)	ND		50		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
n-Butylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
sec-Butylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
tert-Butylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Carbon disulfide	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Carbon tetrachloride	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Chlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Chloroethane	ND		10		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Chloroform	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Chloromethane	ND		10		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
2-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
4-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Chlorodibromomethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,3-Dichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,1-Dichloropropene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Ethylene Dibromide	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Dibromomethane	ND		10		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Dichlorodifluoromethane	ND		10		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,1-Dichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,2-Dichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,1-Dichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Ethylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Hexachlorobutadiene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
2-Hexanone	ND		50		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Isopropylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
4-Isopropyltoluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Methylene Chloride	ND		10		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Naphthalene	ND		10		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
N-Propylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Styrene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWNC-6'**  
**Date Collected: 09/23/11 12:00**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-8**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Tetrachloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Toluene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Trichloroethene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Trichlorofluoromethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Vinyl acetate	ND		50		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Vinyl chloride	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Xylenes, Total	ND		10		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
2,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/23/11 15:00	09/23/11 18:47	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		45 - 131				09/23/11 15:00	09/23/11 18:47	1
1,2-Dichloroethane-d4 (Surr)	99		60 - 140				09/23/11 15:00	09/23/11 18:47	1
Toluene-d8 (Surr)	103		58 - 140				09/23/11 15:00	09/23/11 18:47	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Client Sample ID: SWW-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.98		mg/Kg		09/26/11 13:46	09/27/11 14:06	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/26/11 13:46	09/27/11 14:06	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.07		0 - 5				09/26/11 13:46	09/27/11 14:06	1
p-Terphenyl	77		38 - 148				09/26/11 13:46	09/27/11 14:06	1

**Client Sample ID: SWSA-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-2**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		09/23/11 15:52	09/26/11 14:14	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/23/11 15:52	09/26/11 14:14	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.4		0 - 5				09/23/11 15:52	09/26/11 14:14	1
p-Terphenyl	78		38 - 148				09/23/11 15:52	09/26/11 14:14	1

**Client Sample ID: SWSB-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-3**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/26/11 13:46	09/27/11 12:04	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/26/11 13:46	09/27/11 12:04	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.3		0 - 5				09/26/11 13:46	09/27/11 12:04	1
p-Terphenyl	78		38 - 148				09/26/11 13:46	09/27/11 12:04	1

**Client Sample ID: SWSC-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-4**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/23/11 15:52	09/26/11 15:01	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/23/11 15:52	09/26/11 15:01	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.07		0 - 5				09/23/11 15:52	09/26/11 15:01	1
p-Terphenyl	73		38 - 148				09/23/11 15:52	09/26/11 15:01	1

**Client Sample ID: SWE-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-5**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		09/23/11 15:52	09/26/11 15:24	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/23/11 15:52	09/26/11 15:24	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.06		0 - 5	09/23/11 15:52	09/26/11 15:24	1
p-Terphenyl	77		38 - 148	09/23/11 15:52	09/26/11 15:24	1

**Client Sample ID: SWNA-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-6**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		09/23/11 15:52	09/26/11 15:48	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/23/11 15:52	09/26/11 15:48	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.04		0 - 5	09/23/11 15:52	09/26/11 15:48	1
p-Terphenyl	88		38 - 148	09/23/11 15:52	09/26/11 15:48	1

**Client Sample ID: SWNB-6'**  
**Date Collected: 09/23/11 11:30**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-7**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/26/11 13:46	09/27/11 13:42	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/26/11 13:46	09/27/11 13:42	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.3		0 - 5	09/26/11 13:46	09/27/11 13:42	1
p-Terphenyl	85		38 - 148	09/26/11 13:46	09/27/11 13:42	1

**Client Sample ID: SWNC-6'**  
**Date Collected: 09/23/11 12:00**  
**Date Received: 09/23/11 14:10**

**Lab Sample ID: 720-37634-8**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/23/11 15:52	09/26/11 16:35	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/23/11 15:52	09/26/11 16:35	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.3		0 - 5	09/23/11 15:52	09/26/11 16:35	1
p-Terphenyl	80		38 - 148	09/23/11 15:52	09/26/11 16:35	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Lab Sample ID: MB 720-99570/1-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Acetone	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Benzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Dichlorobromomethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Bromobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chlorobromomethane	ND		20		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Bromoform	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Bromomethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
2-Butanone (MEK)	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
n-Butylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
sec-Butylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
tert-Butylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Carbon disulfide	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Carbon tetrachloride	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chloroethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chloroform	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chloromethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
2-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
4-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chlorodibromomethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,3-Dichloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1-Dichloropropene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Ethylene Dibromide	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Dibromomethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Dichlorodifluoromethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1-Dichloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2-Dichloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1-Dichloroethene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Ethylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Hexachlorobutadiene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
2-Hexanone	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Isopropylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
4-Isopropyltoluene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Methylene Chloride	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Naphthalene	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
N-Propylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Styrene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Lab Sample ID: MB 720-99570/1-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Tetrachloroethene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Toluene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Trichloroethene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Trichlorofluoromethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Vinyl acetate	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Vinyl chloride	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Xylenes, Total	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
2,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/23/11 09:34	09/23/11 10:10	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	98		45 - 131	09/23/11 09:34	09/23/11 10:10	1
1,2-Dichloroethane-d4 (Surr)	97		60 - 140	09/23/11 09:34	09/23/11 10:10	1
Toluene-d8 (Surr)	96		58 - 140	09/23/11 09:34	09/23/11 10:10	1

**Lab Sample ID: LCS 720-99570/2-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Methyl tert-butyl ether	49.4	47.6		ug/Kg		96	71 - 144
Acetone	247	226		ug/Kg		92	30 - 162
Benzene	49.4	45.3		ug/Kg		92	82 - 124
Dichlorobromomethane	49.4	47.4		ug/Kg		96	86 - 131
Bromobenzene	49.4	47.8		ug/Kg		97	88 - 120
Chlorobromomethane	49.4	48.0		ug/Kg		97	81 - 116
Bromoform	49.4	55.7		ug/Kg		113	59 - 158
Bromomethane	49.4	48.8		ug/Kg		99	59 - 132
2-Butanone (MEK)	247	254		ug/Kg		103	61 - 150
n-Butylbenzene	49.4	52.2		ug/Kg		106	80 - 142
sec-Butylbenzene	49.4	50.6		ug/Kg		102	85 - 136
tert-Butylbenzene	49.4	50.2		ug/Kg		102	71 - 130
Carbon disulfide	49.4	44.5		ug/Kg		90	60 - 136
Carbon tetrachloride	49.4	48.0		ug/Kg		97	81 - 138
Chlorobenzene	49.4	48.0		ug/Kg		97	87 - 113
Chloroethane	49.4	50.6		ug/Kg		102	65 - 126
Chloroform	49.4	45.3		ug/Kg		92	77 - 127
Chloromethane	49.4	40.1		ug/Kg		81	60 - 149
2-Chlorotoluene	49.4	49.0		ug/Kg		99	80 - 138
4-Chlorotoluene	49.4	48.2		ug/Kg		98	79 - 136



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Lab Sample ID: LCS 720-99570/2-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.
							Limits
Chlorodibromomethane	49.4	50.0		ug/Kg		101	75 - 146
1,2-Dichlorobenzene	49.4	47.6		ug/Kg		96	84 - 130
1,3-Dichlorobenzene	49.4	48.0		ug/Kg		97	84 - 131
1,4-Dichlorobenzene	49.4	47.8		ug/Kg		97	85 - 125
1,3-Dichloropropane	49.4	48.4		ug/Kg		98	79 - 140
1,1-Dichloropropene	49.4	48.0		ug/Kg		97	70 - 130
1,2-Dibromo-3-Chloropropane	49.4	57.9		ug/Kg		117	68 - 145
Ethylene Dibromide	49.4	51.2		ug/Kg		104	79 - 140
Dibromomethane	49.4	48.0		ug/Kg		97	80 - 139
Dichlorodifluoromethane	49.4	41.7		ug/Kg		84	37 - 158
1,1-Dichloroethane	49.4	44.1		ug/Kg		89	85 - 124
1,2-Dichloroethane	49.4	43.7		ug/Kg		88	72 - 130
1,1-Dichloroethene	49.4	46.0		ug/Kg		93	76 - 122
cis-1,2-Dichloroethene	49.4	50.6		ug/Kg		102	87 - 138
trans-1,2-Dichloroethene	49.4	40.9		ug/Kg		83	67 - 108
1,2-Dichloropropane	49.4	43.5		ug/Kg		88	73 - 127
cis-1,3-Dichloropropene	49.4	48.4		ug/Kg		98	68 - 147
trans-1,3-Dichloropropene	49.4	51.6		ug/Kg		104	84 - 136
Ethylbenzene	49.4	48.4		ug/Kg		98	80 - 137
Hexachlorobutadiene	49.4	49.2		ug/Kg		100	72 - 132
2-Hexanone	247	237		ug/Kg		96	60 - 161
Isopropylbenzene	49.4	51.4		ug/Kg		104	88 - 128
4-Isopropyltoluene	49.4	50.8		ug/Kg		103	85 - 133
Methylene Chloride	49.4	44.9		ug/Kg		91	72 - 134
4-Methyl-2-pentanone (MIBK)	247	229		ug/Kg		93	69 - 160
Naphthalene	49.4	54.5		ug/Kg		110	70 - 147
N-Propylbenzene	49.4	47.4		ug/Kg		96	72 - 125
Styrene	49.4	50.4		ug/Kg		102	89 - 126
1,1,1,2-Tetrachloroethane	49.4	49.2		ug/Kg		100	90 - 130
1,1,1,2,2-Tetrachloroethane	49.4	50.4		ug/Kg		102	82 - 146
Tetrachloroethene	49.4	48.6		ug/Kg		98	78 - 132
Toluene	49.4	48.6		ug/Kg		98	83 - 128
1,2,3-Trichlorobenzene	49.4	50.8		ug/Kg		103	82 - 135
1,2,4-Trichlorobenzene	49.4	48.4		ug/Kg		98	70 - 131
1,1,1-Trichloroethane	49.4	47.6		ug/Kg		96	80 - 127
1,1,2-Trichloroethane	49.4	46.8		ug/Kg		95	82 - 125
Trichloroethene	49.4	47.8		ug/Kg		97	81 - 133
Trichlorofluoromethane	49.4	49.0		ug/Kg		99	71 - 139
1,2,3-Trichloropropane	49.4	53.4		ug/Kg		108	76 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	49.4	50.0		ug/Kg		101	70 - 130
1,2,4-Trimethylbenzene	49.4	48.6		ug/Kg		98	84 - 130
1,3,5-Trimethylbenzene	49.4	50.2		ug/Kg		102	82 - 131
Vinyl acetate	49.4	ND		ug/Kg		96	38 - 176
Vinyl chloride	49.4	46.2		ug/Kg		94	58 - 125
m-Xylene & p-Xylene	98.8	100		ug/Kg		101	79 - 146
o-Xylene	49.4	49.6		ug/Kg		100	84 - 140
2,2-Dichloropropane	49.4	52.0		ug/Kg		105	73 - 162

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Lab Sample ID: LCS 720-99570/2-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	100		45 - 131
1,2-Dichloroethane-d4 (Surr)	94		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: LCS 720-99570/4-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCS LCS		Unit	D	% Rec	% Rec.	
		Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO) -C5-C12	988	876		ug/Kg		89	61 - 128	

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	102		45 - 131
1,2-Dichloroethane-d4 (Surr)	98		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: LCSD 720-99570/3-A**

**Matrix: Solid**

**Analysis Batch: 99553**

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

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCSD LCSD		Unit	D	% Rec	% Rec.		RPD	
		Result	Qualifier				Limits	RPD	Limit	
Methyl tert-butyl ether	49.8	46.0		ug/Kg		92	71 - 144	3	20	
Acetone	249	208		ug/Kg		83	30 - 162	8	30	
Benzene	49.8	45.8		ug/Kg		92	82 - 124	1	20	
Dichlorobromomethane	49.8	47.0		ug/Kg		94	86 - 131	1	20	
Bromobenzene	49.8	48.6		ug/Kg		98	88 - 120	2	20	
Chlorobromomethane	49.8	47.8		ug/Kg		96	81 - 116	0	20	
Bromoform	49.8	54.0		ug/Kg		108	59 - 158	3	20	
Bromomethane	49.8	50.2		ug/Kg		101	59 - 132	3	20	
2-Butanone (MEK)	249	239		ug/Kg		96	61 - 150	6	20	
n-Butylbenzene	49.8	55.0		ug/Kg		110	80 - 142	5	20	
sec-Butylbenzene	49.8	53.2		ug/Kg		107	85 - 136	5	20	
tert-Butylbenzene	49.8	52.6		ug/Kg		106	71 - 130	5	20	
Carbon disulfide	49.8	45.0		ug/Kg		90	60 - 136	1	20	
Carbon tetrachloride	49.8	49.6		ug/Kg		100	81 - 138	3	20	
Chlorobenzene	49.8	48.6		ug/Kg		98	87 - 113	1	20	
Chloroethane	49.8	52.6		ug/Kg		106	65 - 126	4	20	
Chloroform	49.8	45.6		ug/Kg		92	77 - 127	1	20	
Chloromethane	49.8	41.8		ug/Kg		84	60 - 149	4	20	
2-Chlorotoluene	49.8	50.6		ug/Kg		102	80 - 138	3	20	
4-Chlorotoluene	49.8	49.6		ug/Kg		100	79 - 136	3	20	
Chlorodibromomethane	49.8	49.2		ug/Kg		99	75 - 146	2	20	
1,2-Dichlorobenzene	49.8	48.6		ug/Kg		98	84 - 130	2	20	
1,3-Dichlorobenzene	49.8	49.6		ug/Kg		100	84 - 131	3	20	
1,4-Dichlorobenzene	49.8	48.8		ug/Kg		98	85 - 125	2	20	
1,3-Dichloropropane	49.8	47.4		ug/Kg		95	79 - 140	2	20	
1,1-Dichloropropene	49.8	49.2		ug/Kg		99	70 - 130	2	20	
1,2-Dibromo-3-Chloropropane	49.8	53.6		ug/Kg		108	68 - 145	8	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

Lab Sample ID: LCSD 720-99570/3-A

Matrix: Solid

Analysis Batch: 99553

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 99570

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD	
							Lower	Upper	RPD	Limit
Ethylene Dibromide	49.8	49.6		ug/Kg		100	79 - 140		3	20
Dibromomethane	49.8	47.2		ug/Kg		95	80 - 139		2	20
Dichlorodifluoromethane	49.8	43.8		ug/Kg		88	37 - 158		5	20
1,1-Dichloroethane	49.8	44.6		ug/Kg		90	85 - 124		1	20
1,2-Dichloroethane	49.8	43.0		ug/Kg		86	72 - 130		1	20
1,1-Dichloroethene	49.8	46.4		ug/Kg		93	76 - 122		1	20
cis-1,2-Dichloroethene	49.8	50.6		ug/Kg		102	87 - 138		0	20
trans-1,2-Dichloroethene	49.8	41.4		ug/Kg		83	67 - 108		1	20
1,2-Dichloropropane	49.8	43.8		ug/Kg		88	73 - 127		1	20
cis-1,3-Dichloropropene	49.8	48.2		ug/Kg		97	68 - 147		0	20
trans-1,3-Dichloropropene	49.8	50.6		ug/Kg		102	84 - 136		2	20
Ethylbenzene	49.8	49.6		ug/Kg		100	80 - 137		2	20
Hexachlorobutadiene	49.8	52.2		ug/Kg		105	72 - 132		6	20
2-Hexanone	249	212		ug/Kg		85	60 - 161		11	20
Isopropylbenzene	49.8	53.0		ug/Kg		106	88 - 128		3	20
4-Isopropyltoluene	49.8	53.6		ug/Kg		108	85 - 133		5	20
Methylene Chloride	49.8	45.0		ug/Kg		90	72 - 134		0	20
4-Methyl-2-pentanone (MIBK)	249	210		ug/Kg		84	69 - 160		9	20
Naphthalene	49.8	51.4		ug/Kg		103	70 - 147		6	20
N-Propylbenzene	49.8	49.8		ug/Kg		100	72 - 125		5	20
Styrene	49.8	51.2		ug/Kg		103	89 - 126		2	20
1,1,1,2-Tetrachloroethane	49.8	49.6		ug/Kg		100	90 - 130		1	20
1,1,1,2,2-Tetrachloroethane	49.8	48.2		ug/Kg		97	82 - 146		4	20
Tetrachloroethene	49.8	49.8		ug/Kg		100	78 - 132		2	20
Toluene	49.8	49.2		ug/Kg		99	83 - 128		1	20
1,2,3-Trichlorobenzene	49.8	51.2		ug/Kg		103	82 - 135		1	20
1,2,4-Trichlorobenzene	49.8	49.4		ug/Kg		99	70 - 131		2	20
1,1,1-Trichloroethane	49.8	48.6		ug/Kg		98	80 - 127		2	20
1,1,2-Trichloroethane	49.8	46.0		ug/Kg		92	82 - 125		2	20
Trichloroethene	49.8	48.6		ug/Kg		98	81 - 133		2	20
Trichlorofluoromethane	49.8	51.0		ug/Kg		102	71 - 139		4	20
1,2,3-Trichloropropane	49.8	50.6		ug/Kg		102	76 - 146		5	20
1,1,2-Trichloro-1,2,2-trifluoroethane	49.8	51.6		ug/Kg		104	70 - 130		3	20
1,2,4-Trimethylbenzene	49.8	50.2		ug/Kg		101	84 - 130		3	20
1,3,5-Trimethylbenzene	49.8	52.2		ug/Kg		105	82 - 131		4	20
Vinyl acetate	49.8	ND		ug/Kg		94	38 - 176		1	20
Vinyl chloride	49.8	49.2		ug/Kg		99	58 - 125		6	20
m-Xylene & p-Xylene	99.6	102		ug/Kg		103	79 - 146		2	20
o-Xylene	49.8	50.4		ug/Kg		101	84 - 140		2	20
2,2-Dichloropropane	49.8	54.2		ug/Kg		109	73 - 162		4	20

Surrogate	LCSD LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	99		45 - 131
1,2-Dichloroethane-d4 (Surr)	91		60 - 140
Toluene-d8 (Surr)	98		58 - 140

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Lab Sample ID: LCSD 720-99570/5-A**

**Matrix: Solid**

**Analysis Batch: 99553**

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

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	998	835		ug/Kg		84	61 - 128	5	20

Surrogate	LCSD % Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene	100		45 - 131
1,2-Dichloroethane-d4 (Surr)	97		60 - 140
Toluene-d8 (Surr)	98		58 - 140

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

**Lab Sample ID: MB 720-99584/1-A**

**Matrix: Solid**

**Analysis Batch: 99648**

**Client Sample ID: Method Blank**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99584**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.44		0.99		mg/Kg		09/23/11 11:56	09/26/11 12:10	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/23/11 11:56	09/26/11 12:10	1

Surrogate	MB % Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.1		0 - 5	09/23/11 11:56	09/26/11 12:10	1
p-Terphenyl	93		38 - 148	09/23/11 11:56	09/26/11 12:10	1

**Lab Sample ID: LCS 720-99584/2-A**

**Matrix: Solid**

**Analysis Batch: 99648**

**Client Sample ID: Lab Control Sample**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99584**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Diesel Range Organics [C10-C28]	83.2	63.7		mg/Kg		77	50 - 150

Surrogate	LCS % Recovery	LCS Qualifier	LCS Limits
p-Terphenyl	81		38 - 148

**Lab Sample ID: LCSD 720-99584/3-A**

**Matrix: Solid**

**Analysis Batch: 99648**

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

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99584**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	82.9	60.7		mg/Kg		73	50 - 150	5	35

Surrogate	LCSD % Recovery	LCSD Qualifier	LCSD Limits
p-Terphenyl	88		38 - 148

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

**Lab Sample ID: MB 720-99684/1-A**

**Matrix: Solid**

**Analysis Batch: 99747**

**Client Sample ID: Method Blank**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99684**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		09/26/11 13:46	09/27/11 12:04	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/26/11 13:46	09/27/11 12:04	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.09		0 - 5	09/26/11 13:46	09/27/11 12:04	1
p-Terphenyl	88		38 - 148	09/26/11 13:46	09/27/11 12:04	1

**Lab Sample ID: LCS 720-99684/2-A**

**Matrix: Solid**

**Analysis Batch: 99747**

**Client Sample ID: Lab Control Sample**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99684**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Diesel Range Organics [C10-C28]	82.8	77.8		mg/Kg		94	50 - 150

Surrogate	LCS % Recovery	LCS Qualifier	Limits
p-Terphenyl	90		38 - 148

**Lab Sample ID: LCSD 720-99684/3-A**

**Matrix: Solid**

**Analysis Batch: 99747**

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

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99684**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	Limit
Diesel Range Organics [C10-C28]	83.1	83.4		mg/Kg		100	50 - 150	7	35

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
p-Terphenyl	92		38 - 148

**Lab Sample ID: 720-37634-1 MS**

**Matrix: Solid**

**Analysis Batch: 99747**

**Client Sample ID: SWW-6'**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99684**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Diesel Range Organics [C10-C28]	ND		83.0	71.0		mg/Kg		85	50 - 150

Surrogate	MS % Recovery	MS Qualifier	Limits
p-Terphenyl	90		38 - 148

**Lab Sample ID: 720-37634-1 MSD**

**Matrix: Solid**

**Analysis Batch: 99747**

**Client Sample ID: SWW-6'**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99684**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	Limit
Diesel Range Organics [C10-C28]	ND		82.8	69.1		mg/Kg		83	50 - 150	3	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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

Lab Sample ID: 720-37634-1 MSD

Matrix: Solid

Analysis Batch: 99747

Client Sample ID: SWW-6'

Prep Type: Silica Gel Cleanup

Prep Batch: 99684

<i>Surrogate</i>	<i>MSD</i>	<i>MSD</i>	<i>Limits</i>
	<i>% Recovery</i>	<i>Qualifier</i>	
<i>p-Terphenyl</i>	94		38 - 148

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# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

## GC/MS VOA

### Analysis Batch: 99553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37634-1	SWW-6'	Total/NA	Solid	8260B/CA_LUFT MS	99570
720-37634-2	SWSA-6'	Total/NA	Solid	8260B/CA_LUFT MS	99570
720-37634-3	SWSB-6'	Total/NA	Solid	8260B/CA_LUFT MS	99570
720-37634-4	SWSC-6'	Total/NA	Solid	8260B/CA_LUFT MS	99570
720-37634-5	SWE-6'	Total/NA	Solid	8260B/CA_LUFT MS	99570
720-37634-6	SWNA-6'	Total/NA	Solid	8260B/CA_LUFT MS	99570
720-37634-7	SWNB-6'	Total/NA	Solid	8260B/CA_LUFT MS	99570
720-37634-8	SWNC-6'	Total/NA	Solid	8260B/CA_LUFT MS	99570
LCS 720-99570/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99570
LCS 720-99570/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99570
LCSD 720-99570/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99570
LCSD 720-99570/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99570
MB 720-99570/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	99570

### Prep Batch: 99570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37634-1	SWW-6'	Total/NA	Solid	5030B	
720-37634-2	SWSA-6'	Total/NA	Solid	5030B	
720-37634-3	SWSB-6'	Total/NA	Solid	5030B	
720-37634-4	SWSC-6'	Total/NA	Solid	5030B	
720-37634-5	SWE-6'	Total/NA	Solid	5030B	
720-37634-6	SWNA-6'	Total/NA	Solid	5030B	
720-37634-7	SWNB-6'	Total/NA	Solid	5030B	
720-37634-8	SWNC-6'	Total/NA	Solid	5030B	
LCS 720-99570/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-99570/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 720-99570/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
LCSD 720-99570/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-99570/1-A	Method Blank	Total/NA	Solid	5030B	

## GC Semi VOA

### Prep Batch: 99584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37634-2	SWSA-6'	Silica Gel Cleanup	Solid	3546	
720-37634-4	SWSC-6'	Silica Gel Cleanup	Solid	3546	
720-37634-5	SWE-6'	Silica Gel Cleanup	Solid	3546	
720-37634-6	SWNA-6'	Silica Gel Cleanup	Solid	3546	
720-37634-8	SWNC-6'	Silica Gel Cleanup	Solid	3546	
LCS 720-99584/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-99584/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-99584/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	



# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

## GC Semi VOA (Continued)

### Analysis Batch: 99648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37634-2	SWSA-6'	Silica Gel Cleanup	Solid	8015B	99584
720-37634-4	SWSC-6'	Silica Gel Cleanup	Solid	8015B	99584
720-37634-5	SWE-6'	Silica Gel Cleanup	Solid	8015B	99584
720-37634-6	SWNA-6'	Silica Gel Cleanup	Solid	8015B	99584
720-37634-8	SWNC-6'	Silica Gel Cleanup	Solid	8015B	99584
LCS 720-99584/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	99584
LCSD 720-99584/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	99584
MB 720-99584/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	99584

### Prep Batch: 99684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37634-1	SWW-6'	Silica Gel Cleanup	Solid	3546	
720-37634-1 MS	SWW-6'	Silica Gel Cleanup	Solid	3546	
720-37634-1 MSD	SWW-6'	Silica Gel Cleanup	Solid	3546	
720-37634-3	SWSB-6'	Silica Gel Cleanup	Solid	3546	
720-37634-7	SWNB-6'	Silica Gel Cleanup	Solid	3546	
LCS 720-99684/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-99684/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-99684/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

### Analysis Batch: 99747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37634-1	SWW-6'	Silica Gel Cleanup	Solid	8015B	99684
720-37634-1 MS	SWW-6'	Silica Gel Cleanup	Solid	8015B	99684
720-37634-1 MSD	SWW-6'	Silica Gel Cleanup	Solid	8015B	99684
LCS 720-99684/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	99684
LCSD 720-99684/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	99684
MB 720-99684/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	99684

### Analysis Batch: 99748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37634-3	SWSB-6'	Silica Gel Cleanup	Solid	8015B	99684
720-37634-7	SWNB-6'	Silica Gel Cleanup	Solid	8015B	99684

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

## Client Sample ID: SWW-6'

Lab Sample ID: 720-37634-1

Date Collected: 09/23/11 11:30

Matrix: Solid

Date Received: 09/23/11 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99570	09/23/11 15:00	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99553	09/23/11 15:25	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99684	09/26/11 13:46	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99747	09/27/11 14:06	EC	TAL SF

## Client Sample ID: SWSA-6'

Lab Sample ID: 720-37634-2

Date Collected: 09/23/11 11:30

Matrix: Solid

Date Received: 09/23/11 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99570	09/23/11 15:00	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99553	09/23/11 15:54	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99584	09/23/11 15:52	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99648	09/26/11 14:14	DH	TAL SF

## Client Sample ID: SWSB-6'

Lab Sample ID: 720-37634-3

Date Collected: 09/23/11 11:30

Matrix: Solid

Date Received: 09/23/11 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99570	09/23/11 15:00	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99553	09/23/11 16:23	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99684	09/26/11 13:46	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99748	09/27/11 12:04	EC	TAL SF

## Client Sample ID: SWSC-6'

Lab Sample ID: 720-37634-4

Date Collected: 09/23/11 11:30

Matrix: Solid

Date Received: 09/23/11 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99570	09/23/11 15:00	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99553	09/23/11 16:52	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99584	09/23/11 15:52	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99648	09/26/11 15:01	DH	TAL SF

## Client Sample ID: SWE-6'

Lab Sample ID: 720-37634-5

Date Collected: 09/23/11 11:30

Matrix: Solid

Date Received: 09/23/11 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99570	09/23/11 15:00	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99553	09/23/11 17:20	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99584	09/23/11 15:52	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99648	09/26/11 15:24	DH	TAL SF

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

## Client Sample ID: SWNA-6'

Lab Sample ID: 720-37634-6

Date Collected: 09/23/11 11:30

Matrix: Solid

Date Received: 09/23/11 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99570	09/23/11 15:00	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99553	09/23/11 17:49	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99584	09/23/11 15:52	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99648	09/26/11 15:48	DH	TAL SF

## Client Sample ID: SWNB-6'

Lab Sample ID: 720-37634-7

Date Collected: 09/23/11 11:30

Matrix: Solid

Date Received: 09/23/11 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99570	09/23/11 15:00	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99553	09/23/11 18:18	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99684	09/26/11 13:46	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99748	09/27/11 13:42	EC	TAL SF

## Client Sample ID: SWNC-6'

Lab Sample ID: 720-37634-8

Date Collected: 09/23/11 12:00

Matrix: Solid

Date Received: 09/23/11 14:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99570	09/23/11 15:00	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99553	09/23/11 18:47	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99584	09/23/11 15:52	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99648	09/26/11 16:35	DH	TAL SF

**Laboratory References:**

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

# Certification Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

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

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# Method Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

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 San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

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# Sample Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37634-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-37634-1	SWW-6'	Solid	09/23/11 11:30	09/23/11 14:10
720-37634-2	SWSA-6'	Solid	09/23/11 11:30	09/23/11 14:10
720-37634-3	SWSB-6'	Solid	09/23/11 11:30	09/23/11 14:10
720-37634-4	SWSC-6'	Solid	09/23/11 11:30	09/23/11 14:10
720-37634-5	SWE-6'	Solid	09/23/11 11:30	09/23/11 14:10
720-37634-6	SWNA-6'	Solid	09/23/11 11:30	09/23/11 14:10
720-37634-7	SWNB-6'	Solid	09/23/11 11:30	09/23/11 14:10
720-37634-8	SWNC-6'	Solid	09/23/11 12:00	09/23/11 14:10



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

Attn: <u>Jeff Adams</u>		TPH EPA - <input type="checkbox"/> 8260B <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE TEPH EPA 8015M* <input checked="" type="checkbox"/> Silica Gel <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other _____ EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> 5 Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol (HVOCS) EPA 8021 by 8260B Volatile Organics GC/MS (VOCs) <input checked="" type="checkbox"/> EPA 8260B <input type="checkbox"/> 624 Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625 Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 <input type="checkbox"/> PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608 PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310 CAM17 Metals (EPA 6010/7470/7471) Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____ Low Level Metals by EPA 200.8/6020 (ICP-MS): <input type="checkbox"/> W.E.T (STLC) <input type="checkbox"/> TCLP <input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24h hold time for H <sub>2</sub> O) <input type="checkbox"/> Spec. Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> TDS Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>
Company: <u>ENGEO</u>		
Address: <u>2010 Crow Canyon Place</u>		
Phone: <u>925-570-4795</u> Email: <u>jadams@engeo.com</u>		
Bill To: <u>ENGEO</u>	Sampled By: <u>MJ</u>	
Attn:	Phone:	

Sample ID	Date	Time	Mat rix	Preserv	TPH EPA - <input type="checkbox"/> 8260B	TEPH EPA 8015M* <input checked="" type="checkbox"/> Silica Gel	EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX	(HVOCS) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs)	Semivolatiles GC/MS	Oil and Grease <input type="checkbox"/> Petroleum	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608	PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA	Low Level Metals by EPA 200.8/6020 (ICP-MS):	W.E.T (STLC)	TCLP	Hexavalent Chromium	pH (24h hold time for H <sub>2</sub> O)	Spec. Cond. <input type="checkbox"/> Alkalinity	TSS <input type="checkbox"/> TDS	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F	Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Number of Containers
1 SWW-6'	9/23/11	11:30	S, L		X	X			X																	
2 SWSA-6'																										
3 SWSB-6'																										
4 SWSC-6'																										
5 SWE <del>6'</del>																										
6 SWNA-6'																										
7 SWNB-6'																										
8 SWNC-6	✓	12:00			✓	✓			✓																	

Project Info.	Sample Receipt	1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Project Name: <u>Macedo Property</u>	# of Containers: <u>8</u>	Signature: <u>[Signature]</u> Time: <u>2:10</u>	Signature: _____ Time: _____	Signature: _____ Time: _____
Project#: <u>738000003</u>	Head Space: _____	Printed Name: <u>Morgan J</u> Date: <u>9/23/11</u>	Printed Name: _____ Date: _____	Printed Name: _____ Date: _____
PO#: _____	Temp: <u>27.3°C</u> <u>4 hr.</u>	Company: <u>ENGEO</u>	Company: _____	Company: _____
Credit Card#: _____	Conforms to record: _____			

T A T 5 Day    3 Day    (2) Day    1 Day Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDF Special Instructions / Comments: <input type="checkbox"/> Global ID _____	Other: _____	1) Received by: Signature: <u>[Signature]</u> Time: <u>2:10</u> Printed Name: <u>Chris G. L.</u> Date: <u>9/23/11</u> Company: <u>TASAP</u>	2) Received by: Signature: _____ Time: _____ Printed Name: _____ Date: _____ Company: _____	3) Received by: Signature: _____ Time: _____ Printed Name: _____ Date: _____ Company: _____
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## Login Sample Receipt Checklist

Client: Engeo, Inc.

Job Number: 720-37634-1

**Login Number: 37634**

**List Source: TestAmerica San Francisco**

**List Number: 1**

**Creator: Apostol, Anita**

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



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 720-37668-1  
Client Project/Site: Macedo

For:  
Engeo, Inc.  
580 N Wilma Avenue  
Suite A  
Ripon, California 95366-9502

Attn: Mr. Richard Gandolfo



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Authorized for release by:  
09/28/2011 12:21:37 PM

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

### LINKS

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[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.*

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# Definitions/Glossary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

## 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
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
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: Macedo

TestAmerica Job ID: 720-37668-1

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**Job ID: 720-37668-1**

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**Laboratory: TestAmerica San Francisco**

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**Narrative**

**Job Narrative**  
720-37668-1

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

No other analytical or quality issues were noted.

**GC VOA**

No analytical or quality issues were noted.

**GC Semi VOA**

No other analytical or quality issues were noted.

**Organic Prep**

No analytical or quality issues were noted.



# Detection Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

## Client Sample ID: PIT 1-B-SW

Lab Sample ID: 720-37668-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	4.5		0.98		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: PIT 1-B-NW

Lab Sample ID: 720-37668-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	4.7		0.99		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: PIT 1-B-NE

Lab Sample ID: 720-37668-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	11		1.0		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: PIT 1-B-SE

Lab Sample ID: 720-37668-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	5.2		0.99		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: PIT 1-SW-E1

Lab Sample ID: 720-37668-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.1		1.0		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: PIT 1-SW-E2

Lab Sample ID: 720-37668-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	3.1		0.99		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: PIT 1-SW-N1

Lab Sample ID: 720-37668-7

No Detections

## Client Sample ID: PIT 1-SW-N2

Lab Sample ID: 720-37668-8

No Detections

## Client Sample ID: PIT 1-SW-S1

Lab Sample ID: 720-37668-9

No Detections

## Client Sample ID: PIT 1-SW-S2

Lab Sample ID: 720-37668-10

No Detections

## Client Sample ID: PIT 1-SW-W1

Lab Sample ID: 720-37668-11

No Detections

## Client Sample ID: PIT 1-SW-W2

Lab Sample ID: 720-37668-12

No Detections

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-B-SW**

**Date Collected: 09/27/11 11:30**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-1**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Acetone	ND		46		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Benzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Dichlorobromomethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Bromobenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Chlorobromomethane	ND		18		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Bromoform	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Bromomethane	ND		9.1		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
2-Butanone (MEK)	ND		46		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
n-Butylbenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
sec-Butylbenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
tert-Butylbenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Carbon disulfide	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Carbon tetrachloride	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Chlorobenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Chloroethane	ND		9.1		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Chloroform	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Chloromethane	ND		9.1		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
2-Chlorotoluene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
4-Chlorotoluene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Chlorodibromomethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,2-Dichlorobenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,3-Dichlorobenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,4-Dichlorobenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,3-Dichloropropane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,1-Dichloropropene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,2-Dibromo-3-Chloropropane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Ethylene Dibromide	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Dibromomethane	ND		9.1		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Dichlorodifluoromethane	ND		9.1		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,1-Dichloroethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,2-Dichloroethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,1-Dichloroethene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
cis-1,2-Dichloroethene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
trans-1,2-Dichloroethene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,2-Dichloropropane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
cis-1,3-Dichloropropene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
trans-1,3-Dichloropropene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Ethylbenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Hexachlorobutadiene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
2-Hexanone	ND		46		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Isopropylbenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
4-Isopropyltoluene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Methylene Chloride	ND		9.1		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
4-Methyl-2-pentanone (MIBK)	ND		46		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Naphthalene	ND		9.1		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
N-Propylbenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Styrene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,1,1,2-Tetrachloroethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-B-SW**  
**Date Collected: 09/27/11 11:30**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Tetrachloroethene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Toluene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,2,3-Trichlorobenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,2,4-Trichlorobenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,1,1-Trichloroethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,1,2-Trichloroethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Trichloroethene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Trichlorofluoromethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,2,3-Trichloropropane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,2,4-Trimethylbenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
1,3,5-Trimethylbenzene	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Vinyl acetate	ND		46		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Vinyl chloride	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Xylenes, Total	ND		9.1		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
2,2-Dichloropropane	ND		4.6		ug/Kg		09/27/11 13:30	09/27/11 13:45	1
Gasoline Range Organics (GRO) -C5-C12	ND		230		ug/Kg		09/27/11 13:30	09/27/11 13:45	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		45 - 131	09/27/11 13:30	09/27/11 13:45	1
1,2-Dichloroethane-d4 (Surr)	110		60 - 140	09/27/11 13:30	09/27/11 13:45	1
Toluene-d8 (Surr)	96		58 - 140	09/27/11 13:30	09/27/11 13:45	1

**Client Sample ID: PIT 1-B-NW**  
**Date Collected: 09/27/11 11:29**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-2**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Acetone	ND		47		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Benzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Dichlorobromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Bromobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Chlorobromomethane	ND		19		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Bromoform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Bromomethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
2-Butanone (MEK)	ND		47		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
n-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
sec-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
tert-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Carbon disulfide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Carbon tetrachloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Chlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Chloroethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Chloroform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Chloromethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
2-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
4-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-B-NW**

**Date Collected: 09/27/11 11:29**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-2**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorodibromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,3-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,1-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Ethylene Dibromide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Dibromomethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Dichlorodifluoromethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,1-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,2-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,1-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Ethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Hexachlorobutadiene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
2-Hexanone	ND		47		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Isopropylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
4-Isopropyltoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Methylene Chloride	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
4-Methyl-2-pentanone (MIBK)	ND		47		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Naphthalene	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
N-Propylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Styrene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Tetrachloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Toluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Trichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Trichlorofluoromethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Vinyl acetate	ND		47		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Vinyl chloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Xylenes, Total	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
2,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 14:16	1
Gasoline Range Organics (GRO) -C5-C12	ND		230		ug/Kg		09/27/11 13:30	09/27/11 14:16	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		45 - 131	09/27/11 13:30	09/27/11 14:16	1
1,2-Dichloroethane-d4 (Surr)	110		60 - 140	09/27/11 13:30	09/27/11 14:16	1
Toluene-d8 (Surr)	95		58 - 140	09/27/11 13:30	09/27/11 14:16	1

**Client Sample ID: PIT 1-B-NE**  
**Date Collected: 09/27/11 11:24**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-3**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Acetone	ND		45		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Benzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Dichlorobromomethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Bromobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Chlorobromomethane	ND		18		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Bromoform	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Bromomethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
2-Butanone (MEK)	ND		45		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
n-Butylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
sec-Butylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
tert-Butylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Carbon disulfide	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Carbon tetrachloride	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Chlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Chloroethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Chloroform	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Chloromethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
2-Chlorotoluene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
4-Chlorotoluene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Chlorodibromomethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,2-Dichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,3-Dichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,4-Dichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,3-Dichloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,1-Dichloropropene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,2-Dibromo-3-Chloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Ethylene Dibromide	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Dibromomethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Dichlorodifluoromethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,1-Dichloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,2-Dichloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,1-Dichloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
cis-1,2-Dichloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
trans-1,2-Dichloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,2-Dichloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
cis-1,3-Dichloropropene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
trans-1,3-Dichloropropene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Ethylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Hexachlorobutadiene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
2-Hexanone	ND		45		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Isopropylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
4-Isopropyltoluene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Methylene Chloride	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 14:45	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-B-NE**

**Date Collected: 09/27/11 11:24**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-3**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		45		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Naphthalene	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
N-Propylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Styrene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,1,1,2-Tetrachloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,1,2,2-Tetrachloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Tetrachloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Toluene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,2,3-Trichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,2,4-Trichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,1,1-Trichloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,1,2-Trichloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Trichloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Trichlorofluoromethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,2,3-Trichloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,2,4-Trimethylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
1,3,5-Trimethylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Vinyl acetate	ND		45		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Vinyl chloride	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Xylenes, Total	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
2,2-Dichloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Gasoline Range Organics (GRO) -C5-C12	ND		220		ug/Kg		09/27/11 13:30	09/27/11 14:45	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		45 - 131				09/27/11 13:30	09/27/11 14:45	1
1,2-Dichloroethane-d4 (Surr)	116		60 - 140				09/27/11 13:30	09/27/11 14:45	1
Toluene-d8 (Surr)	96		58 - 140				09/27/11 13:30	09/27/11 14:45	1

**Client Sample ID: PIT 1-B-SE**

**Date Collected: 09/27/11 11:20**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-4**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Acetone	ND		47		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Benzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Dichlorobromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Bromobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Chlorobromomethane	ND		19		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Bromoform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Bromomethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
2-Butanone (MEK)	ND		47		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
n-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
sec-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
tert-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Carbon disulfide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Carbon tetrachloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Chlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-B-SE**

**Date Collected: 09/27/11 11:20**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-4**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Chloroform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Chloromethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
2-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
4-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Chlorodibromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,3-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,1-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Ethylene Dibromide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Dibromomethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Dichlorodifluoromethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,1-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,2-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,1-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Ethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Hexachlorobutadiene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
2-Hexanone	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Isopropylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
4-Isopropyltoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Methylene Chloride	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
4-Methyl-2-pentanone (MIBK)	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Naphthalene	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
N-Propylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Styrene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Tetrachloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Toluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Trichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Trichlorofluoromethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Vinyl acetate	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Vinyl chloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-B-SE**

**Date Collected: 09/27/11 11:20**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-4**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
2,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/27/11 13:30	09/27/11 15:16	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		45 - 131				09/27/11 13:30	09/27/11 15:16	1
1,2-Dichloroethane-d4 (Surr)	114		60 - 140				09/27/11 13:30	09/27/11 15:16	1
Toluene-d8 (Surr)	96		58 - 140				09/27/11 13:30	09/27/11 15:16	1

**Client Sample ID: PIT 1-SW-E1**

**Date Collected: 09/27/11 11:15**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-5**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Acetone	ND		49		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Benzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Dichlorobromomethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Bromobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Chlorobromomethane	ND		20		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Bromoform	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Bromomethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
2-Butanone (MEK)	ND		49		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
n-Butylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
sec-Butylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
tert-Butylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Carbon disulfide	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Carbon tetrachloride	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Chlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Chloroethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Chloroform	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Chloromethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
2-Chlorotoluene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
4-Chlorotoluene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Chlorodibromomethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,3-Dichloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,1-Dichloropropene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,2-Dibromo-3-Chloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Ethylene Dibromide	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Dibromomethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Dichlorodifluoromethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,1-Dichloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,2-Dichloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,1-Dichloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-E1**

**Date Collected: 09/27/11 11:15**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-5**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Ethylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Hexachlorobutadiene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
2-Hexanone	ND		49		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Isopropylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
4-Isopropyltoluene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Methylene Chloride	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
4-Methyl-2-pentanone (MIBK)	ND		49		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Naphthalene	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
N-Propylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Styrene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Tetrachloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Toluene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,2,3-Trichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Trichloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Trichlorofluoromethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Vinyl acetate	ND		49		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Vinyl chloride	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Xylenes, Total	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
2,2-Dichloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 15:46	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/27/11 13:30	09/27/11 15:46	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		45 - 131	09/27/11 13:30	09/27/11 15:46	1
1,2-Dichloroethane-d4 (Surr)	115		60 - 140	09/27/11 13:30	09/27/11 15:46	1
Toluene-d8 (Surr)	95		58 - 140	09/27/11 13:30	09/27/11 15:46	1

**Client Sample ID: PIT 1-SW-E2**

**Date Collected: 09/27/11 11:18**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-6**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Acetone	ND		45		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Benzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Dichlorobromomethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Bromobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Chlorobromomethane	ND		18		ug/Kg		09/27/11 13:30	09/27/11 16:16	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-E2**  
**Date Collected: 09/27/11 11:18**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-6**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Bromomethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
2-Butanone (MEK)	ND		45		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
n-Butylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
sec-Butylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
tert-Butylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Carbon disulfide	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Carbon tetrachloride	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Chlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Chloroethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Chloroform	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Chloromethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
2-Chlorotoluene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
4-Chlorotoluene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Chlorodibromomethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,2-Dichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,3-Dichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,4-Dichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,3-Dichloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,1-Dichloropropene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,2-Dibromo-3-Chloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Ethylene Dibromide	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Dibromomethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Dichlorodifluoromethane	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,1-Dichloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,2-Dichloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,1-Dichloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
cis-1,2-Dichloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
trans-1,2-Dichloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,2-Dichloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
cis-1,3-Dichloropropene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
trans-1,3-Dichloropropene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Ethylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Hexachlorobutadiene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
2-Hexanone	ND		45		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Isopropylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
4-Isopropyltoluene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Methylene Chloride	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
4-Methyl-2-pentanone (MIBK)	ND		45		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Naphthalene	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
N-Propylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Styrene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,1,1,2-Tetrachloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,1,2,2-Tetrachloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Tetrachloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Toluene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,2,3-Trichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,2,4-Trichlorobenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,1,1-Trichloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-E2**  
**Date Collected: 09/27/11 11:18**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-6**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Trichloroethene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Trichlorofluoromethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,2,3-Trichloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,2,4-Trimethylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
1,3,5-Trimethylbenzene	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Vinyl acetate	ND		45		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Vinyl chloride	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Xylenes, Total	ND		9.0		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
2,2-Dichloropropane	ND		4.5		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Gasoline Range Organics (GRO) -C5-C12	ND		230		ug/Kg		09/27/11 13:30	09/27/11 16:16	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		45 - 131				09/27/11 13:30	09/27/11 16:16	1
1,2-Dichloroethane-d4 (Surr)	117		60 - 140				09/27/11 13:30	09/27/11 16:16	1
Toluene-d8 (Surr)	97		58 - 140				09/27/11 13:30	09/27/11 16:16	1

**Client Sample ID: PIT 1-SW-N1**  
**Date Collected: 09/27/11 11:32**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-7**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Acetone	ND		47		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Benzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Dichlorobromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Bromobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Chlorobromomethane	ND		19		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Bromoform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Bromomethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
2-Butanone (MEK)	ND		47		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
n-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
sec-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
tert-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Carbon disulfide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Carbon tetrachloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Chlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Chloroethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Chloroform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Chloromethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
2-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
4-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Chlorodibromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,3-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,1-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-N1**  
**Date Collected: 09/27/11 11:32**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-7**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Ethylene Dibromide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Dibromomethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Dichlorodifluoromethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,1-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,2-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,1-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Ethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Hexachlorobutadiene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
2-Hexanone	ND		47		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Isopropylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
4-Isopropyltoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Methylene Chloride	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
4-Methyl-2-pentanone (MIBK)	ND		47		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Naphthalene	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
N-Propylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Styrene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Tetrachloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Toluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Trichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Trichlorofluoromethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Vinyl acetate	ND		47		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Vinyl chloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Xylenes, Total	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
2,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/27/11 13:30	09/27/11 16:47	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		45 - 131				09/27/11 13:30	09/27/11 16:47	1
1,2-Dichloroethane-d4 (Surr)	115		60 - 140				09/27/11 13:30	09/27/11 16:47	1
Toluene-d8 (Surr)	95		58 - 140				09/27/11 13:30	09/27/11 16:47	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-N2**

**Date Collected: 09/27/11 11:34**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-8**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Acetone	ND		43		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Benzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Dichlorobromomethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Bromobenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Chlorobromomethane	ND		17		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Bromoform	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Bromomethane	ND		8.6		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
2-Butanone (MEK)	ND		43		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
n-Butylbenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
sec-Butylbenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
tert-Butylbenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Carbon disulfide	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Carbon tetrachloride	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Chlorobenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Chloroethane	ND		8.6		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Chloroform	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Chloromethane	ND		8.6		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
2-Chlorotoluene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
4-Chlorotoluene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Chlorodibromomethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,2-Dichlorobenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,3-Dichlorobenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,4-Dichlorobenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,3-Dichloropropane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,1-Dichloropropene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,2-Dibromo-3-Chloropropane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Ethylene Dibromide	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Dibromomethane	ND		8.6		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Dichlorodifluoromethane	ND		8.6		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,1-Dichloroethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,2-Dichloroethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,1-Dichloroethene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
cis-1,2-Dichloroethene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
trans-1,2-Dichloroethene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,2-Dichloropropane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
cis-1,3-Dichloropropene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
trans-1,3-Dichloropropene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Ethylbenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Hexachlorobutadiene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
2-Hexanone	ND		43		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Isopropylbenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
4-Isopropyltoluene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Methylene Chloride	ND		8.6		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
4-Methyl-2-pentanone (MIBK)	ND		43		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Naphthalene	ND		8.6		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
N-Propylbenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Styrene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,1,1,2-Tetrachloroethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-N2**

**Date Collected: 09/27/11 11:34**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-8**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Tetrachloroethene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Toluene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,2,3-Trichlorobenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,2,4-Trichlorobenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,1,1-Trichloroethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,1,2-Trichloroethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Trichloroethene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Trichlorofluoromethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,2,3-Trichloropropane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,2,4-Trimethylbenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
1,3,5-Trimethylbenzene	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Vinyl acetate	ND		43		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Vinyl chloride	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Xylenes, Total	ND		8.6		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
2,2-Dichloropropane	ND		4.3		ug/Kg		09/27/11 13:30	09/27/11 17:17	1
Gasoline Range Organics (GRO) -C5-C12	ND		210		ug/Kg		09/27/11 13:30	09/27/11 17:17	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		45 - 131	09/27/11 13:30	09/27/11 17:17	1
1,2-Dichloroethane-d4 (Surr)	121		60 - 140	09/27/11 13:30	09/27/11 17:17	1
Toluene-d8 (Surr)	92		58 - 140	09/27/11 13:30	09/27/11 17:17	1

**Client Sample ID: PIT 1-SW-S1**

**Date Collected: 09/27/11 11:38**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-9**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Acetone	ND		47		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Benzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Dichlorobromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Bromobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Chlorobromomethane	ND		19		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Bromoform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Bromomethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
2-Butanone (MEK)	ND		47		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
n-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
sec-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
tert-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Carbon disulfide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Carbon tetrachloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Chlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Chloroethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Chloroform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Chloromethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
2-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
4-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-S1**

**Date Collected: 09/27/11 11:38**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-9**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorodibromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,3-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,1-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Ethylene Dibromide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Dibromomethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Dichlorodifluoromethane	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,1-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,2-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,1-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Ethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Hexachlorobutadiene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
2-Hexanone	ND		47		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Isopropylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
4-Isopropyltoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Methylene Chloride	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
4-Methyl-2-pentanone (MIBK)	ND		47		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Naphthalene	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
N-Propylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Styrene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Tetrachloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Toluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Trichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Trichlorofluoromethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Vinyl acetate	ND		47		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Vinyl chloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Xylenes, Total	ND		9.5		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
2,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 17:47	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/27/11 13:30	09/27/11 17:47	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		45 - 131	09/27/11 13:30	09/27/11 17:47	1
1,2-Dichloroethane-d4 (Surr)	116		60 - 140	09/27/11 13:30	09/27/11 17:47	1
Toluene-d8 (Surr)	95		58 - 140	09/27/11 13:30	09/27/11 17:47	1

**Client Sample ID: PIT 1-SW-S2**  
**Date Collected: 09/27/11 11:36**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-10**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Acetone	ND		50		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Benzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Dichlorobromomethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Bromobenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Chlorobromomethane	ND		20		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Bromoform	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Bromomethane	ND		9.9		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
2-Butanone (MEK)	ND		50		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
n-Butylbenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
sec-Butylbenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
tert-Butylbenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Carbon disulfide	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Carbon tetrachloride	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Chlorobenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Chloroethane	ND		9.9		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Chloroform	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Chloromethane	ND		9.9		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
2-Chlorotoluene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
4-Chlorotoluene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Chlorodibromomethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,3-Dichloropropane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,1-Dichloropropene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Ethylene Dibromide	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Dibromomethane	ND		9.9		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Dichlorodifluoromethane	ND		9.9		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,1-Dichloroethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,2-Dichloroethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,1-Dichloroethene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,2-Dichloropropane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Ethylbenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Hexachlorobutadiene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
2-Hexanone	ND		50		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Isopropylbenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
4-Isopropyltoluene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Methylene Chloride	ND		9.9		ug/Kg		09/27/11 13:30	09/27/11 18:17	1



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-S2**

**Date Collected: 09/27/11 11:36**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-10**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Naphthalene	ND		9.9		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
N-Propylbenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Styrene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Tetrachloroethene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Toluene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Trichloroethene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Trichlorofluoromethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Vinyl acetate	ND		50		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Vinyl chloride	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Xylenes, Total	ND		9.9		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
2,2-Dichloropropane	ND		5.0		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/27/11 13:30	09/27/11 18:17	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		45 - 131				09/27/11 13:30	09/27/11 18:17	1
1,2-Dichloroethane-d4 (Surr)	119		60 - 140				09/27/11 13:30	09/27/11 18:17	1
Toluene-d8 (Surr)	95		58 - 140				09/27/11 13:30	09/27/11 18:17	1

**Client Sample ID: PIT 1-SW-W1**

**Date Collected: 09/27/11 11:45**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-11**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Acetone	ND		49		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Benzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Dichlorobromomethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Bromobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Chlorobromomethane	ND		20		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Bromoform	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Bromomethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
2-Butanone (MEK)	ND		49		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
n-Butylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
sec-Butylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
tert-Butylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Carbon disulfide	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Carbon tetrachloride	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Chlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-W1**

**Date Collected: 09/27/11 11:45**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-11**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Chloroform	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Chloromethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
2-Chlorotoluene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
4-Chlorotoluene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Chlorodibromomethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,3-Dichloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,1-Dichloropropene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,2-Dibromo-3-Chloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Ethylene Dibromide	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Dibromomethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Dichlorodifluoromethane	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,1-Dichloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,2-Dichloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,1-Dichloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,2-Dichloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Ethylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Hexachlorobutadiene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
2-Hexanone	ND		49		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Isopropylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
4-Isopropyltoluene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Methylene Chloride	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
4-Methyl-2-pentanone (MIBK)	ND		49		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Naphthalene	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
N-Propylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Styrene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Tetrachloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Toluene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,2,3-Trichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Trichloroethene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Trichlorofluoromethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Vinyl acetate	ND		49		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Vinyl chloride	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-W1**

**Date Collected: 09/27/11 11:45**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-11**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		9.8		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
2,2-Dichloropropane	ND		4.9		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/27/11 13:30	09/27/11 18:48	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		45 - 131				09/27/11 13:30	09/27/11 18:48	1
1,2-Dichloroethane-d4 (Surr)	123		60 - 140				09/27/11 13:30	09/27/11 18:48	1
Toluene-d8 (Surr)	95		58 - 140				09/27/11 13:30	09/27/11 18:48	1

**Client Sample ID: PIT 1-SW-W2**

**Date Collected: 09/27/11 11:40**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-12**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Acetone	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Benzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Dichlorobromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Bromobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Chlorobromomethane	ND		19		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Bromoform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Bromomethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
2-Butanone (MEK)	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
n-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
sec-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
tert-Butylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Carbon disulfide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Carbon tetrachloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Chlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Chloroethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Chloroform	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Chloromethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
2-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
4-Chlorotoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Chlorodibromomethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,3-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,1-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Ethylene Dibromide	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Dibromomethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Dichlorodifluoromethane	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,1-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,2-Dichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,1-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-W2**

**Date Collected: 09/27/11 11:40**

**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-12**

**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Ethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Hexachlorobutadiene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
2-Hexanone	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Isopropylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
4-Isopropyltoluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Methylene Chloride	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
4-Methyl-2-pentanone (MIBK)	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Naphthalene	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
N-Propylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Styrene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Tetrachloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Toluene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Trichloroethene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Trichlorofluoromethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Vinyl acetate	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Vinyl chloride	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Xylenes, Total	ND		9.4		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
2,2-Dichloropropane	ND		4.7		ug/Kg		09/27/11 13:30	09/27/11 19:18	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/27/11 13:30	09/27/11 19:18	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		45 - 131	09/27/11 13:30	09/27/11 19:18	1
1,2-Dichloroethane-d4 (Surr)	121		60 - 140	09/27/11 13:30	09/27/11 19:18	1
Toluene-d8 (Surr)	94		58 - 140	09/27/11 13:30	09/27/11 19:18	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-B-SW**  
**Date Collected: 09/27/11 11:30**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Diesel Range Organics [C10-C28]</b>	<b>4.5</b>		0.98		mg/Kg		09/27/11 09:32	09/27/11 21:27	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/27/11 09:32	09/27/11 21:27	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.04		0 - 5				09/27/11 09:32	09/27/11 21:27	1
p-Terphenyl	88		38 - 148				09/27/11 09:32	09/27/11 21:27	1

**Client Sample ID: PIT 1-B-NW**  
**Date Collected: 09/27/11 11:29**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-2**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Diesel Range Organics [C10-C28]</b>	<b>4.7</b>		0.99		mg/Kg		09/27/11 09:32	09/27/11 21:52	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/27/11 09:32	09/27/11 21:52	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.08		0 - 5				09/27/11 09:32	09/27/11 21:52	1
p-Terphenyl	90		38 - 148				09/27/11 09:32	09/27/11 21:52	1

**Client Sample ID: PIT 1-B-NE**  
**Date Collected: 09/27/11 11:24**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-3**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Diesel Range Organics [C10-C28]</b>	<b>11</b>		1.0		mg/Kg		09/27/11 09:32	09/27/11 22:16	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/27/11 09:32	09/27/11 22:16	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	2		0 - 5				09/27/11 09:32	09/27/11 22:16	1
p-Terphenyl	92		38 - 148				09/27/11 09:32	09/27/11 22:16	1

**Client Sample ID: PIT 1-B-SE**  
**Date Collected: 09/27/11 11:20**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-4**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Diesel Range Organics [C10-C28]</b>	<b>5.2</b>		0.99		mg/Kg		09/27/11 14:50	09/27/11 22:40	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/27/11 14:50	09/27/11 22:40	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.01		0 - 5				09/27/11 14:50	09/27/11 22:40	1
p-Terphenyl	86		38 - 148				09/27/11 14:50	09/27/11 22:40	1

**Client Sample ID: PIT 1-SW-E1**  
**Date Collected: 09/27/11 11:15**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-5**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Diesel Range Organics [C10-C28]</b>	<b>1.1</b>		1.0		mg/Kg		09/27/11 14:50	09/27/11 23:05	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/27/11 14:50	09/27/11 23:05	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.02		0 - 5	09/27/11 14:50	09/27/11 23:05	1
p-Terphenyl	90		38 - 148	09/27/11 14:50	09/27/11 23:05	1

**Client Sample ID: PIT 1-SW-E2**  
**Date Collected: 09/27/11 11:18**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-6**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.1		0.99		mg/Kg		09/27/11 14:50	09/27/11 23:29	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/27/11 14:50	09/27/11 23:29	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.006		0 - 5	09/27/11 14:50	09/27/11 23:29	1
p-Terphenyl	100		38 - 148	09/27/11 14:50	09/27/11 23:29	1

**Client Sample ID: PIT 1-SW-N1**  
**Date Collected: 09/27/11 11:32**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-7**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		09/27/11 14:50	09/27/11 23:53	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/27/11 14:50	09/27/11 23:53	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.06		0 - 5	09/27/11 14:50	09/27/11 23:53	1
p-Terphenyl	86		38 - 148	09/27/11 14:50	09/27/11 23:53	1

**Client Sample ID: PIT 1-SW-N2**  
**Date Collected: 09/27/11 11:34**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-8**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/27/11 14:50	09/27/11 20:38	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/27/11 14:50	09/27/11 20:38	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.6		0 - 5	09/27/11 14:50	09/27/11 20:38	1
p-Terphenyl	84		38 - 148	09/27/11 14:50	09/27/11 20:38	1

**Client Sample ID: PIT 1-SW-S1**  
**Date Collected: 09/27/11 11:38**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-9**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/27/11 14:50	09/27/11 21:02	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/27/11 14:50	09/27/11 21:02	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.5		0 - 5	09/27/11 14:50	09/27/11 21:02	1
p-Terphenyl	83		38 - 148	09/27/11 14:50	09/27/11 21:02	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Client Sample ID: PIT 1-SW-S2**  
**Date Collected: 09/27/11 11:36**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-10**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/27/11 16:00	09/27/11 21:27	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/27/11 16:00	09/27/11 21:27	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.5		0 - 5				09/27/11 16:00	09/27/11 21:27	1
p-Terphenyl	87		38 - 148				09/27/11 16:00	09/27/11 21:27	1

**Client Sample ID: PIT 1-SW-W1**  
**Date Collected: 09/27/11 11:45**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-11**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/27/11 16:00	09/27/11 21:52	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/27/11 16:00	09/27/11 21:52	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.4		0 - 5				09/27/11 16:00	09/27/11 21:52	1
p-Terphenyl	86		38 - 148				09/27/11 16:00	09/27/11 21:52	1

**Client Sample ID: PIT 1-SW-W2**  
**Date Collected: 09/27/11 11:40**  
**Date Received: 09/27/11 12:35**

**Lab Sample ID: 720-37668-12**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.98		mg/Kg		09/27/11 16:00	09/28/11 00:18	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/27/11 16:00	09/28/11 00:18	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.02		0 - 5				09/27/11 16:00	09/28/11 00:18	1
p-Terphenyl	79		38 - 148				09/27/11 16:00	09/28/11 00:18	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Lab Sample ID: MB 720-99735/1-A**

**Matrix: Solid**

**Analysis Batch: 99727**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99735**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Acetone	ND		49		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Benzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Dichlorobromomethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Bromobenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Chlorobromomethane	ND		20		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Bromoform	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Bromomethane	ND		9.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
2-Butanone (MEK)	ND		49		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
n-Butylbenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
sec-Butylbenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
tert-Butylbenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Carbon disulfide	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Carbon tetrachloride	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Chlorobenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Chloroethane	ND		9.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Chloroform	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Chloromethane	ND		9.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
2-Chlorotoluene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
4-Chlorotoluene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Chlorodibromomethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,3-Dichloropropane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,1-Dichloropropene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,2-Dibromo-3-Chloropropane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Ethylene Dibromide	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Dibromomethane	ND		9.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Dichlorodifluoromethane	ND		9.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,1-Dichloroethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,2-Dichloroethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,1-Dichloroethene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,2-Dichloropropane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Ethylbenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Hexachlorobutadiene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
2-Hexanone	ND		49		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Isopropylbenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
4-Isopropyltoluene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Methylene Chloride	ND		9.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
4-Methyl-2-pentanone (MIBK)	ND		49		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Naphthalene	ND		9.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
N-Propylbenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Styrene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Lab Sample ID: MB 720-99735/1-A**

**Matrix: Solid**

**Analysis Batch: 99727**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99735**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Tetrachloroethene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Toluene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,2,3-Trichlorobenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Trichloroethene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Trichlorofluoromethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Vinyl acetate	ND		49		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Vinyl chloride	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Xylenes, Total	ND		9.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
2,2-Dichloropropane	ND		4.9		ug/Kg		09/27/11 08:30	09/27/11 09:28	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/27/11 08:30	09/27/11 09:28	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	97		45 - 131	09/27/11 08:30	09/27/11 09:28	1
1,2-Dichloroethane-d4 (Surr)	119		60 - 140	09/27/11 08:30	09/27/11 09:28	1
Toluene-d8 (Surr)	97		58 - 140	09/27/11 08:30	09/27/11 09:28	1

**Lab Sample ID: LCS 720-99735/2-A**

**Matrix: Solid**

**Analysis Batch: 99727**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99735**

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Methyl tert-butyl ether	49.6	51.0		ug/Kg		103	71 - 144
Acetone	248	157		ug/Kg		63	30 - 162
Benzene	49.6	47.4		ug/Kg		96	82 - 124
Dichlorobromomethane	49.6	55.4		ug/Kg		112	86 - 131
Bromobenzene	49.6	49.6		ug/Kg		100	88 - 120
Chlorobromomethane	49.6	49.4		ug/Kg		100	81 - 116
Bromoform	49.6	51.4		ug/Kg		104	59 - 158
Bromomethane	49.6	48.6		ug/Kg		98	59 - 132
2-Butanone (MEK)	248	199		ug/Kg		80	61 - 150
n-Butylbenzene	49.6	51.2		ug/Kg		103	80 - 142
sec-Butylbenzene	49.6	49.8		ug/Kg		100	85 - 136
tert-Butylbenzene	49.6	51.4		ug/Kg		104	71 - 130
Carbon disulfide	49.6	44.6		ug/Kg		90	60 - 136
Carbon tetrachloride	49.6	56.9		ug/Kg		115	81 - 138
Chlorobenzene	49.6	47.2		ug/Kg		95	87 - 113
Chloroethane	49.6	47.6		ug/Kg		96	65 - 126
Chloroform	49.6	50.8		ug/Kg		102	77 - 127
Chloromethane	49.6	43.5		ug/Kg		88	60 - 149
2-Chlorotoluene	49.6	52.0		ug/Kg		105	80 - 138
4-Chlorotoluene	49.6	51.8		ug/Kg		104	79 - 136



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Lab Sample ID: LCS 720-99735/2-A**

**Matrix: Solid**

**Analysis Batch: 99727**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99735**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.
							Limits
Chlorodibromomethane	49.6	52.8		ug/Kg		106	75 - 146
1,2-Dichlorobenzene	49.6	48.2		ug/Kg		97	84 - 130
1,3-Dichlorobenzene	49.6	49.8		ug/Kg		100	84 - 131
1,4-Dichlorobenzene	49.6	48.2		ug/Kg		97	85 - 125
1,3-Dichloropropane	49.6	49.8		ug/Kg		100	79 - 140
1,1-Dichloropropene	49.6	51.2		ug/Kg		103	70 - 130
1,2-Dibromo-3-Chloropropane	49.6	46.0		ug/Kg		93	68 - 145
Ethylene Dibromide	49.6	50.2		ug/Kg		101	79 - 140
Dibromomethane	49.6	50.6		ug/Kg		102	80 - 139
Dichlorodifluoromethane	49.6	42.7		ug/Kg		86	37 - 158
1,1-Dichloroethane	49.6	49.0		ug/Kg		99	85 - 124
1,2-Dichloroethane	49.6	52.4		ug/Kg		106	72 - 130
1,1-Dichloroethene	49.6	44.6		ug/Kg		90	76 - 122
cis-1,2-Dichloroethene	49.6	56.2		ug/Kg		113	87 - 138
trans-1,2-Dichloroethene	49.6	41.1		ug/Kg		83	67 - 108
1,2-Dichloropropane	49.6	47.8		ug/Kg		96	73 - 127
cis-1,3-Dichloropropene	49.6	52.2		ug/Kg		105	68 - 147
trans-1,3-Dichloropropene	49.6	54.8		ug/Kg		110	84 - 136
Ethylbenzene	49.6	48.0		ug/Kg		97	80 - 137
Hexachlorobutadiene	49.6	46.4		ug/Kg		94	72 - 132
2-Hexanone	248	218		ug/Kg		88	60 - 161
Isopropylbenzene	49.6	51.2		ug/Kg		103	88 - 128
4-Isopropyltoluene	49.6	50.8		ug/Kg		102	85 - 133
Methylene Chloride	49.6	46.8		ug/Kg		94	72 - 134
4-Methyl-2-pentanone (MIBK)	248	240		ug/Kg		97	69 - 160
Naphthalene	49.6	44.2		ug/Kg		89	70 - 147
N-Propylbenzene	49.6	48.8		ug/Kg		98	72 - 125
Styrene	49.6	51.6		ug/Kg		104	89 - 126
1,1,1,2-Tetrachloroethane	49.6	53.0		ug/Kg		107	90 - 130
1,1,1,2,2-Tetrachloroethane	49.6	47.4		ug/Kg		96	82 - 146
Tetrachloroethene	49.6	48.4		ug/Kg		98	78 - 132
Toluene	49.6	47.4		ug/Kg		96	83 - 128
1,2,3-Trichlorobenzene	49.6	46.4		ug/Kg		94	82 - 135
1,2,4-Trichlorobenzene	49.6	45.6		ug/Kg		92	70 - 131
1,1,1-Trichloroethane	49.6	53.4		ug/Kg		108	80 - 127
1,1,2-Trichloroethane	49.6	47.8		ug/Kg		96	82 - 125
Trichloroethene	49.6	48.2		ug/Kg		97	81 - 133
Trichlorofluoromethane	49.6	54.2		ug/Kg		109	71 - 139
1,2,3-Trichloropropane	49.6	50.4		ug/Kg		102	76 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	49.6	49.8		ug/Kg		100	70 - 130
1,2,4-Trimethylbenzene	49.6	50.2		ug/Kg		101	84 - 130
1,3,5-Trimethylbenzene	49.6	51.6		ug/Kg		104	82 - 131
Vinyl acetate	49.6	54.4		ug/Kg		110	38 - 176
Vinyl chloride	49.6	45.0		ug/Kg		91	58 - 125
m-Xylene & p-Xylene	99.2	98.2		ug/Kg		99	79 - 146
o-Xylene	49.6	50.0		ug/Kg		101	84 - 140
2,2-Dichloropropane	49.6	54.4		ug/Kg		110	73 - 162



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Lab Sample ID: LCS 720-99735/2-A**

**Matrix: Solid**

**Analysis Batch: 99727**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99735**

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	99		45 - 131
1,2-Dichloroethane-d4 (Surr)	107		60 - 140
Toluene-d8 (Surr)	100		58 - 140

**Lab Sample ID: LCS 720-99735/4-A**

**Matrix: Solid**

**Analysis Batch: 99727**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99735**

Analyte	Spike Added	LCS LCS		Unit	D	% Rec	% Rec.	
		Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO) -C5-C12	984	717		ug/Kg		73	61 - 128	

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	100		45 - 131
1,2-Dichloroethane-d4 (Surr)	109		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: LCSD 720-99735/3-A**

**Matrix: Solid**

**Analysis Batch: 99727**

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

**Prep Type: Total/NA**

**Prep Batch: 99735**

Analyte	Spike Added	LCSD LCSD		Unit	D	% Rec	% Rec.		RPD	
		Result	Qualifier				Limits	RPD	Limit	
Methyl tert-butyl ether	49.3	51.9		ug/Kg		105	71 - 144	2	20	
Acetone	247	168		ug/Kg		68	30 - 162	7	30	
Benzene	49.3	46.9		ug/Kg		95	82 - 124	1	20	
Dichlorobromomethane	49.3	54.6		ug/Kg		111	86 - 131	1	20	
Bromobenzene	49.3	49.7		ug/Kg		101	88 - 120	0	20	
Chlorobromomethane	49.3	49.1		ug/Kg		100	81 - 116	1	20	
Bromoform	49.3	53.3		ug/Kg		108	59 - 158	4	20	
Bromomethane	49.3	47.9		ug/Kg		97	59 - 132	1	20	
2-Butanone (MEK)	247	220		ug/Kg		89	61 - 150	10	20	
n-Butylbenzene	49.3	50.9		ug/Kg		103	80 - 142	1	20	
sec-Butylbenzene	49.3	50.1		ug/Kg		102	85 - 136	1	20	
tert-Butylbenzene	49.3	50.7		ug/Kg		103	71 - 130	1	20	
Carbon disulfide	49.3	44.6		ug/Kg		90	60 - 136	0	20	
Carbon tetrachloride	49.3	56.4		ug/Kg		114	81 - 138	1	20	
Chlorobenzene	49.3	46.9		ug/Kg		95	87 - 113	1	20	
Chloroethane	49.3	46.9		ug/Kg		95	65 - 126	1	20	
Chloroform	49.3	49.7		ug/Kg		101	77 - 127	2	20	
Chloromethane	49.3	42.6		ug/Kg		86	60 - 149	2	20	
2-Chlorotoluene	49.3	51.3		ug/Kg		104	80 - 138	1	20	
4-Chlorotoluene	49.3	50.7		ug/Kg		103	79 - 136	2	20	
Chlorodibromomethane	49.3	54.0		ug/Kg		110	75 - 146	2	20	
1,2-Dichlorobenzene	49.3	48.3		ug/Kg		98	84 - 130	0	20	
1,3-Dichlorobenzene	49.3	49.3		ug/Kg		100	84 - 131	1	20	
1,4-Dichlorobenzene	49.3	47.7		ug/Kg		97	85 - 125	1	20	
1,3-Dichloropropane	49.3	50.9		ug/Kg		103	79 - 140	2	20	
1,1-Dichloropropene	49.3	51.1		ug/Kg		104	70 - 130	0	20	
1,2-Dibromo-3-Chloropropane	49.3	51.9		ug/Kg		105	68 - 145	12	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Lab Sample ID: LCSD 720-99735/3-A**

**Matrix: Solid**

**Analysis Batch: 99727**

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

**Prep Type: Total/NA**

**Prep Batch: 99735**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Ethylene Dibromide	49.3	51.5		ug/Kg		104	79 - 140	3	20	
Dibromomethane	49.3	50.7		ug/Kg		103	80 - 139	0	20	
Dichlorodifluoromethane	49.3	41.0		ug/Kg		83	37 - 158	4	20	
1,1-Dichloroethane	49.3	48.1		ug/Kg		98	85 - 124	2	20	
1,2-Dichloroethane	49.3	52.1		ug/Kg		106	72 - 130	1	20	
1,1-Dichloroethene	49.3	44.2		ug/Kg		90	76 - 122	1	20	
cis-1,2-Dichloroethene	49.3	55.4		ug/Kg		112	87 - 138	1	20	
trans-1,2-Dichloroethene	49.3	40.8		ug/Kg		83	67 - 108	1	20	
1,2-Dichloropropane	49.3	47.3		ug/Kg		96	73 - 127	1	20	
cis-1,3-Dichloropropene	49.3	52.1		ug/Kg		106	68 - 147	0	20	
trans-1,3-Dichloropropene	49.3	55.0		ug/Kg		112	84 - 136	0	20	
Ethylbenzene	49.3	48.1		ug/Kg		98	80 - 137	0	20	
Hexachlorobutadiene	49.3	46.7		ug/Kg		95	72 - 132	1	20	
2-Hexanone	247	240		ug/Kg		97	60 - 161	10	20	
Isopropylbenzene	49.3	50.5		ug/Kg		102	88 - 128	1	20	
4-Isopropyltoluene	49.3	50.3		ug/Kg		102	85 - 133	1	20	
Methylene Chloride	49.3	46.7		ug/Kg		95	72 - 134	0	20	
4-Methyl-2-pentanone (MIBK)	247	260		ug/Kg		105	69 - 160	8	20	
Naphthalene	49.3	48.1		ug/Kg		98	70 - 147	8	20	
N-Propylbenzene	49.3	48.5		ug/Kg		98	72 - 125	1	20	
Styrene	49.3	51.5		ug/Kg		104	89 - 126	0	20	
1,1,1,2-Tetrachloroethane	49.3	52.5		ug/Kg		106	90 - 130	1	20	
1,1,1,2,2-Tetrachloroethane	49.3	49.9		ug/Kg		101	82 - 146	5	20	
Tetrachloroethene	49.3	48.1		ug/Kg		98	78 - 132	1	20	
Toluene	49.3	47.1		ug/Kg		96	83 - 128	1	20	
1,2,3-Trichlorobenzene	49.3	47.7		ug/Kg		97	82 - 135	3	20	
1,2,4-Trichlorobenzene	49.3	46.2		ug/Kg		94	70 - 131	1	20	
1,1,1-Trichloroethane	49.3	52.5		ug/Kg		106	80 - 127	2	20	
1,1,2-Trichloroethane	49.3	48.9		ug/Kg		99	82 - 125	2	20	
Trichloroethene	49.3	47.9		ug/Kg		97	81 - 133	1	20	
Trichlorofluoromethane	49.3	54.2		ug/Kg		110	71 - 139	0	20	
1,2,3-Trichloropropane	49.3	52.9		ug/Kg		107	76 - 146	5	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	49.3	48.9		ug/Kg		99	70 - 130	2	20	
1,2,4-Trimethylbenzene	49.3	49.5		ug/Kg		100	84 - 130	1	20	
1,3,5-Trimethylbenzene	49.3	51.1		ug/Kg		104	82 - 131	1	20	
Vinyl acetate	49.3	56.4		ug/Kg		114	38 - 176	4	20	
Vinyl chloride	49.3	44.2		ug/Kg		90	58 - 125	2	20	
m-Xylene & p-Xylene	98.6	97.6		ug/Kg		99	79 - 146	1	20	
o-Xylene	49.3	49.9		ug/Kg		101	84 - 140	0	20	
2,2-Dichloropropane	49.3	53.1		ug/Kg		108	73 - 162	2	20	

Surrogate	LCSD LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	101		45 - 131
1,2-Dichloroethane-d4 (Surr)	109		60 - 140
Toluene-d8 (Surr)	99		58 - 140

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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

**Lab Sample ID: LCSD 720-99735/5-A**

**Matrix: Solid**

**Analysis Batch: 99727**

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

**Prep Type: Total/NA**

**Prep Batch: 99735**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	996	731		ug/Kg		73	61 - 128	2	20

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	102		45 - 131
1,2-Dichloroethane-d4 (Surr)	111		60 - 140
Toluene-d8 (Surr)	99		58 - 140

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

**Lab Sample ID: MB 720-99741/1-A**

**Matrix: Solid**

**Analysis Batch: 99748**

**Client Sample ID: Method Blank**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99741**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/27/11 09:08	09/28/11 00:18	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/27/11 09:08	09/28/11 00:18	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.4		0 - 5	09/27/11 09:08	09/28/11 00:18	1
p-Terphenyl	89		38 - 148	09/27/11 09:08	09/28/11 00:18	1

**Lab Sample ID: LCS 720-99741/2-A**

**Matrix: Solid**

**Analysis Batch: 99748**

**Client Sample ID: Lab Control Sample**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99741**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Diesel Range Organics [C10-C28]	82.9	73.9		mg/Kg		89	50 - 150

Surrogate	LCS % Recovery	LCS Qualifier	Limits
p-Terphenyl	100		38 - 148

**Lab Sample ID: LCSD 720-99741/3-A**

**Matrix: Solid**

**Analysis Batch: 99748**

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

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99741**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	83.4	62.1		mg/Kg		74	50 - 150	17	35

Surrogate	LCSD % Recovery	LCSD Qualifier	Limits
p-Terphenyl	101		38 - 148

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

## GC/MS VOA

### Analysis Batch: 99727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37668-1	PIT 1-B-SW	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-2	PIT 1-B-NW	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-3	PIT 1-B-NE	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-4	PIT 1-B-SE	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-5	PIT 1-SW-E1	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-6	PIT 1-SW-E2	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-7	PIT 1-SW-N1	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-8	PIT 1-SW-N2	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-9	PIT 1-SW-S1	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-10	PIT 1-SW-S2	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-11	PIT 1-SW-W1	Total/NA	Solid	8260B/CA_LUFT MS	99735
720-37668-12	PIT 1-SW-W2	Total/NA	Solid	8260B/CA_LUFT MS	99735
LCS 720-99735/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99735
LCS 720-99735/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99735
LCSD 720-99735/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99735
LCSD 720-99735/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99735
MB 720-99735/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	99735

### Prep Batch: 99735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37668-1	PIT 1-B-SW	Total/NA	Solid	5030B	
720-37668-2	PIT 1-B-NW	Total/NA	Solid	5030B	
720-37668-3	PIT 1-B-NE	Total/NA	Solid	5030B	
720-37668-4	PIT 1-B-SE	Total/NA	Solid	5030B	
720-37668-5	PIT 1-SW-E1	Total/NA	Solid	5030B	
720-37668-6	PIT 1-SW-E2	Total/NA	Solid	5030B	
720-37668-7	PIT 1-SW-N1	Total/NA	Solid	5030B	
720-37668-8	PIT 1-SW-N2	Total/NA	Solid	5030B	
720-37668-9	PIT 1-SW-S1	Total/NA	Solid	5030B	
720-37668-10	PIT 1-SW-S2	Total/NA	Solid	5030B	
720-37668-11	PIT 1-SW-W1	Total/NA	Solid	5030B	
720-37668-12	PIT 1-SW-W2	Total/NA	Solid	5030B	
LCS 720-99735/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-99735/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 720-99735/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
LCSD 720-99735/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-99735/1-A	Method Blank	Total/NA	Solid	5030B	

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

## GC Semi VOA

### Prep Batch: 99741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37668-1	PIT 1-B-SW	Silica Gel Cleanup	Solid	3546	
720-37668-2	PIT 1-B-NW	Silica Gel Cleanup	Solid	3546	
720-37668-3	PIT 1-B-NE	Silica Gel Cleanup	Solid	3546	
720-37668-4	PIT 1-B-SE	Silica Gel Cleanup	Solid	3546	
720-37668-5	PIT 1-SW-E1	Silica Gel Cleanup	Solid	3546	
720-37668-6	PIT 1-SW-E2	Silica Gel Cleanup	Solid	3546	
720-37668-7	PIT 1-SW-N1	Silica Gel Cleanup	Solid	3546	
720-37668-8	PIT 1-SW-N2	Silica Gel Cleanup	Solid	3546	
720-37668-9	PIT 1-SW-S1	Silica Gel Cleanup	Solid	3546	
720-37668-10	PIT 1-SW-S2	Silica Gel Cleanup	Solid	3546	
720-37668-11	PIT 1-SW-W1	Silica Gel Cleanup	Solid	3546	
720-37668-12	PIT 1-SW-W2	Silica Gel Cleanup	Solid	3546	
LCS 720-99741/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCS 720-99741/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-99741/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

### Analysis Batch: 99747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37668-1	PIT 1-B-SW	Silica Gel Cleanup	Solid	8015B	99741
720-37668-2	PIT 1-B-NW	Silica Gel Cleanup	Solid	8015B	99741
720-37668-3	PIT 1-B-NE	Silica Gel Cleanup	Solid	8015B	99741
720-37668-4	PIT 1-B-SE	Silica Gel Cleanup	Solid	8015B	99741
720-37668-5	PIT 1-SW-E1	Silica Gel Cleanup	Solid	8015B	99741
720-37668-6	PIT 1-SW-E2	Silica Gel Cleanup	Solid	8015B	99741
720-37668-7	PIT 1-SW-N1	Silica Gel Cleanup	Solid	8015B	99741
720-37668-12	PIT 1-SW-W2	Silica Gel Cleanup	Solid	8015B	99741

### Analysis Batch: 99748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37668-8	PIT 1-SW-N2	Silica Gel Cleanup	Solid	8015B	99741
720-37668-9	PIT 1-SW-S1	Silica Gel Cleanup	Solid	8015B	99741
720-37668-10	PIT 1-SW-S2	Silica Gel Cleanup	Solid	8015B	99741
720-37668-11	PIT 1-SW-W1	Silica Gel Cleanup	Solid	8015B	99741
LCS 720-99741/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	99741
LCS 720-99741/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	99741
MB 720-99741/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	99741

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

## Client Sample ID: PIT 1-B-SW

Lab Sample ID: 720-37668-1

Date Collected: 09/27/11 11:30

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 13:45	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 09:32	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99747	09/27/11 21:27	EC	TAL SF

## Client Sample ID: PIT 1-B-NW

Lab Sample ID: 720-37668-2

Date Collected: 09/27/11 11:29

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 14:16	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 09:32	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99747	09/27/11 21:52	EC	TAL SF

## Client Sample ID: PIT 1-B-NE

Lab Sample ID: 720-37668-3

Date Collected: 09/27/11 11:24

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 14:45	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 09:32	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99747	09/27/11 22:16	EC	TAL SF

## Client Sample ID: PIT 1-B-SE

Lab Sample ID: 720-37668-4

Date Collected: 09/27/11 11:20

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 15:16	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 14:50	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99747	09/27/11 22:40	EC	TAL SF

## Client Sample ID: PIT 1-SW-E1

Lab Sample ID: 720-37668-5

Date Collected: 09/27/11 11:15

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 15:46	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 14:50	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99747	09/27/11 23:05	EC	TAL SF

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

## Client Sample ID: PIT 1-SW-E2

Lab Sample ID: 720-37668-6

Date Collected: 09/27/11 11:18

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 16:16	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 14:50	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99747	09/27/11 23:29	EC	TAL SF

## Client Sample ID: PIT 1-SW-N1

Lab Sample ID: 720-37668-7

Date Collected: 09/27/11 11:32

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 16:47	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 14:50	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99747	09/27/11 23:53	EC	TAL SF

## Client Sample ID: PIT 1-SW-N2

Lab Sample ID: 720-37668-8

Date Collected: 09/27/11 11:34

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 17:17	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 14:50	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99748	09/27/11 20:38	EC	TAL SF

## Client Sample ID: PIT 1-SW-S1

Lab Sample ID: 720-37668-9

Date Collected: 09/27/11 11:38

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 17:47	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 14:50	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99748	09/27/11 21:02	EC	TAL SF

## Client Sample ID: PIT 1-SW-S2

Lab Sample ID: 720-37668-10

Date Collected: 09/27/11 11:36

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 18:17	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 16:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99748	09/27/11 21:27	EC	TAL SF

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

## Client Sample ID: PIT 1-SW-W1

Lab Sample ID: 720-37668-11

Date Collected: 09/27/11 11:45

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 18:48	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 16:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99748	09/27/11 21:52	EC	TAL SF

## Client Sample ID: PIT 1-SW-W2

Lab Sample ID: 720-37668-12

Date Collected: 09/27/11 11:40

Matrix: Solid

Date Received: 09/27/11 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99735	09/27/11 13:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99727	09/27/11 19:18	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99741	09/27/11 16:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99747	09/28/11 00:18	EC	TAL SF

### Laboratory References:

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



# Certification Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

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

- 1
- 2
- 3
- 4
- 5
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- 8
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- 13
- 14

# Method Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

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 San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



# Sample Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37668-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-37668-1	PIT 1-B-SW	Solid	09/27/11 11:30	09/27/11 12:35
720-37668-2	PIT 1-B-NW	Solid	09/27/11 11:29	09/27/11 12:35
720-37668-3	PIT 1-B-NE	Solid	09/27/11 11:24	09/27/11 12:35
720-37668-4	PIT 1-B-SE	Solid	09/27/11 11:20	09/27/11 12:35
720-37668-5	PIT 1-SW-E1	Solid	09/27/11 11:15	09/27/11 12:35
720-37668-6	PIT 1-SW-E2	Solid	09/27/11 11:18	09/27/11 12:35
720-37668-7	PIT 1-SW-N1	Solid	09/27/11 11:32	09/27/11 12:35
720-37668-8	PIT 1-SW-N2	Solid	09/27/11 11:34	09/27/11 12:35
720-37668-9	PIT 1-SW-S1	Solid	09/27/11 11:38	09/27/11 12:35
720-37668-10	PIT 1-SW-S2	Solid	09/27/11 11:36	09/27/11 12:35
720-37668-11	PIT 1-SW-W1	Solid	09/27/11 11:45	09/27/11 12:35
720-37668-12	PIT 1-SW-W2	Solid	09/27/11 11:40	09/27/11 12:35



**770-37668**

09/28/2011

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

Attn: <u>Richard Gandolfo / Jeff Adams</u>		TPH EPA <input checked="" type="checkbox"/> 8260B <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE TEPH EPA 8015M* <input checked="" type="checkbox"/> Silica Gel <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> 5 Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol (HVOCs) EPA 8021 by 8260B Volatile Organics GC/MS (VOCs) <input checked="" type="checkbox"/> EPA 8260B <input type="checkbox"/> 624 Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625 Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608 PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310 CAM17 Metals (EPA 6010/7470/7471) Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: Low Level Metals by EPA 200.8/6020 (ICP-MS): <input type="checkbox"/> WET (STLC) <input type="checkbox"/> TCLP Hexavalent Chromium <input type="checkbox"/> pH (24h hold time for H <sub>2</sub> O) Spec. Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> TDS Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>
Company: <u>ENGEO</u>		
Address:		
Phone:	Email:	
Bill To: <u>on file</u>	Sampled By: <u>R. Gandolfo</u>	
Attn:	Phone:	

Sample ID	Date	Time	Mat rx	Preser v	TPH EPA <input checked="" type="checkbox"/> 8260B	Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	TEPH EPA 8015M* <input checked="" type="checkbox"/> Silica Gel	Diesel <input checked="" type="checkbox"/> Motor Oil <input type="checkbox"/> Other	EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX	5 Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol	(HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs)	EPA 8260B <input type="checkbox"/> 624	Semivolatiles GC/MS	EPA 8270 <input type="checkbox"/> 625	Oil and Grease <input type="checkbox"/> Petroleum	(EPA 1664) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608	PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other:	Low Level Metals by EPA 200.8/6020 (ICP-MS):	WET (STLC) <input type="checkbox"/> TCLP <input type="checkbox"/>	Hexavalent Chromium <input type="checkbox"/> pH (24h hold time for H <sub>2</sub> O) <input type="checkbox"/>	Spec. Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> TDS <input type="checkbox"/>	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub> <input type="checkbox"/>	Number of Containers		
Pit 1-B-SW	9/27/11	11:30	S	ice	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
Pit 1-B-NW		11:29			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	
Pit 1-B-NE		11:29			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	
Pit 1-B-SE		11:20			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	
Pit 1-SW-E1		11:15			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	
Pit 1-SW-E2		11:18			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	
Pit 1-SW-N1		11:32			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	
Pit 1-SW-N2		11:34			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	
Pit 1-SW-S1		11:35			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	
Pit 1-SW-S2		11:36			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	

**RUSH**

Project Info		Sample Receipt		1) Relinquished by:		2) Relinquished by:		3) Relinquished by:			
Project Name: <u>Macedo</u>	# of Containers: <u>12</u>	Signature: <u>Richard Gandolfo</u>	Time: <u>12:35</u>	Signature:	Time:	Signature:	Time:	Signature:	Time:		
Project#: <u>7380,000,000</u>	Head Space:	Printed Name: <u>Richard Gandolfo</u>	Date: <u>9/27/11</u>	Printed Name:	Date:	Printed Name:	Date:	Printed Name:	Date:		
PO#:	Temp: <u>3.1°C</u>	Company: <u>ENGEO</u>		Company:		Company:		Company:			
Credit Card#:	Conforms to record:										
T A T	5 Day	3 Day	2 Day	1 Day	Other:	1) Received by:		2) Received by:		3) Received by:	
Report: <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDF						Signature: <u>John Mulley</u>	Time: <u>1235</u>	Signature:	Time:	Signature:	Time:
Special Instructions / Comments: <input type="checkbox"/> Global ID _____						Printed Name: <u>John Mulley</u>	Date: <u>9-27-11</u>	Printed Name:	Date:	Printed Name:	Date:
						Company: <u>ENGEO</u>		Company:		Company:	

See Terms and Conditions on reverse  
 \*TestAmerica SF reports 8015M from C<sub>2</sub>-C<sub>24</sub> (industry norm). Default for 8015B is C<sub>10</sub>-C<sub>25</sub>

Page 42 of 44

**770-37668**

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

Attn: <u>R. Gondolf / J. Adam</u>		TPH EPA 8260B <input checked="" type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE TEPH EPA 8015M* <input checked="" type="checkbox"/> Silica Gel <input type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other _____ EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> 5 Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol (HVOCs) EPA 8021 by 8260B Volatile Organics GC/MS (VOCs) <input checked="" type="checkbox"/> EPA 8260B <input type="checkbox"/> 624 Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625 Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608 PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608 PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310 CAM17 Metals (EPA 601074707471) Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____ Low Level Metals by EPA 200.8/6020 (ICP-MS): <input type="checkbox"/> W.E.T (STLC) <input type="checkbox"/> TCLP Hexavalent Chromium <input type="checkbox"/> pH (24h hold time for H <sub>2</sub> O) Spec. Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> TDS Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>
Company: <u>ENGEO</u>		
Address:		
Phone:	Email:	
Bill To: <u>on file</u>	Sampled By: <u>R. Gondolf</u>	
Attn:	Phone:	

Sample ID	Date	Time	Mat rix	Preserv						Number of Containers	
<u>Pit 1 - SW - W1</u>	<u>9-27-11</u>	<u>11:45</u>	<u>S</u>	<u>Ice</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>1</u>
<u>Pit 1 - SW - W2</u>	<u>9-27-11</u>	<u>11:46</u>	<u>S</u>	<u>Ice</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>1</u>
RUSH											

Project Info	Sample Receipt	1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Project Name: <u>Macedo</u>	# of Containers: <u>12</u>	Signature: <u>[Signature]</u> Time: <u>12:35</u>	Signature: _____ Time: _____	Signature: _____ Time: _____
Project#: <u>7380.000.003</u>	Head Space: _____	Printed Name: <u>Richard Gondolf</u> Date: <u>9/27/11</u>	Printed Name: _____ Date: _____	Printed Name: _____ Date: _____
PO#: _____	Temp: <u>3.12</u>	Company: <u>ENGEO</u>	Company: _____	Company: _____
Credit Card#: _____	Conforms to record: _____			
TAT: 5 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 1 Day <input checked="" type="checkbox"/> Other: _____		1) Received by: <u>[Signature]</u> Time: <u>12:35</u>	2) Received by: _____	3) Received by: _____
Report <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDF		Signature: <u>[Signature]</u> Time: <u>9-27-11</u>	Signature: _____ Time: _____	Signature: _____ Time: _____
Special Instructions / Comments: <input type="checkbox"/> Global ID _____		Printed Name: <u>John Mulken</u> Date: _____	Printed Name: _____ Date: _____	Printed Name: _____ Date: _____
		Company: <u>to Amin</u>	Company: _____	Company: _____

See Terms and Conditions on reverse  
 \*TestAmerica SF reports 8015M from C<sub>6</sub>-C<sub>24</sub> (industry norm). Default for 8015B is C<sub>10</sub>-C<sub>28</sub>

# Login Sample Receipt Checklist

Client: Engeo, Inc.

Job Number: 720-37668-1

Login Number: 37668

List Source: TestAmerica San Francisco

List Number: 1

Creator: Mullen, Joan

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

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 720-37712-1  
Client Project/Site: Macedo

For:  
Engeo, Inc.  
580 N Wilma Avenue  
Suite A  
Ripon, California 95366-9502

Attn: Mr. Richard Gandolfo



---

Authorized for release by:  
09/29/2011 04:13:07 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.*





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# Definitions/Glossary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

## Qualifiers

### Metals

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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
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: Macedo

TestAmerica Job ID: 720-37712-1

---

**Job ID: 720-37712-1**

---

**Laboratory: TestAmerica San Francisco**

---

**Narrative**

**Job Narrative**  
720-37712-1

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**GC/MS VOA**

No other analytical or quality issues were noted.

**GC VOA**

No analytical or quality issues were noted.

**GC Semi VOA**

No analytical or quality issues were noted.

**Metals**

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for prep batch 99873 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

**Organic Prep**

No analytical or quality issues were noted.



# Detection Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

Client Sample ID: SP2-BASE-6

Lab Sample ID: 720-37712-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	4.0		2.0		mg/Kg	1		8015B	Silica Gel Clear
Arsenic	4.4		3.7		mg/Kg	4		6010B	Total/NA
Barium	160		1.8		mg/Kg	4		6010B	Total/NA
Chromium	25		1.8		mg/Kg	4		6010B	Total/NA
Cobalt	11		0.73		mg/Kg	4		6010B	Total/NA
Copper	14		5.5		mg/Kg	4		6010B	Total/NA
Lead	10		1.8		mg/Kg	4		6010B	Total/NA
Nickel	30		1.8		mg/Kg	4		6010B	Total/NA
Vanadium	33		1.8		mg/Kg	4		6010B	Total/NA
Zinc	41		5.5		mg/Kg	4		6010B	Total/NA
Mercury	0.067		0.010		mg/Kg	1		7471A	Total/NA

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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

**Client Sample ID: SP2-BASE-6**  
**Date Collected: 09/28/11 11:00**  
**Date Received: 09/28/11 15:43**

**Lab Sample ID: 720-37712-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.8		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
Ethylbenzene	ND		4.8		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
Toluene	ND		4.8		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
Xylenes, Total	ND		9.6		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
TBA	ND		9.6		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
Methyl tert-butyl ether	ND		4.8		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
Ethyl tert-butyl ether	ND		4.8		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
TAME	ND		4.8		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
DIPE	ND		4.8		ug/Kg		09/28/11 18:00	09/28/11 21:44	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	93		45 - 131				09/28/11 18:00	09/28/11 21:44	1
1,2-Dichloroethane-d4 (Surr)	103		60 - 140				09/28/11 18:00	09/28/11 21:44	1
Toluene-d8 (Surr)	96		58 - 140				09/28/11 18:00	09/28/11 21:44	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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

Client Sample ID: SP2-BASE-6  
Date Collected: 09/28/11 11:00  
Date Received: 09/28/11 15:43

Lab Sample ID: 720-37712-1  
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4.0		2.0		mg/Kg		09/28/11 16:53	09/29/11 03:36	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/28/11 16:53	09/29/11 03:36	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.4		0 - 1				09/28/11 16:53	09/29/11 03:36	1
p-Terphenyl	77		38 - 148				09/28/11 16:53	09/29/11 03:36	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

## Method: 6010B - Metals (ICP)

Client Sample ID: SP2-BASE-6  
Date Collected: 09/28/11 11:00  
Date Received: 09/28/11 15:43

Lab Sample ID: 720-37712-1  
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.8		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
<b>Arsenic</b>	<b>4.4</b>		3.7		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
<b>Barium</b>	<b>160</b>		1.8		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
Beryllium	ND		0.37		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
Cadmium	ND		0.46		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
<b>Chromium</b>	<b>25</b>		1.8		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
<b>Cobalt</b>	<b>11</b>		0.73		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
<b>Copper</b>	<b>14</b>		5.5		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
<b>Lead</b>	<b>10</b>		1.8		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
Molybdenum	ND		1.8		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
<b>Nickel</b>	<b>30</b>		1.8		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
Selenium	ND		3.7		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
Silver	ND		0.92		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
Thallium	ND		1.8		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
<b>Vanadium</b>	<b>33</b>		1.8		mg/Kg		09/28/11 19:51	09/29/11 14:14	4
<b>Zinc</b>	<b>41</b>		5.5		mg/Kg		09/28/11 19:51	09/29/11 14:14	4

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

## Method: 7471A - Mercury (CVAA)

Client Sample ID: SP2-BASE-6  
Date Collected: 09/28/11 11:00  
Date Received: 09/28/11 15:43

Lab Sample ID: 720-37712-1  
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.067		0.010		mg/Kg		09/28/11 20:28	09/28/11 22:42	1

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



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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

**Lab Sample ID: MB 720-99876/1-A**

**Matrix: Solid**

**Analysis Batch: 99863**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99876**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg		09/28/11 18:00	09/28/11 19:20	1
Ethylbenzene	ND		5.0		ug/Kg		09/28/11 18:00	09/28/11 19:20	1
Toluene	ND		5.0		ug/Kg		09/28/11 18:00	09/28/11 19:20	1
Xylenes, Total	ND		10		ug/Kg		09/28/11 18:00	09/28/11 19:20	1
Gasoline Range Organics (GRO)	ND		250		ug/Kg		09/28/11 18:00	09/28/11 19:20	1
-C5-C12									
TBA	ND		10		ug/Kg		09/28/11 18:00	09/28/11 19:20	1
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/28/11 18:00	09/28/11 19:20	1
Ethyl tert-butyl ether	ND		5.0		ug/Kg		09/28/11 18:00	09/28/11 19:20	1
TAME	ND		5.0		ug/Kg		09/28/11 18:00	09/28/11 19:20	1
DIPE	ND		5.0		ug/Kg		09/28/11 18:00	09/28/11 19:20	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		45 - 131	09/28/11 18:00	09/28/11 19:20	1
1,2-Dichloroethane-d4 (Surr)	98		60 - 140	09/28/11 18:00	09/28/11 19:20	1
Toluene-d8 (Surr)	97		58 - 140	09/28/11 18:00	09/28/11 19:20	1

**Lab Sample ID: LCS 720-99876/2-A**

**Matrix: Solid**

**Analysis Batch: 99863**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99876**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Benzene	50.0	49.8		ug/Kg		100	82 - 124
Ethylbenzene	50.0	52.2		ug/Kg		104	80 - 137
Toluene	50.0	51.2		ug/Kg		102	83 - 128
m-Xylene & p-Xylene	100	106		ug/Kg		106	79 - 146
o-Xylene	50.0	51.6		ug/Kg		103	84 - 140
TBA	1000	957		ug/Kg		96	63 - 119
Methyl tert-butyl ether	50.0	47.0		ug/Kg		94	71 - 144
Ethyl tert-butyl ether	50.0	44.8		ug/Kg		90	76 - 129
TAME	50.0	48.4		ug/Kg		97	74 - 140
DIPE	50.0	42.4		ug/Kg		85	83 - 131

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	99		45 - 131
1,2-Dichloroethane-d4 (Surr)	91		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: LCS 720-99876/4-A**

**Matrix: Solid**

**Analysis Batch: 99863**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99876**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Gasoline Range Organics (GRO)	1000	893		ug/Kg		89	61 - 128
-C5-C12							

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	103		45 - 131
1,2-Dichloroethane-d4 (Surr)	99		60 - 140

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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

**Lab Sample ID: LCS 720-99876/4-A**  
**Matrix: Solid**  
**Analysis Batch: 99863**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 99876**

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
Toluene-d8 (Surr)	99		58 - 140

**Lab Sample ID: LCSD 720-99876/3-A**  
**Matrix: Solid**  
**Analysis Batch: 99863**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99876**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Benzene	50.0	50.4		ug/Kg		101	82 - 124	1	20	
Ethylbenzene	50.0	53.0		ug/Kg		106	80 - 137	2	20	
Toluene	50.0	52.0		ug/Kg		104	83 - 128	2	20	
m-Xylene & p-Xylene	100	107		ug/Kg		107	79 - 146	2	20	
o-Xylene	50.0	52.4		ug/Kg		105	84 - 140	2	20	
TBA	1000	1000		ug/Kg		100	63 - 119	4	20	
Methyl tert-butyl ether	50.0	50.2		ug/Kg		100	71 - 144	7	20	
Ethyl tert-butyl ether	50.0	45.8		ug/Kg		92	76 - 129	2	20	
TAME	50.0	49.4		ug/Kg		99	74 - 140	2	20	
DIPE	50.0	43.8		ug/Kg		88	83 - 131	3	20	

Surrogate	LCSD LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	100		45 - 131
1,2-Dichloroethane-d4 (Surr)	93		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: LCSD 720-99876/5-A**  
**Matrix: Solid**  
**Analysis Batch: 99863**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99876**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Gasoline Range Organics (GRO) -C5-C12	1000	874		ug/Kg		87	61 - 128	2	20	

Surrogate	LCSD LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	102		45 - 131
1,2-Dichloroethane-d4 (Surr)	97		60 - 140
Toluene-d8 (Surr)	100		58 - 140

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

**Lab Sample ID: MB 720-99866/1-A**  
**Matrix: Solid**  
**Analysis Batch: 99813**

**Client Sample ID: Method Blank**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99866**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		2.0		mg/Kg		09/28/11 16:53	09/29/11 04:49	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/28/11 16:53	09/29/11 04:49	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
Capric Acid (Surr)	0.01		0 - 1	09/28/11 16:53	09/29/11 04:49	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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

**Lab Sample ID: MB 720-99866/1-A**  
**Matrix: Solid**  
**Analysis Batch: 99813**

**Client Sample ID: Method Blank**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99866**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
p-Terphenyl	101		38 - 148	09/28/11 16:53	09/29/11 04:49	1

**Lab Sample ID: LCS 720-99866/2-A**  
**Matrix: Solid**  
**Analysis Batch: 99813**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99866**

Analyte	Spike Added	LCS LCS		Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Diesel Range Organics [C10-C28]	82.5	61.1		mg/Kg		74	50 - 150
Surrogate	LCS LCS		Limits				
% Recovery	Qualifier						
p-Terphenyl	92		38 - 148				

**Lab Sample ID: LCSD 720-99866/3-A**  
**Matrix: Solid**  
**Analysis Batch: 99813**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99866**

Analyte	Spike Added	LCSD LCSD		Unit	D	% Rec	% Rec. Limits	RPD	
		Result	Qualifier					RPD	Limit
Diesel Range Organics [C10-C28]	82.7	62.1		mg/Kg		75	50 - 150	2	35
Surrogate	LCSD LCSD		Limits						
% Recovery	Qualifier								
p-Terphenyl	92		38 - 148						

**Lab Sample ID: 720-37712-1 MS**  
**Matrix: Solid**  
**Analysis Batch: 99813**

**Client Sample ID: SP2-BASE-6**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99866**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	% Rec	% Rec. Limits
				Result	Qualifier				
Diesel Range Organics [C10-C28]	4.0		83.0	57.3		mg/Kg		64	50 - 150
Surrogate	MS MS		Limits						
% Recovery	Qualifier								
p-Terphenyl	77		38 - 148						

**Lab Sample ID: 720-37712-1 MSD**  
**Matrix: Solid**  
**Analysis Batch: 99813**

**Client Sample ID: SP2-BASE-6**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99866**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	% Rec	% Rec. Limits	RPD	
				Result	Qualifier					RPD	Limit
Diesel Range Organics [C10-C28]	4.0		83.1	54.8		mg/Kg		61	50 - 150	5	20
Surrogate	MSD MSD		Limits								
% Recovery	Qualifier										
p-Terphenyl	74		38 - 148								

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 720-99873/1-A**  
**Matrix: Solid**  
**Analysis Batch: 99930**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 99873**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.50		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Arsenic	ND		1.0		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Barium	ND		0.50		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Beryllium	ND		0.10		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Cadmium	ND		0.13		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Chromium	ND		0.50		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Cobalt	ND		0.20		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Copper	ND		1.5		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Lead	ND		0.50		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Molybdenum	ND		0.50		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Nickel	ND		0.50		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Selenium	ND		1.0		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Silver	ND		0.25		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Thallium	ND		0.50		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Vanadium	ND		0.50		mg/Kg		09/28/11 19:51	09/29/11 13:52	1
Zinc	ND		1.5		mg/Kg		09/28/11 19:51	09/29/11 13:52	1

**Lab Sample ID: LCS 720-99873/2-A**  
**Matrix: Solid**  
**Analysis Batch: 99930**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 99873**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	
Antimony	50.0	48.2		mg/Kg		96	80 - 120	
Arsenic	50.0	49.0		mg/Kg		98	80 - 120	
Barium	50.0	50.2		mg/Kg		100	80 - 120	
Beryllium	50.0	46.8		mg/Kg		94	80 - 120	
Cadmium	50.0	53.2		mg/Kg		106	80 - 120	
Chromium	50.0	50.5		mg/Kg		101	80 - 120	
Cobalt	50.0	51.2		mg/Kg		102	80 - 120	
Copper	50.0	48.4		mg/Kg		97	80 - 120	
Lead	50.0	52.8		mg/Kg		106	80 - 120	
Molybdenum	50.0	52.2		mg/Kg		104	80 - 120	
Nickel	50.0	52.8		mg/Kg		106	80 - 120	
Selenium	50.0	48.8		mg/Kg		98	80 - 120	
Silver	25.0	23.1		mg/Kg		92	80 - 120	
Thallium	50.0	53.2		mg/Kg		106	80 - 120	
Vanadium	50.0	50.7		mg/Kg		101	80 - 120	
Zinc	50.0	50.7		mg/Kg		101	80 - 120	

**Lab Sample ID: LCSD 720-99873/3-A**  
**Matrix: Solid**  
**Analysis Batch: 99930**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99873**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD
							Limits	RPD	Limit
Antimony	50.0	46.9		mg/Kg		94	80 - 120	3	20
Arsenic	50.0	47.6		mg/Kg		95	80 - 120	3	20
Barium	50.0	49.1		mg/Kg		98	80 - 120	2	20
Beryllium	50.0	45.6		mg/Kg		91	80 - 120	3	20
Cadmium	50.0	51.5		mg/Kg		103	80 - 120	3	20
Chromium	50.0	48.9		mg/Kg		98	80 - 120	3	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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

**Lab Sample ID: LCSD 720-99873/3-A**  
**Matrix: Solid**  
**Analysis Batch: 99930**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99873**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD Limit
							Limits	RPD	
Cobalt	50.0	49.6		mg/Kg		99	80 - 120	3	20
Copper	50.0	46.8		mg/Kg		94	80 - 120	3	20
Lead	50.0	51.1		mg/Kg		102	80 - 120	3	20
Molybdenum	50.0	50.6		mg/Kg		101	80 - 120	3	20
Nickel	50.0	51.1		mg/Kg		102	80 - 120	3	20
Selenium	50.0	47.4		mg/Kg		95	80 - 120	3	20
Silver	25.0	22.5		mg/Kg		90	80 - 120	3	20
Thallium	50.0	51.4		mg/Kg		103	80 - 120	3	20
Vanadium	50.0	49.1		mg/Kg		98	80 - 120	3	20
Zinc	50.0	49.3		mg/Kg		99	80 - 120	3	20

**Lab Sample ID: LCSSRM 720-99873/10-A**  
**Matrix: Solid**  
**Analysis Batch: 99930**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 99873**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	% Rec	% Rec.		RPD Limit
							Limits	RPD	
Antimony	105	59.0		mg/Kg		56	11 - 101		
Arsenic	79.4	67.5		mg/Kg		85	69 - 119		
Barium	391	316		mg/Kg		81	61 - 117		
Beryllium	304	243		mg/Kg		80	56 - 102		
Cadmium	48.3	41.7		mg/Kg		86	67 - 118		
Chromium	171	147		mg/Kg		86	67 - 121		
Cobalt	59.2	51.2		mg/Kg		87	64 - 133		
Copper	327	280		mg/Kg		86	68 - 126		
Lead	181	151		mg/Kg		83	62 - 113		
Molybdenum	156	139		mg/Kg		89	62 - 128		
Nickel	76.0	65.0		mg/Kg		86	65 - 117		
Selenium	76.9	62.8		mg/Kg		82	63 - 126		
Silver	29.1	23.8		mg/Kg		82	51 - 130		
Thallium	192	163		mg/Kg		85	64 - 124		
Vanadium	213	190		mg/Kg		89	67 - 123		
Zinc	256	216		mg/Kg		85	62 - 110		

**Lab Sample ID: 720-37712-1 MS**  
**Matrix: Solid**  
**Analysis Batch: 99930**

**Client Sample ID: SP2-BASE-6**  
**Prep Type: Total/NA**  
**Prep Batch: 99873**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	% Rec	% Rec.	
				Result	Qualifier				Limits	RPD
Antimony	ND		49.5	17.0	F	mg/Kg		34	75 - 125	
Arsenic	4.4		49.5	49.6		mg/Kg		91	75 - 125	
Barium	160		49.5	210		mg/Kg		94	75 - 125	
Beryllium	ND		49.5	44.0		mg/Kg		88	75 - 125	
Cadmium	ND		49.5	49.8		mg/Kg		100	75 - 125	
Chromium	25		49.5	73.7		mg/Kg		99	75 - 125	
Cobalt	11		49.5	58.7		mg/Kg		97	75 - 125	
Copper	14		49.5	61.3		mg/Kg		96	75 - 125	
Lead	10		49.5	60.0		mg/Kg		100	75 - 125	
Molybdenum	ND		49.5	42.4		mg/Kg		85	75 - 125	
Nickel	30		49.5	80.2		mg/Kg		101	75 - 125	
Selenium	ND		49.5	44.9		mg/Kg		91	75 - 125	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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

Lab Sample ID: 720-37712-1 MS

Matrix: Solid

Analysis Batch: 99930

Client Sample ID: SP2-BASE-6

Prep Type: Total/NA

Prep Batch: 99873

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD
Silver	ND		24.8	22.5		mg/Kg		91	75 - 125	
Thallium	ND		49.5	48.9		mg/Kg		99	75 - 125	
Vanadium	33		49.5	82.9		mg/Kg		101	75 - 125	
Zinc	41		49.5	91.2		mg/Kg		102	75 - 125	

Lab Sample ID: 720-37712-1 MSD

Matrix: Solid

Analysis Batch: 99930

Client Sample ID: SP2-BASE-6

Prep Type: Total/NA

Prep Batch: 99873

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.		RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
Antimony	ND		49.0	15.3	F	mg/Kg		30	75 - 125	11	20
Arsenic	4.4		49.0	47.1		mg/Kg		87	75 - 125	5	20
Barium	160		49.0	200		mg/Kg		75	75 - 125	5	20
Beryllium	ND		49.0	43.3		mg/Kg		88	75 - 125	2	20
Cadmium	ND		49.0	47.7		mg/Kg		97	75 - 125	4	20
Chromium	25		49.0	71.0		mg/Kg		95	75 - 125	4	20
Cobalt	11		49.0	56.2		mg/Kg		93	75 - 125	4	20
Copper	14		49.0	59.6		mg/Kg		94	75 - 125	3	20
Lead	10		49.0	56.6		mg/Kg		95	75 - 125	6	20
Molybdenum	ND		49.0	40.1		mg/Kg		81	75 - 125	6	20
Nickel	30		49.0	75.2		mg/Kg		92	75 - 125	6	20
Selenium	ND		49.0	42.6		mg/Kg		87	75 - 125	5	20
Silver	ND		24.5	22.0		mg/Kg		90	75 - 125	2	20
Thallium	ND		49.0	47.0		mg/Kg		96	75 - 125	4	20
Vanadium	33		49.0	79.1		mg/Kg		94	75 - 125	5	20
Zinc	41		49.0	85.9		mg/Kg		93	75 - 125	6	20

## Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 720-99874/1-A

Matrix: Solid

Analysis Batch: 99884

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 99874

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.010		mg/Kg		09/28/11 20:28	09/28/11 22:31	1

Lab Sample ID: LCS 720-99874/2-A

Matrix: Solid

Analysis Batch: 99884

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 99874

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.	
							Result	Qualifier
Mercury	0.833	0.679		mg/Kg		82	80 - 120	

Lab Sample ID: LCSD 720-99874/3-A

Matrix: Solid

Analysis Batch: 99884

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 99874

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec.		RPD
							Result	Qualifier	Limits
Mercury	0.833	0.680		mg/Kg		82	80 - 120	0	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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

Lab Sample ID: 720-37712-1 MS

Matrix: Solid

Analysis Batch: 99884

Client Sample ID: SP2-BASE-6

Prep Type: Total/NA

Prep Batch: 99874

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	Limits
Mercury	0.067		0.735	0.634		mg/Kg		77	75 - 125

Lab Sample ID: 720-37712-1 MSD

Matrix: Solid

Analysis Batch: 99884

Client Sample ID: SP2-BASE-6

Prep Type: Total/NA

Prep Batch: 99874

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	Limits	RPD	Limit
Mercury	0.067		0.820	0.693		mg/Kg		76	75 - 125	9	20

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

## GC/MS VOA

### Analysis Batch: 99863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37712-1	SP2-BASE-6	Total/NA	Solid	8260B/CA_LUFT	99876
LCS 720-99876/2-A	Lab Control Sample	Total/NA	Solid	MS	99876
LCS 720-99876/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT	99876
LCS 720-99876/4-A	Lab Control Sample	Total/NA	Solid	MS	99876
LCSD 720-99876/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT	99876
LCSD 720-99876/3-A	Lab Control Sample Dup	Total/NA	Solid	MS	99876
LCSD 720-99876/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT	99876
LCSD 720-99876/5-A	Lab Control Sample Dup	Total/NA	Solid	MS	99876
MB 720-99876/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT	99876
MB 720-99876/1-A	Method Blank	Total/NA	Solid	MS	99876

### Prep Batch: 99876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37712-1	SP2-BASE-6	Total/NA	Solid	5030B	
LCS 720-99876/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-99876/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 720-99876/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
LCSD 720-99876/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-99876/1-A	Method Blank	Total/NA	Solid	5030B	

## GC Semi VOA

### Analysis Batch: 99813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37712-1	SP2-BASE-6	Silica Gel Cleanup	Solid	8015B	99866
720-37712-1 MS	SP2-BASE-6	Silica Gel Cleanup	Solid	8015B	99866
720-37712-1 MSD	SP2-BASE-6	Silica Gel Cleanup	Solid	8015B	99866
LCS 720-99866/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	99866
LCSD 720-99866/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	99866
MB 720-99866/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	99866

### Prep Batch: 99866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37712-1	SP2-BASE-6	Silica Gel Cleanup	Solid	3546	
720-37712-1 MS	SP2-BASE-6	Silica Gel Cleanup	Solid	3546	
720-37712-1 MSD	SP2-BASE-6	Silica Gel Cleanup	Solid	3546	
LCS 720-99866/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-99866/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-99866/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

## Metals

### Prep Batch: 99873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37712-1	SP2-BASE-6	Total/NA	Solid	3050B	
720-37712-1 MS	SP2-BASE-6	Total/NA	Solid	3050B	
720-37712-1 MSD	SP2-BASE-6	Total/NA	Solid	3050B	
LCS 720-99873/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-99873/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-99873/10-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-99873/1-A	Method Blank	Total/NA	Solid	3050B	



# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

## Metals (Continued)

### Prep Batch: 99874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37712-1	SP2-BASE-6	Total/NA	Solid	7471A	
720-37712-1 MS	SP2-BASE-6	Total/NA	Solid	7471A	
720-37712-1 MSD	SP2-BASE-6	Total/NA	Solid	7471A	
LCS 720-99874/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 720-99874/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
MB 720-99874/1-A	Method Blank	Total/NA	Solid	7471A	

### Analysis Batch: 99884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37712-1	SP2-BASE-6	Total/NA	Solid	7471A	99874
720-37712-1 MS	SP2-BASE-6	Total/NA	Solid	7471A	99874
720-37712-1 MSD	SP2-BASE-6	Total/NA	Solid	7471A	99874
LCS 720-99874/2-A	Lab Control Sample	Total/NA	Solid	7471A	99874
LCSD 720-99874/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	99874
MB 720-99874/1-A	Method Blank	Total/NA	Solid	7471A	99874

### Analysis Batch: 99930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37712-1	SP2-BASE-6	Total/NA	Solid	6010B	99873
720-37712-1 MS	SP2-BASE-6	Total/NA	Solid	6010B	99873
720-37712-1 MSD	SP2-BASE-6	Total/NA	Solid	6010B	99873
LCS 720-99873/2-A	Lab Control Sample	Total/NA	Solid	6010B	99873
LCSD 720-99873/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	99873
LCSSRM 720-99873/10-A	Lab Control Sample	Total/NA	Solid	6010B	99873
MB 720-99873/1-A	Method Blank	Total/NA	Solid	6010B	99873

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

**Client Sample ID: SP2-BASE-6**

**Lab Sample ID: 720-37712-1**

**Date Collected: 09/28/11 11:00**

**Matrix: Solid**

**Date Received: 09/28/11 15:43**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared Or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Prep	5030B			99876	09/28/11 18:00	LL	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99863	09/28/11 21:44	AC	TAL SF
Silica Gel Cleanup	Prep	3546			99866	09/28/11 16:53	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99813	09/29/11 03:36	EC	TAL SF
Total/NA	Prep	7471A			99874	09/28/11 20:28	SK	TAL SF
Total/NA	Analysis	7471A		1	99884	09/28/11 22:42	SK	TAL SF
Total/NA	Prep	3050B			99873	09/28/11 19:51	SK	TAL SF
Total/NA	Analysis	6010B		4	99930	09/29/11 14:14	BA	TAL SF

**Laboratory References:**

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

# Certification Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

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

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# Method Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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
6010B	Metals (ICP)	SW846	TAL SF
7471A	Mercury (CVAA)	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 San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



# Sample Summary

Client: Engeo, Inc.  
Project/Site: Macedo

TestAmerica Job ID: 720-37712-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-37712-1	SP2-BASE-6	Solid	09/28/11 11:00	09/28/11 15:43

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## Login Sample Receipt Checklist

Client: Engeo, Inc.

Job Number: 720-37712-1

**Login Number: 37712**

**List Source: TestAmerica San Francisco**

**List Number: 1**

**Creator: Apostol, Anita**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	32.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 720-37616-2  
Client Project/Site: Macedo Property

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

Attn: Mr. Jeff Adams



---

Authorized for release by:  
09/28/2011 12:29:59 PM

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

### LINKS

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

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# Definitions/Glossary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

## Qualifiers

### Metals

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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
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: Macedo Property

TestAmerica Job ID: 720-37616-2

---

**Job ID: 720-37616-2**

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**Laboratory: TestAmerica San Francisco**

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**Narrative**

**Job Narrative**  
**720-37616-2**

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**Metals**

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for prep batch 99752 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

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# Detection Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

## Client Sample ID: BA-4.5'

## Lab Sample ID: 720-37616-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	20		1.9		mg/Kg	4		6010B	Total/NA
Nickel	36		1.9		mg/Kg	4		6010B	Total/NA
Lead	4.8		1.9		mg/Kg	4		6010B	Total/NA
Zinc	33		5.6		mg/Kg	4		6010B	Total/NA

## Client Sample ID: BB-4.5'

## Lab Sample ID: 720-37616-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	30		1.9		mg/Kg	4		6010B	Total/NA
Nickel	38		1.9		mg/Kg	4		6010B	Total/NA
Lead	6.3		1.9		mg/Kg	4		6010B	Total/NA
Zinc	42		5.6		mg/Kg	4		6010B	Total/NA

## Client Sample ID: BC-6'

## Lab Sample ID: 720-37616-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	20		1.9		mg/Kg	4		6010B	Total/NA
Nickel	38		1.9		mg/Kg	4		6010B	Total/NA
Lead	3.1		1.9		mg/Kg	4		6010B	Total/NA
Zinc	28		5.6		mg/Kg	4		6010B	Total/NA

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

## Method: 6010B - Metals (ICP)

**Client Sample ID: BA-4.5'**  
**Date Collected: 09/22/11 11:00**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.47		mg/Kg		09/27/11 14:25	09/27/11 21:07	4
<b>Chromium</b>	<b>20</b>		1.9		mg/Kg		09/27/11 14:25	09/27/11 21:07	4
<b>Nickel</b>	<b>36</b>		1.9		mg/Kg		09/27/11 14:25	09/27/11 21:07	4
<b>Lead</b>	<b>4.8</b>		1.9		mg/Kg		09/27/11 14:25	09/27/11 21:07	4
<b>Zinc</b>	<b>33</b>		5.6		mg/Kg		09/27/11 14:25	09/27/11 21:07	4

**Client Sample ID: BB-4.5'**  
**Date Collected: 09/22/11 11:15**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-2**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.47		mg/Kg		09/27/11 14:33	09/27/11 21:28	4
<b>Chromium</b>	<b>30</b>		1.9		mg/Kg		09/27/11 14:33	09/27/11 21:28	4
<b>Nickel</b>	<b>38</b>		1.9		mg/Kg		09/27/11 14:33	09/27/11 21:28	4
<b>Lead</b>	<b>6.3</b>		1.9		mg/Kg		09/27/11 14:33	09/27/11 21:28	4
<b>Zinc</b>	<b>42</b>		5.6		mg/Kg		09/27/11 14:33	09/27/11 21:28	4

**Client Sample ID: BC-6'**  
**Date Collected: 09/22/11 14:30**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-3**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.47		mg/Kg		09/27/11 14:33	09/27/11 21:32	4
<b>Chromium</b>	<b>20</b>		1.9		mg/Kg		09/27/11 14:33	09/27/11 21:32	4
<b>Nickel</b>	<b>38</b>		1.9		mg/Kg		09/27/11 14:33	09/27/11 21:32	4
<b>Lead</b>	<b>3.1</b>		1.9		mg/Kg		09/27/11 14:33	09/27/11 21:32	4
<b>Zinc</b>	<b>28</b>		5.6		mg/Kg		09/27/11 14:33	09/27/11 21:32	4

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 720-99752/1-A**  
**Matrix: Solid**  
**Analysis Batch: 99804**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 99752**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.13		mg/Kg		09/27/11 10:57	09/27/11 20:29	1
Chromium	ND		0.50		mg/Kg		09/27/11 10:57	09/27/11 20:29	1
Nickel	ND		0.50		mg/Kg		09/27/11 10:57	09/27/11 20:29	1
Lead	ND		0.50		mg/Kg		09/27/11 10:57	09/27/11 20:29	1

**Lab Sample ID: MB 720-99752/1-A**  
**Matrix: Solid**  
**Analysis Batch: 99835**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 99752**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		1.5		mg/Kg		09/27/11 10:57	09/28/11 10:48	1

**Lab Sample ID: LCS 720-99752/2-A**  
**Matrix: Solid**  
**Analysis Batch: 99804**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 99752**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	
Cadmium	50.0	49.8		mg/Kg		100	80 - 120	
Chromium	50.0	50.1		mg/Kg		100	80 - 120	
Nickel	50.0	50.2		mg/Kg		100	80 - 120	
Lead	50.0	50.3		mg/Kg		101	80 - 120	
Zinc	50.0	50.2		mg/Kg		100	80 - 120	

**Lab Sample ID: LCSD 720-99752/3-A**  
**Matrix: Solid**  
**Analysis Batch: 99804**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99752**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		
							Limits	RPD	Limit
Cadmium	50.0	49.9		mg/Kg		100	80 - 120	0	20
Chromium	50.0	49.8		mg/Kg		100	80 - 120	1	20
Nickel	50.0	50.1		mg/Kg		100	80 - 120	0	20
Lead	50.0	50.2		mg/Kg		100	80 - 120	0	20
Zinc	50.0	50.3		mg/Kg		101	80 - 120	0	20

**Lab Sample ID: LCSSRM 720-99752/7-A**  
**Matrix: Solid**  
**Analysis Batch: 99804**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 99752**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	% Rec	% Rec.	
							Limits	
Cadmium	48.3	46.1		mg/Kg		95	67 - 118	
Chromium	171	168		mg/Kg		98	67 - 121	
Nickel	76.0	72.2		mg/Kg		95	65 - 117	
Lead	181	169		mg/Kg		93	62 - 113	
Zinc	256	247		mg/Kg		97	62 - 110	

**Lab Sample ID: 720-37616-2 MS**  
**Matrix: Solid**  
**Analysis Batch: 99804**

**Client Sample ID: BB-4.5'**  
**Prep Type: Total/NA**  
**Prep Batch: 99752**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec.	
									Limits	
Cadmium	ND		45.9	44.5		mg/Kg		97	75 - 125	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

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

Lab Sample ID: 720-37616-2 MS

Matrix: Solid

Analysis Batch: 99804

Client Sample ID: BB-4.5'

Prep Type: Total/NA

Prep Batch: 99752

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD
Chromium	30		45.9	79.5		mg/Kg		107	75 - 125	
Nickel	38		45.9	83.8		mg/Kg		101	75 - 125	
Lead	6.3		45.9	50.9		mg/Kg		97	75 - 125	
Zinc	42		45.9	90.4		mg/Kg		105	75 - 125	

Lab Sample ID: 720-37616-2 MSD

Matrix: Solid

Analysis Batch: 99804

Client Sample ID: BB-4.5'

Prep Type: Total/NA

Prep Batch: 99752

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
Cadmium	ND		42.0	40.4		mg/Kg		96	75 - 125	10	20	
Chromium	30		42.0	75.2		mg/Kg		107	75 - 125	6	20	
Nickel	38		42.0	80.4		mg/Kg		102	75 - 125	4	20	
Lead	6.3		42.0	48.8		mg/Kg		101	75 - 125	4	20	
Zinc	42		42.0	106	F	mg/Kg		153	75 - 125	16	20	

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

## Metals

### Prep Batch: 99752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37616-1	BA-4.5'	Total/NA	Solid	3050B	
720-37616-2	BB-4.5'	Total/NA	Solid	3050B	
720-37616-2 MS	BB-4.5'	Total/NA	Solid	3050B	
720-37616-2 MSD	BB-4.5'	Total/NA	Solid	3050B	
720-37616-3	BC-6'	Total/NA	Solid	3050B	
LCS 720-99752/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-99752/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-99752/7-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-99752/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 99804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37616-1	BA-4.5'	Total/NA	Solid	6010B	99752
720-37616-2	BB-4.5'	Total/NA	Solid	6010B	99752
720-37616-2 MS	BB-4.5'	Total/NA	Solid	6010B	99752
720-37616-2 MSD	BB-4.5'	Total/NA	Solid	6010B	99752
720-37616-3	BC-6'	Total/NA	Solid	6010B	99752
LCS 720-99752/2-A	Lab Control Sample	Total/NA	Solid	6010B	99752
LCSD 720-99752/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	99752
LCSSRM 720-99752/7-A	Lab Control Sample	Total/NA	Solid	6010B	99752
MB 720-99752/1-A	Method Blank	Total/NA	Solid	6010B	99752

### Analysis Batch: 99835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-99752/1-A	Method Blank	Total/NA	Solid	6010B	99752

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

**Client Sample ID: BA-4.5'**

**Date Collected: 09/22/11 11:00**

**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-1**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			99752	09/27/11 14:25	ET	TAL SF
Total/NA	Analysis	6010B		4	99804	09/27/11 21:07	BA	TAL SF

**Client Sample ID: BB-4.5'**

**Date Collected: 09/22/11 11:15**

**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-2**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			99752	09/27/11 14:33	ET	TAL SF
Total/NA	Analysis	6010B		4	99804	09/27/11 21:28	BA	TAL SF

**Client Sample ID: BC-6'**

**Date Collected: 09/22/11 14:30**

**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-3**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			99752	09/27/11 14:33	ET	TAL SF
Total/NA	Analysis	6010B		4	99804	09/27/11 21:32	BA	TAL SF

**Laboratory References:**

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



# Certification Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

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

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# Method Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

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Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL SF

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**Protocol References:**

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

**Laboratory References:**

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



# Sample Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-37616-1	BA-4.5'	Solid	09/22/11 11:00	09/22/11 15:18
720-37616-2	BB-4.5'	Solid	09/22/11 11:15	09/22/11 15:18
720-37616-3	BC-6'	Solid	09/22/11 14:30	09/22/11 15:18

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720-37616-2

Salimpour, Afsaneh

From: Jeff Adams [jaa@engeo.com]

Sent: Tuesday, September 27, 2011 1:47 PM

To: Salimpour, Afsaneh

720-37616-2

Afsaneh –

A couple more tests. Can we run these samples (BA-4.5, BB-4.5, and BC-6) for LUFT metals? Please use 24-hr turnaround.

Thanks!  
Jeff

Jeffrey A. Adams, PhD, PE, REA I  
Associate



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[www.engeo.com](http://www.engeo.com)

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# Login Sample Receipt Checklist

Client: Engeo, Inc.

Job Number: 720-37616-2

**Login Number: 37616**

**List Number: 1**

**Creator: Hoang, Julie**

**List Source: TestAmerica San Francisco**

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

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 720-37616-1  
Client Project/Site: Macedo Property

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

Attn: Mr. Jeff Adams



Authorized for release by:  
09/23/2011 03:16:04 PM  
Onieka Howard  
Project Manager I  
[onieka.howard@testamericainc.com](mailto:onieka.howard@testamericainc.com)

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

### LINKS

Review your project  
results through  
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Have a Question?



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

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# Definitions/Glossary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
F	MS or MSD exceeds the control limits
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

## 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
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
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: Macedo Property

TestAmerica Job ID: 720-37616-1

**Job ID: 720-37616-1**

**Laboratory: TestAmerica San Francisco**

## Narrative

**Job Narrative**  
720-37616-1

### Comments

No additional comments.

### Receipt

All samples were received in good condition within temperature requirements.

### GC/MS VOA

No analytical or quality issues were noted.

### GC VOA

No analytical or quality issues were noted.

### GC Semi VOA

Method(s) 8015B: Capric acid surrogate recovery for the following sample(s) was outside control limits: BA-4.5' (720-37616-1) and BC-6' (720-37616-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8015B: Due to the level of dilution required for the following sample(s), surrogate recoveries are not reported: BB-4.5' (720-37616-2).

Method(s) 8015B: Due to the high concentration of C10-C28, the matrix spike / matrix spike duplicate (MS/MSD) for batch 99543 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

### Organic Prep

No analytical or quality issues were noted.



# Detection Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

## Client Sample ID: BA-4.5'

Lab Sample ID: 720-37616-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO)	670		240		ug/Kg	1		8260B/CA_LUFTM	Total/NA
-C5-C12 Diesel Range Organics [C10-C28]	200		2.0		mg/Kg	2		8015B	Silica Gel Clear

## Client Sample ID: BB-4.5'

Lab Sample ID: 720-37616-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	290		10		mg/Kg	10		8015B	Silica Gel Clear
Motor Oil Range Organics [C24-C36]	1000		500		mg/Kg	10		8015B	Silica Gel Clear

## Client Sample ID: BC-6'

Lab Sample ID: 720-37616-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	180		3.0		mg/Kg	3		8015B	Silica Gel Clear
Motor Oil Range Organics [C24-C36]	220		150		mg/Kg	3		8015B	Silica Gel Clear

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Client Sample ID: BA-4.5'**  
**Date Collected: 09/22/11 11:00**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Acetone	ND		49		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Benzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Dichlorobromomethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Bromobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Chlorobromomethane	ND		20		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Bromoform	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Bromomethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
2-Butanone (MEK)	ND		49		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
n-Butylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
sec-Butylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
tert-Butylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Carbon disulfide	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Carbon tetrachloride	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Chlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Chloroethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Chloroform	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Chloromethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
2-Chlorotoluene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
4-Chlorotoluene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Chlorodibromomethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,3-Dichloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,1-Dichloropropene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,2-Dibromo-3-Chloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Ethylene Dibromide	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Dibromomethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Dichlorodifluoromethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,1-Dichloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,2-Dichloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,1-Dichloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,2-Dichloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Ethylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Hexachlorobutadiene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
2-Hexanone	ND		49		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Isopropylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
4-Isopropyltoluene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Methylene Chloride	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
4-Methyl-2-pentanone (MIBK)	ND		49		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Naphthalene	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
N-Propylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Styrene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Client Sample ID: BA-4.5'**  
**Date Collected: 09/22/11 11:00**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Tetrachloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Toluene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,2,3-Trichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Trichloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Trichlorofluoromethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Vinyl acetate	ND		49		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Vinyl chloride	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
Xylenes, Total	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
2,2-Dichloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 03:25	1
<b>Gasoline Range Organics (GRO)</b>	<b>670</b>		<b>240</b>		<b>ug/Kg</b>		<b>09/22/11 22:04</b>	<b>09/23/11 03:25</b>	<b>1</b>
<b>-C5-C12</b>									

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		45 - 131	09/22/11 22:04	09/23/11 03:25	1
1,2-Dichloroethane-d4 (Surr)	97		60 - 140	09/22/11 22:04	09/23/11 03:25	1
Toluene-d8 (Surr)	100		58 - 140	09/22/11 22:04	09/23/11 03:25	1

**Client Sample ID: BB-4.5'**  
**Date Collected: 09/22/11 11:15**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-2**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Acetone	ND		47		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Benzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Dichlorobromomethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Bromobenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Chlorobromomethane	ND		19		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Bromoform	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Bromomethane	ND		9.4		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
2-Butanone (MEK)	ND		47		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
n-Butylbenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
sec-Butylbenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
tert-Butylbenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Carbon disulfide	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Carbon tetrachloride	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Chlorobenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Chloroethane	ND		9.4		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Chloroform	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Chloromethane	ND		9.4		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
2-Chlorotoluene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
4-Chlorotoluene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Client Sample ID: BB-4.5'**  
**Date Collected: 09/22/11 11:15**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-2**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorodibromomethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,3-Dichloropropane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,1-Dichloropropene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Ethylene Dibromide	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Dibromomethane	ND		9.4		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Dichlorodifluoromethane	ND		9.4		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,1-Dichloroethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,2-Dichloroethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,1-Dichloroethene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,2-Dichloropropane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Ethylbenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Hexachlorobutadiene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
2-Hexanone	ND		47		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Isopropylbenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
4-Isopropyltoluene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Methylene Chloride	ND		9.4		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
4-Methyl-2-pentanone (MIBK)	ND		47		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Naphthalene	ND		9.4		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
N-Propylbenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Styrene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Tetrachloroethene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Toluene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Trichloroethene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Trichlorofluoromethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Vinyl acetate	ND		47		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Vinyl chloride	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Xylenes, Total	ND		9.4		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
2,2-Dichloropropane	ND		4.7		ug/Kg		09/23/11 09:34	09/23/11 12:35	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/23/11 09:34	09/23/11 12:35	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		45 - 131	09/23/11 09:34	09/23/11 12:35	1
1,2-Dichloroethane-d4 (Surr)	99		60 - 140	09/23/11 09:34	09/23/11 12:35	1
Toluene-d8 (Surr)	96		58 - 140	09/23/11 09:34	09/23/11 12:35	1

**Client Sample ID: BC-6'**  
**Date Collected: 09/22/11 14:30**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-3**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Acetone	ND		49		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Benzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Dichlorobromomethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Bromobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Chlorobromomethane	ND		20		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Bromoform	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Bromomethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
2-Butanone (MEK)	ND		49		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
n-Butylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
sec-Butylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
tert-Butylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Carbon disulfide	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Carbon tetrachloride	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Chlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Chloroethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Chloroform	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Chloromethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
2-Chlorotoluene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
4-Chlorotoluene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Chlorodibromomethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,3-Dichloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,1-Dichloropropene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,2-Dibromo-3-Chloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Ethylene Dibromide	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Dibromomethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Dichlorodifluoromethane	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,1-Dichloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,2-Dichloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,1-Dichloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,2-Dichloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Ethylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Hexachlorobutadiene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
2-Hexanone	ND		49		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Isopropylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
4-Isopropyltoluene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Methylene Chloride	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 04:23	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Client Sample ID: BC-6'**  
**Date Collected: 09/22/11 14:30**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-3**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		49		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Naphthalene	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
N-Propylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Styrene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Tetrachloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Toluene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,2,3-Trichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Trichloroethene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Trichlorofluoromethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Vinyl acetate	ND		49		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Vinyl chloride	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Xylenes, Total	ND		9.8		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
2,2-Dichloropropane	ND		4.9		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/22/11 22:04	09/23/11 04:23	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	103		45 - 131				09/22/11 22:04	09/23/11 04:23	1
1,2-Dichloroethane-d4 (Surr)	97		60 - 140				09/22/11 22:04	09/23/11 04:23	1
Toluene-d8 (Surr)	101		58 - 140				09/22/11 22:04	09/23/11 04:23	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Client Sample ID: BA-4.5'**  
**Date Collected: 09/22/11 11:00**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-1**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Diesel Range Organics [C10-C28]</b>	<b>200</b>		2.0		mg/Kg		09/22/11 17:16	09/22/11 22:32	2
Motor Oil Range Organics [C24-C36]	ND		99		mg/Kg		09/22/11 17:16	09/22/11 22:32	2
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	41	X	0 - 5				09/22/11 17:16	09/22/11 22:32	2
p-Terphenyl	93		38 - 148				09/22/11 17:16	09/22/11 22:32	2

**Client Sample ID: BB-4.5'**  
**Date Collected: 09/22/11 11:15**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-2**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Diesel Range Organics [C10-C28]</b>	<b>290</b>		10		mg/Kg		09/22/11 17:16	09/22/11 21:45	10
<b>Motor Oil Range Organics [C24-C36]</b>	<b>1000</b>		500		mg/Kg		09/22/11 17:16	09/22/11 21:45	10
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0		0 - 5				09/22/11 17:16	09/22/11 21:45	10
p-Terphenyl	0	D	38 - 148				09/22/11 17:16	09/22/11 21:45	10

**Client Sample ID: BC-6'**  
**Date Collected: 09/22/11 14:30**  
**Date Received: 09/22/11 15:18**

**Lab Sample ID: 720-37616-3**  
**Matrix: Solid**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Diesel Range Organics [C10-C28]</b>	<b>180</b>		3.0		mg/Kg		09/22/11 17:16	09/22/11 22:08	3
<b>Motor Oil Range Organics [C24-C36]</b>	<b>220</b>		150		mg/Kg		09/22/11 17:16	09/22/11 22:08	3
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	27	X	0 - 5				09/22/11 17:16	09/22/11 22:08	3
p-Terphenyl	79		38 - 148				09/22/11 17:16	09/22/11 22:08	3



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: MB 720-99550/1-A**

**Matrix: Solid**

**Analysis Batch: 99536**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99550**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Acetone	ND		50		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Benzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Dichlorobromomethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Bromobenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Chlorobromomethane	ND		20		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Bromoform	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Bromomethane	ND		10		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
2-Butanone (MEK)	ND		50		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
n-Butylbenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
sec-Butylbenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
tert-Butylbenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Carbon disulfide	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Carbon tetrachloride	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Chlorobenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Chloroethane	ND		10		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Chloroform	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Chloromethane	ND		10		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
2-Chlorotoluene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
4-Chlorotoluene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Chlorodibromomethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,3-Dichloropropane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,1-Dichloropropene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Ethylene Dibromide	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Dibromomethane	ND		10		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Dichlorodifluoromethane	ND		10		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,1-Dichloroethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,2-Dichloroethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,1-Dichloroethene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,2-Dichloropropane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Ethylbenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Hexachlorobutadiene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
2-Hexanone	ND		50		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Isopropylbenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
4-Isopropyltoluene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Methylene Chloride	ND		10		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Naphthalene	ND		10		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
N-Propylbenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Styrene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: MB 720-99550/1-A**

**Matrix: Solid**

**Analysis Batch: 99536**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99550**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Tetrachloroethene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Toluene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Trichloroethene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Trichlorofluoromethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Vinyl acetate	ND		50		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Vinyl chloride	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Xylenes, Total	ND		10		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
2,2-Dichloropropane	ND		5.0		ug/Kg		09/22/11 22:04	09/23/11 00:04	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/22/11 22:04	09/23/11 00:04	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	103		45 - 131	09/22/11 22:04	09/23/11 00:04	1
1,2-Dichloroethane-d4 (Surr)	89		60 - 140	09/22/11 22:04	09/23/11 00:04	1
Toluene-d8 (Surr)	101		58 - 140	09/22/11 22:04	09/23/11 00:04	1

**Lab Sample ID: LCS 720-99550/2-A**

**Matrix: Solid**

**Analysis Batch: 99536**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99550**

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Methyl tert-butyl ether	50.0	52.0		ug/Kg		104	71 - 144
Acetone	250	229		ug/Kg		92	30 - 162
Benzene	50.0	55.4		ug/Kg		111	82 - 124
Dichlorobromomethane	50.0	54.2		ug/Kg		108	86 - 131
Bromobenzene	50.0	44.0		ug/Kg		88	88 - 120
Chlorobromomethane	50.0	55.8		ug/Kg		112	81 - 116
Bromoform	50.0	50.2		ug/Kg		100	59 - 158
Bromomethane	50.0	52.2		ug/Kg		104	59 - 132
2-Butanone (MEK)	250	268		ug/Kg		107	61 - 150
n-Butylbenzene	50.0	50.0		ug/Kg		100	80 - 142
sec-Butylbenzene	50.0	49.0		ug/Kg		98	85 - 136
tert-Butylbenzene	50.0	48.2		ug/Kg		96	71 - 130
Carbon disulfide	50.0	54.4		ug/Kg		109	60 - 136
Carbon tetrachloride	50.0	57.8		ug/Kg		116	81 - 138
Chlorobenzene	50.0	48.2		ug/Kg		96	87 - 113
Chloroethane	50.0	54.2		ug/Kg		108	65 - 126
Chloroform	50.0	53.6		ug/Kg		107	77 - 127
Chloromethane	50.0	40.2		ug/Kg		80	60 - 149
2-Chlorotoluene	50.0	46.8		ug/Kg		94	80 - 138
4-Chlorotoluene	50.0	45.4		ug/Kg		91	79 - 136

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: LCS 720-99550/2-A**

**Matrix: Solid**

**Analysis Batch: 99536**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99550**

Analyte	Spike	LCS	LCS	Unit	D	% Rec	% Rec.
	Added	Result	Qualifier				Limits
Chlorodibromomethane	50.0	56.6		ug/Kg		113	75 - 146
1,2-Dichlorobenzene	50.0	43.8		ug/Kg		88	84 - 130
1,3-Dichlorobenzene	50.0	44.8		ug/Kg		90	84 - 131
1,4-Dichlorobenzene	50.0	44.0		ug/Kg		88	85 - 125
1,3-Dichloropropane	50.0	55.0		ug/Kg		110	79 - 140
1,1-Dichloropropene	50.0	58.8		ug/Kg		118	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	46.8		ug/Kg		94	68 - 145
Ethylene Dibromide	50.0	56.8		ug/Kg		114	79 - 140
Dibromomethane	50.0	54.4		ug/Kg		109	80 - 139
Dichlorodifluoromethane	50.0	45.2		ug/Kg		90	37 - 158
1,1-Dichloroethane	50.0	53.4		ug/Kg		107	85 - 124
1,2-Dichloroethane	50.0	48.8		ug/Kg		98	72 - 130
1,1-Dichloroethene	50.0	55.2		ug/Kg		110	76 - 122
cis-1,2-Dichloroethene	50.0	61.0		ug/Kg		122	87 - 138
trans-1,2-Dichloroethene	50.0	49.8		ug/Kg		100	67 - 108
1,2-Dichloropropane	50.0	52.2		ug/Kg		104	73 - 127
cis-1,3-Dichloropropene	50.0	56.8		ug/Kg		114	68 - 147
trans-1,3-Dichloropropene	50.0	58.2		ug/Kg		116	84 - 136
Ethylbenzene	50.0	49.4		ug/Kg		99	80 - 137
Hexachlorobutadiene	50.0	47.6		ug/Kg		95	72 - 132
2-Hexanone	250	241		ug/Kg		96	60 - 161
Isopropylbenzene	50.0	52.6		ug/Kg		105	88 - 128
4-Isopropyltoluene	50.0	48.8		ug/Kg		98	85 - 133
Methylene Chloride	50.0	53.4		ug/Kg		107	72 - 134
4-Methyl-2-pentanone (MIBK)	250	237		ug/Kg		95	69 - 160
Naphthalene	50.0	46.6		ug/Kg		93	70 - 147
N-Propylbenzene	50.0	45.4		ug/Kg		91	72 - 125
Styrene	50.0	50.8		ug/Kg		102	89 - 126
1,1,1,2-Tetrachloroethane	50.0	48.2		ug/Kg		96	90 - 130
1,1,1,2,2-Tetrachloroethane	50.0	43.0		ug/Kg		86	82 - 146
Tetrachloroethene	50.0	59.0		ug/Kg		118	78 - 132
Toluene	50.0	49.6		ug/Kg		99	83 - 128
1,2,3-Trichlorobenzene	50.0	45.4		ug/Kg		91	82 - 135
1,2,4-Trichlorobenzene	50.0	43.8		ug/Kg		88	70 - 131
1,1,1-Trichloroethane	50.0	57.4		ug/Kg		115	80 - 127
1,1,2-Trichloroethane	50.0	53.0		ug/Kg		106	82 - 125
Trichloroethene	50.0	57.8		ug/Kg		116	81 - 133
Trichlorofluoromethane	50.0	57.4		ug/Kg		115	71 - 139
1,2,3-Trichloropropane	50.0	44.4		ug/Kg		89	76 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	60.6		ug/Kg		121	70 - 130
1,2,4-Trimethylbenzene	50.0	46.4		ug/Kg		93	84 - 130
1,3,5-Trimethylbenzene	50.0	47.6		ug/Kg		95	82 - 131
Vinyl acetate	50.0	51.6		ug/Kg		103	38 - 176
Vinyl chloride	50.0	51.0		ug/Kg		102	58 - 125
m-Xylene & p-Xylene	100	102		ug/Kg		102	79 - 146
o-Xylene	50.0	50.2		ug/Kg		100	84 - 140
2,2-Dichloropropane	50.0	62.4		ug/Kg		125	73 - 162

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: LCS 720-99550/2-A**

**Matrix: Solid**

**Analysis Batch: 99536**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99550**

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	104		45 - 131
1,2-Dichloroethane-d4 (Surr)	86		60 - 140
Toluene-d8 (Surr)	105		58 - 140

**Lab Sample ID: LCS 720-99550/4-A**

**Matrix: Solid**

**Analysis Batch: 99536**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99550**

Analyte	Spike Added	LCS LCS		Unit	D	% Rec	% Rec.	
		Result	Qualifier				Limits	RPD
Gasoline Range Organics (GRO) -C5-C12	1000	1050		ug/Kg		105	61 - 128	

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	107		45 - 131
1,2-Dichloroethane-d4 (Surr)	92		60 - 140
Toluene-d8 (Surr)	104		58 - 140

**Lab Sample ID: LCSD 720-99550/3-A**

**Matrix: Solid**

**Analysis Batch: 99536**

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

**Prep Type: Total/NA**

**Prep Batch: 99550**

Analyte	Spike Added	LCSD LCSD		Unit	D	% Rec	% Rec.		RPD	
		Result	Qualifier				Limits	RPD	Limit	
Methyl tert-butyl ether	50.0	51.6		ug/Kg		103	71 - 144	1	20	
Acetone	250	240		ug/Kg		96	30 - 162	5	30	
Benzene	50.0	55.4		ug/Kg		111	82 - 124	0	20	
Dichlorobromomethane	50.0	55.0		ug/Kg		110	86 - 131	1	20	
Bromobenzene	50.0	44.6		ug/Kg		89	88 - 120	1	20	
Chlorobromomethane	50.0	55.4		ug/Kg		111	81 - 116	1	20	
Bromoform	50.0	51.2		ug/Kg		102	59 - 158	2	20	
Bromomethane	50.0	55.0		ug/Kg		110	59 - 132	5	20	
2-Butanone (MEK)	250	276		ug/Kg		110	61 - 150	3	20	
n-Butylbenzene	50.0	49.8		ug/Kg		100	80 - 142	0	20	
sec-Butylbenzene	50.0	49.2		ug/Kg		98	85 - 136	0	20	
tert-Butylbenzene	50.0	48.6		ug/Kg		97	71 - 130	1	20	
Carbon disulfide	50.0	54.4		ug/Kg		109	60 - 136	0	20	
Carbon tetrachloride	50.0	58.4		ug/Kg		117	81 - 138	1	20	
Chlorobenzene	50.0	48.8		ug/Kg		98	87 - 113	1	20	
Chloroethane	50.0	57.4		ug/Kg		115	65 - 126	6	20	
Chloroform	50.0	54.0		ug/Kg		108	77 - 127	1	20	
Chloromethane	50.0	42.2		ug/Kg		84	60 - 149	5	20	
2-Chlorotoluene	50.0	46.6		ug/Kg		93	80 - 138	0	20	
4-Chlorotoluene	50.0	45.6		ug/Kg		91	79 - 136	0	20	
Chlorodibromomethane	50.0	56.4		ug/Kg		113	75 - 146	0	20	
1,2-Dichlorobenzene	50.0	43.6		ug/Kg		87	84 - 130	0	20	
1,3-Dichlorobenzene	50.0	44.8		ug/Kg		90	84 - 131	0	20	
1,4-Dichlorobenzene	50.0	44.2		ug/Kg		88	85 - 125	0	20	
1,3-Dichloropropane	50.0	54.4		ug/Kg		109	79 - 140	1	20	
1,1-Dichloropropene	50.0	59.0		ug/Kg		118	70 - 130	0	20	
1,2-Dibromo-3-Chloropropane	50.0	48.4		ug/Kg		97	68 - 145	3	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: LCSD 720-99550/3-A**

**Matrix: Solid**

**Analysis Batch: 99536**

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

**Prep Type: Total/NA**

**Prep Batch: 99550**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD	
							Limits	RPD	RPD	Limit
Ethylene Dibromide	50.0	56.0		ug/Kg		112	79 - 140	1	20	
Dibromomethane	50.0	53.6		ug/Kg		107	80 - 139	1	20	
Dichlorodifluoromethane	50.0	46.8		ug/Kg		94	37 - 158	3	20	
1,1-Dichloroethane	50.0	53.8		ug/Kg		108	85 - 124	1	20	
1,2-Dichloroethane	50.0	48.6		ug/Kg		97	72 - 130	0	20	
1,1-Dichloroethene	50.0	55.6		ug/Kg		111	76 - 122	1	20	
cis-1,2-Dichloroethene	50.0	61.0		ug/Kg		122	87 - 138	0	20	
trans-1,2-Dichloroethene	50.0	49.6		ug/Kg		99	67 - 108	0	20	
1,2-Dichloropropane	50.0	51.6		ug/Kg		103	73 - 127	1	20	
cis-1,3-Dichloropropene	50.0	56.0		ug/Kg		112	68 - 147	1	20	
trans-1,3-Dichloropropene	50.0	58.0		ug/Kg		116	84 - 136	0	20	
Ethylbenzene	50.0	50.6		ug/Kg		101	80 - 137	2	20	
Hexachlorobutadiene	50.0	48.0		ug/Kg		96	72 - 132	1	20	
2-Hexanone	250	242		ug/Kg		97	60 - 161	1	20	
Isopropylbenzene	50.0	53.4		ug/Kg		107	88 - 128	2	20	
4-Isopropyltoluene	50.0	48.8		ug/Kg		98	85 - 133	0	20	
Methylene Chloride	50.0	53.8		ug/Kg		108	72 - 134	1	20	
4-Methyl-2-pentanone (MIBK)	250	237		ug/Kg		95	69 - 160	0	20	
Naphthalene	50.0	46.6		ug/Kg		93	70 - 147	0	20	
N-Propylbenzene	50.0	46.0		ug/Kg		92	72 - 125	1	20	
Styrene	50.0	51.6		ug/Kg		103	89 - 126	2	20	
1,1,1,2-Tetrachloroethane	50.0	48.8		ug/Kg		98	90 - 130	1	20	
1,1,1,2,2-Tetrachloroethane	50.0	42.6		ug/Kg		85	82 - 146	1	20	
Tetrachloroethene	50.0	59.2		ug/Kg		118	78 - 132	0	20	
Toluene	50.0	50.2		ug/Kg		100	83 - 128	1	20	
1,2,3-Trichlorobenzene	50.0	45.2		ug/Kg		90	82 - 135	0	20	
1,2,4-Trichlorobenzene	50.0	43.4		ug/Kg		87	70 - 131	1	20	
1,1,1-Trichloroethane	50.0	57.8		ug/Kg		116	80 - 127	1	20	
1,1,1,2-Trichloroethane	50.0	52.6		ug/Kg		105	82 - 125	1	20	
Trichloroethene	50.0	58.4		ug/Kg		117	81 - 133	1	20	
Trichlorofluoromethane	50.0	58.6		ug/Kg		117	71 - 139	2	20	
1,2,3-Trichloropropane	50.0	44.6		ug/Kg		89	76 - 146	0	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	60.6		ug/Kg		121	70 - 130	0	20	
1,2,4-Trimethylbenzene	50.0	46.0		ug/Kg		92	84 - 130	1	20	
1,3,5-Trimethylbenzene	50.0	47.6		ug/Kg		95	82 - 131	0	20	
Vinyl acetate	50.0	51.0		ug/Kg		102	38 - 176	1	20	
Vinyl chloride	50.0	53.6		ug/Kg		107	58 - 125	5	20	
m-Xylene & p-Xylene	100	103		ug/Kg		103	79 - 146	2	20	
o-Xylene	50.0	51.0		ug/Kg		102	84 - 140	2	20	
2,2-Dichloropropane	50.0	63.0		ug/Kg		126	73 - 162	1	20	

Surrogate	LCSD LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	105		45 - 131
1,2-Dichloroethane-d4 (Surr)	85		60 - 140
Toluene-d8 (Surr)	104		58 - 140

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: LCSD 720-99550/5-A**

**Matrix: Solid**

**Analysis Batch: 99536**

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

**Prep Type: Total/NA**

**Prep Batch: 99550**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	1000	1030		ug/Kg		103	61 - 128	2	20

Surrogate	LCSD % Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene	106		45 - 131
1,2-Dichloroethane-d4 (Surr)	92		60 - 140
Toluene-d8 (Surr)	105		58 - 140

**Lab Sample ID: MB 720-99570/1-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Acetone	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Benzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Dichlorobromomethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Bromobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chlorobromomethane	ND		20		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Bromoform	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Bromomethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
2-Butanone (MEK)	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
n-Butylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
sec-Butylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
tert-Butylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Carbon disulfide	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Carbon tetrachloride	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chloroethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chloroform	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chloromethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
2-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
4-Chlorotoluene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Chlorodibromomethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,3-Dichloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1-Dichloropropene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Ethylene Dibromide	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Dibromomethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Dichlorodifluoromethane	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1-Dichloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2-Dichloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1-Dichloroethene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: MB 720-99570/1-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Ethylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Hexachlorobutadiene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
2-Hexanone	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Isopropylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
4-Isopropyltoluene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Methylene Chloride	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Naphthalene	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
N-Propylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Styrene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Tetrachloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Toluene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Trichloroethene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Trichlorofluoromethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Vinyl acetate	ND		50		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Vinyl chloride	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Xylenes, Total	ND		10		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
2,2-Dichloropropane	ND		5.0		ug/Kg		09/23/11 09:34	09/23/11 10:10	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/23/11 09:34	09/23/11 10:10	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	98		45 - 131	09/23/11 09:34	09/23/11 10:10	1
1,2-Dichloroethane-d4 (Surr)	97		60 - 140	09/23/11 09:34	09/23/11 10:10	1
Toluene-d8 (Surr)	96		58 - 140	09/23/11 09:34	09/23/11 10:10	1

**Lab Sample ID: LCS 720-99570/2-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec Limits
Acetone	247	226		ug/Kg		92	30 - 162
Benzene	49.4	45.3		ug/Kg		92	82 - 124
Dichlorobromomethane	49.4	47.4		ug/Kg		96	86 - 131
Bromobenzene	49.4	47.8		ug/Kg		97	88 - 120
Chlorobromomethane	49.4	48.0		ug/Kg		97	81 - 116
Bromoform	49.4	55.7		ug/Kg		113	59 - 158



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: LCS 720-99570/2-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.
							Limits
Bromomethane	49.4	48.8		ug/Kg		99	59 - 132
2-Butanone (MEK)	247	254		ug/Kg		103	61 - 150
n-Butylbenzene	49.4	52.2		ug/Kg		106	80 - 142
sec-Butylbenzene	49.4	50.6		ug/Kg		102	85 - 136
tert-Butylbenzene	49.4	50.2		ug/Kg		102	71 - 130
Carbon disulfide	49.4	44.5		ug/Kg		90	60 - 136
Carbon tetrachloride	49.4	48.0		ug/Kg		97	81 - 138
Chlorobenzene	49.4	48.0		ug/Kg		97	87 - 113
Chloroethane	49.4	50.6		ug/Kg		102	65 - 126
Chloroform	49.4	45.3		ug/Kg		92	77 - 127
Chloromethane	49.4	40.1		ug/Kg		81	60 - 149
2-Chlorotoluene	49.4	49.0		ug/Kg		99	80 - 138
4-Chlorotoluene	49.4	48.2		ug/Kg		98	79 - 136
Chlorodibromomethane	49.4	50.0		ug/Kg		101	75 - 146
1,2-Dichlorobenzene	49.4	47.6		ug/Kg		96	84 - 130
1,3-Dichlorobenzene	49.4	48.0		ug/Kg		97	84 - 131
1,4-Dichlorobenzene	49.4	47.8		ug/Kg		97	85 - 125
1,3-Dichloropropane	49.4	48.4		ug/Kg		98	79 - 140
1,1-Dichloropropene	49.4	48.0		ug/Kg		97	70 - 130
1,2-Dibromo-3-Chloropropane	49.4	57.9		ug/Kg		117	68 - 145
Ethylene Dibromide	49.4	51.2		ug/Kg		104	79 - 140
Dibromomethane	49.4	48.0		ug/Kg		97	80 - 139
Dichlorodifluoromethane	49.4	41.7		ug/Kg		84	37 - 158
1,1-Dichloroethane	49.4	44.1		ug/Kg		89	85 - 124
1,2-Dichloroethane	49.4	43.7		ug/Kg		88	72 - 130
1,1-Dichloroethene	49.4	46.0		ug/Kg		93	76 - 122
cis-1,2-Dichloroethene	49.4	50.6		ug/Kg		102	87 - 138
trans-1,2-Dichloroethene	49.4	40.9		ug/Kg		83	67 - 108
1,2-Dichloropropane	49.4	43.5		ug/Kg		88	73 - 127
cis-1,3-Dichloropropene	49.4	48.4		ug/Kg		98	68 - 147
trans-1,3-Dichloropropene	49.4	51.6		ug/Kg		104	84 - 136
Ethylbenzene	49.4	48.4		ug/Kg		98	80 - 137
Hexachlorobutadiene	49.4	49.2		ug/Kg		100	72 - 132
2-Hexanone	247	237		ug/Kg		96	60 - 161
Isopropylbenzene	49.4	51.4		ug/Kg		104	88 - 128
4-Isopropyltoluene	49.4	50.8		ug/Kg		103	85 - 133
Methylene Chloride	49.4	44.9		ug/Kg		91	72 - 134
4-Methyl-2-pentanone (MIBK)	247	229		ug/Kg		93	69 - 160
Naphthalene	49.4	54.5		ug/Kg		110	70 - 147
N-Propylbenzene	49.4	47.4		ug/Kg		96	72 - 125
Styrene	49.4	50.4		ug/Kg		102	89 - 126
1,1,1,2-Tetrachloroethane	49.4	49.2		ug/Kg		100	90 - 130
1,1,1,2,2-Tetrachloroethane	49.4	50.4		ug/Kg		102	82 - 146
Tetrachloroethene	49.4	48.6		ug/Kg		98	78 - 132
Toluene	49.4	48.6		ug/Kg		98	83 - 128
1,2,3-Trichlorobenzene	49.4	50.8		ug/Kg		103	82 - 135
1,2,4-Trichlorobenzene	49.4	48.4		ug/Kg		98	70 - 131
1,1,1-Trichloroethane	49.4	47.6		ug/Kg		96	80 - 127
1,1,2-Trichloroethane	49.4	46.8		ug/Kg		95	82 - 125
Trichloroethene	49.4	47.8		ug/Kg		97	81 - 133



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: LCS 720-99570/2-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits	
Trichlorofluoromethane	49.4	49.0		ug/Kg		99	71 - 139	
1,2,3-Trichloropropane	49.4	53.4		ug/Kg		108	76 - 146	
1,1,2-Trichloro-1,2,2-trifluoroethane	49.4	50.0		ug/Kg		101	70 - 130	
1,2,4-Trimethylbenzene	49.4	48.6		ug/Kg		98	84 - 130	
1,3,5-Trimethylbenzene	49.4	50.2		ug/Kg		102	82 - 131	
Vinyl acetate	49.4	ND		ug/Kg		96	38 - 176	
Vinyl chloride	49.4	46.2		ug/Kg		94	58 - 125	
m-Xylene & p-Xylene	98.8	100		ug/Kg		101	79 - 146	
o-Xylene	49.4	49.6		ug/Kg		100	84 - 140	
2,2-Dichloropropane	49.4	52.0		ug/Kg		105	73 - 162	

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	100		45 - 131
1,2-Dichloroethane-d4 (Surr)	94		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: LCS 720-99570/4-A**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits	
Gasoline Range Organics (GRO) -C5-C12	988	876		ug/Kg		89	61 - 128	

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	102		45 - 131
1,2-Dichloroethane-d4 (Surr)	98		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: LCS 720-99570/3-A**

**Matrix: Solid**

**Analysis Batch: 99553**

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

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits		RPD Limit	
Methyl tert-butyl ether	49.8	46.0		ug/Kg		92	71 - 144	3	20	
Acetone	249	208		ug/Kg		83	30 - 162	8	30	
Benzene	49.8	45.8		ug/Kg		92	82 - 124	1	20	
Dichlorobromomethane	49.8	47.0		ug/Kg		94	86 - 131	1	20	
Bromobenzene	49.8	48.6		ug/Kg		98	88 - 120	2	20	
Chlorobromomethane	49.8	47.8		ug/Kg		96	81 - 116	0	20	
Bromoform	49.8	54.0		ug/Kg		108	59 - 158	3	20	
Bromomethane	49.8	50.2		ug/Kg		101	59 - 132	3	20	
2-Butanone (MEK)	249	239		ug/Kg		96	61 - 150	6	20	
n-Butylbenzene	49.8	55.0		ug/Kg		110	80 - 142	5	20	
sec-Butylbenzene	49.8	53.2		ug/Kg		107	85 - 136	5	20	
tert-Butylbenzene	49.8	52.6		ug/Kg		106	71 - 130	5	20	
Carbon disulfide	49.8	45.0		ug/Kg		90	60 - 136	1	20	
Carbon tetrachloride	49.8	49.6		ug/Kg		100	81 - 138	3	20	
Chlorobenzene	49.8	48.6		ug/Kg		98	87 - 113	1	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: LCSD 720-99570/3-A**

**Matrix: Solid**

**Analysis Batch: 99553**

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

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Chloroethane	49.8	52.6		ug/Kg		106	65 - 126	4	20	
Chloroform	49.8	45.6		ug/Kg		92	77 - 127	1	20	
Chloromethane	49.8	41.8		ug/Kg		84	60 - 149	4	20	
2-Chlorotoluene	49.8	50.6		ug/Kg		102	80 - 138	3	20	
4-Chlorotoluene	49.8	49.6		ug/Kg		100	79 - 136	3	20	
Chlorodibromomethane	49.8	49.2		ug/Kg		99	75 - 146	2	20	
1,2-Dichlorobenzene	49.8	48.6		ug/Kg		98	84 - 130	2	20	
1,3-Dichlorobenzene	49.8	49.6		ug/Kg		100	84 - 131	3	20	
1,4-Dichlorobenzene	49.8	48.8		ug/Kg		98	85 - 125	2	20	
1,3-Dichloropropane	49.8	47.4		ug/Kg		95	79 - 140	2	20	
1,1-Dichloropropene	49.8	49.2		ug/Kg		99	70 - 130	2	20	
1,2-Dibromo-3-Chloropropane	49.8	53.6		ug/Kg		108	68 - 145	8	20	
Ethylene Dibromide	49.8	49.6		ug/Kg		100	79 - 140	3	20	
Dibromomethane	49.8	47.2		ug/Kg		95	80 - 139	2	20	
Dichlorodifluoromethane	49.8	43.8		ug/Kg		88	37 - 158	5	20	
1,1-Dichloroethane	49.8	44.6		ug/Kg		90	85 - 124	1	20	
1,2-Dichloroethane	49.8	43.0		ug/Kg		86	72 - 130	1	20	
1,1-Dichloroethene	49.8	46.4		ug/Kg		93	76 - 122	1	20	
cis-1,2-Dichloroethene	49.8	50.6		ug/Kg		102	87 - 138	0	20	
trans-1,2-Dichloroethene	49.8	41.4		ug/Kg		83	67 - 108	1	20	
1,2-Dichloropropane	49.8	43.8		ug/Kg		88	73 - 127	1	20	
cis-1,3-Dichloropropene	49.8	48.2		ug/Kg		97	68 - 147	0	20	
trans-1,3-Dichloropropene	49.8	50.6		ug/Kg		102	84 - 136	2	20	
Ethylbenzene	49.8	49.6		ug/Kg		100	80 - 137	2	20	
Hexachlorobutadiene	49.8	52.2		ug/Kg		105	72 - 132	6	20	
2-Hexanone	249	212		ug/Kg		85	60 - 161	11	20	
Isopropylbenzene	49.8	53.0		ug/Kg		106	88 - 128	3	20	
4-Isopropyltoluene	49.8	53.6		ug/Kg		108	85 - 133	5	20	
Methylene Chloride	49.8	45.0		ug/Kg		90	72 - 134	0	20	
4-Methyl-2-pentanone (MIBK)	249	210		ug/Kg		84	69 - 160	9	20	
Naphthalene	49.8	51.4		ug/Kg		103	70 - 147	6	20	
N-Propylbenzene	49.8	49.8		ug/Kg		100	72 - 125	5	20	
Styrene	49.8	51.2		ug/Kg		103	89 - 126	2	20	
1,1,1,2-Tetrachloroethane	49.8	49.6		ug/Kg		100	90 - 130	1	20	
1,1,2,2-Tetrachloroethane	49.8	48.2		ug/Kg		97	82 - 146	4	20	
Tetrachloroethene	49.8	49.8		ug/Kg		100	78 - 132	2	20	
Toluene	49.8	49.2		ug/Kg		99	83 - 128	1	20	
1,2,3-Trichlorobenzene	49.8	51.2		ug/Kg		103	82 - 135	1	20	
1,2,4-Trichlorobenzene	49.8	49.4		ug/Kg		99	70 - 131	2	20	
1,1,1-Trichloroethane	49.8	48.6		ug/Kg		98	80 - 127	2	20	
1,1,2-Trichloroethane	49.8	46.0		ug/Kg		92	82 - 125	2	20	
Trichloroethene	49.8	48.6		ug/Kg		98	81 - 133	2	20	
Trichlorofluoromethane	49.8	51.0		ug/Kg		102	71 - 139	4	20	
1,2,3-Trichloropropane	49.8	50.6		ug/Kg		102	76 - 146	5	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	49.8	51.6		ug/Kg		104	70 - 130	3	20	
1,2,4-Trimethylbenzene	49.8	50.2		ug/Kg		101	84 - 130	3	20	
1,3,5-Trimethylbenzene	49.8	52.2		ug/Kg		105	82 - 131	4	20	
Vinyl acetate	49.8	ND		ug/Kg		94	38 - 176	1	20	
Vinyl chloride	49.8	49.2		ug/Kg		99	58 - 125	6	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: LCSD 720-99570/3-A**

**Matrix: Solid**

**Analysis Batch: 99553**

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

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
m-Xylene & p-Xylene	99.6	102		ug/Kg		103	79 - 146	2	20	
o-Xylene	49.8	50.4		ug/Kg		101	84 - 140	2	20	
2,2-Dichloropropane	49.8	54.2		ug/Kg		109	73 - 162	4	20	

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	99		45 - 131
1,2-Dichloroethane-d4 (Surr)	91		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: LCSD 720-99570/5-A**

**Matrix: Solid**

**Analysis Batch: 99553**

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

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Gasoline Range Organics (GRO) -C5-C12	998	835		ug/Kg		84	61 - 128	5	20	

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	100		45 - 131
1,2-Dichloroethane-d4 (Surr)	97		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: 720-37616-2 MS**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: BB-4.5'**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	% Rec	% Rec.	
				Result	Qualifier				Limits	RPD
Methyl tert-butyl ether	ND		48.5	61.0		ug/Kg		126	69 - 130	
Acetone	ND		243	261		ug/Kg		107	37 - 150	
Benzene	ND		48.5	53.4		ug/Kg		110	70 - 130	
Dichlorobromomethane	ND		48.5	53.4		ug/Kg		110	64 - 135	
Bromobenzene	ND		48.5	55.9		ug/Kg		115	70 - 130	
Chlorobromomethane	ND		48.5	60.2		ug/Kg		124	65 - 130	
Bromoform	ND		48.5	54.8		ug/Kg		113	58 - 132	
Bromomethane	ND		48.5	64.3	F	ug/Kg		132	56 - 130	
2-Butanone (MEK)	ND		243	291		ug/Kg		120	41 - 150	
n-Butylbenzene	ND		48.5	31.1		ug/Kg		62	60 - 145	
sec-Butylbenzene	ND		48.5	35.1		ug/Kg		72	64 - 137	
tert-Butylbenzene	ND		48.5	40.2		ug/Kg		83	63 - 134	
Carbon disulfide	ND		48.5	48.0		ug/Kg		99	10 - 150	
Carbon tetrachloride	ND		48.5	48.0		ug/Kg		99	54 - 130	
Chlorobenzene	ND		48.5	45.8		ug/Kg		94	70 - 130	
Chloroethane	ND		48.5	67.2	F	ug/Kg		138	61 - 130	
Chloroform	ND		48.5	56.1		ug/Kg		116	67 - 130	
Chloromethane	ND		48.5	52.6		ug/Kg		108	50 - 131	
2-Chlorotoluene	ND		48.5	48.3		ug/Kg		100	70 - 130	
4-Chlorotoluene	ND		48.5	47.4		ug/Kg		98	70 - 130	
Chlorodibromomethane	ND		48.5	53.0		ug/Kg		109	60 - 141	
1,2-Dichlorobenzene	ND		48.5	41.2		ug/Kg		85	70 - 130	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: 720-37616-2 MS**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: BB-4.5'**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Sample	Sample	Spike	MS		Unit	D	% Rec	% Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
1,3-Dichlorobenzene	ND		48.5	41.7		ug/Kg		86	70 - 130
1,4-Dichlorobenzene	ND		48.5	41.9		ug/Kg		86	70 - 130
1,3-Dichloropropane	ND		48.5	55.3		ug/Kg		114	70 - 130
1,1-Dichloropropene	ND		48.5	48.5		ug/Kg		100	67 - 130
1,2-Dibromo-3-Chloropropane	ND		48.5	62.3		ug/Kg		128	57 - 130
Ethylene Dibromide	ND		48.5	55.5		ug/Kg		114	66 - 135
Dibromomethane	ND		48.5	57.5		ug/Kg		118	65 - 131
Dichlorodifluoromethane	ND		48.5	50.3		ug/Kg		104	38 - 130
1,1-Dichloroethane	ND		48.5	56.3		ug/Kg		116	67 - 130
1,2-Dichloroethane	ND		48.5	54.2		ug/Kg		112	70 - 130
1,1-Dichloroethene	ND		48.5	56.7		ug/Kg		117	64 - 130
cis-1,2-Dichloroethene	ND		48.5	62.5		ug/Kg		129	68 - 131
trans-1,2-Dichloroethene	ND		48.5	49.1		ug/Kg		101	70 - 130
1,2-Dichloropropane	ND		48.5	52.2		ug/Kg		108	65 - 133
cis-1,3-Dichloropropene	ND		48.5	56.1		ug/Kg		116	46 - 139
trans-1,3-Dichloropropene	ND		48.5	57.3		ug/Kg		118	55 - 131
Ethylbenzene	ND		48.5	42.1		ug/Kg		87	65 - 130
Hexachlorobutadiene	ND		48.5	15.7	F	ug/Kg		32	58 - 132
2-Hexanone	ND		243	257		ug/Kg		106	44 - 150
Isopropylbenzene	ND		48.5	35.9		ug/Kg		74	65 - 130
4-Isopropyltoluene	ND		48.5	35.5		ug/Kg		73	69 - 134
Methylene Chloride	ND		48.5	58.8		ug/Kg		117	63 - 130
4-Methyl-2-pentanone (MIBK)	ND		243	257		ug/Kg		106	51 - 140
Naphthalene	ND		48.5	35.7		ug/Kg		74	45 - 146
N-Propylbenzene	ND		48.5	42.5		ug/Kg		88	70 - 130
Styrene	ND		48.5	44.7		ug/Kg		92	58 - 135
1,1,1,2-Tetrachloroethane	ND		48.5	49.9		ug/Kg		103	64 - 133
1,1,1,2,2-Tetrachloroethane	ND		48.5	ND	F	ug/Kg		0	70 - 131
Tetrachloroethene	ND		48.5	37.7		ug/Kg		78	67 - 130
Toluene	ND		48.5	51.8		ug/Kg		105	70 - 130
1,2,3-Trichlorobenzene	ND		48.5	21.2	F	ug/Kg		44	58 - 138
1,2,4-Trichlorobenzene	ND		48.5	22.3	F	ug/Kg		46	49 - 144
1,1,1-Trichloroethane	ND		48.5	53.2		ug/Kg		110	57 - 133
1,1,2-Trichloroethane	ND		48.5	51.1		ug/Kg		105	68 - 132
Trichloroethene	ND		48.5	91.1	F	ug/Kg		188	66 - 130
Trichlorofluoromethane	ND		48.5	59.2		ug/Kg		122	61 - 130
1,2,3-Trichloropropane	ND		48.5	77.5	F	ug/Kg		160	62 - 150
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		48.5	47.8		ug/Kg		98	52 - 130
1,2,4-Trimethylbenzene	ND		48.5	43.9		ug/Kg		88	64 - 140
1,3,5-Trimethylbenzene	ND		48.5	44.3		ug/Kg		90	67 - 134
Vinyl acetate	ND		48.5	ND	F	ug/Kg		0	52 - 150
Vinyl chloride	ND		48.5	60.4		ug/Kg		124	62 - 130
m-Xylene & p-Xylene	ND		97.1	84.9		ug/Kg		86	70 - 130
o-Xylene	ND		48.5	42.7		ug/Kg		87	68 - 130
2,2-Dichloropropane	ND		48.5	62.3		ug/Kg		128	63 - 130

Surrogate	MS % Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	91		45 - 131

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: 720-37616-2 MS**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: BB-4.5'**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Surrogate	MS MS		Limits
	% Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		60 - 140
Toluene-d8 (Surr)	91		58 - 140

**Lab Sample ID: 720-37616-2 MSD**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: BB-4.5'**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	% Rec	% Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Methyl tert-butyl ether	ND		48.4	63.1		ug/Kg		130	69 - 130	3	20	
Acetone	ND		242	280		ug/Kg		116	37 - 150	7	20	
Benzene	ND		48.4	57.6		ug/Kg		119	70 - 130	8	20	
Dichlorobromomethane	ND		48.4	56.7		ug/Kg		117	64 - 135	6	20	
Bromobenzene	ND		48.4	65.6	F	ug/Kg		136	70 - 130	16	20	
Chlorobromomethane	ND		48.4	62.1		ug/Kg		128	65 - 130	3	20	
Bromoform	ND		48.4	51.1		ug/Kg		106	58 - 132	7	20	
Bromomethane	ND		48.4	63.2	F	ug/Kg		131	56 - 130	2	20	
2-Butanone (MEK)	ND		242	296		ug/Kg		123	41 - 150	2	20	
n-Butylbenzene	ND		48.4	32.1		ug/Kg		65	60 - 145	3	20	
sec-Butylbenzene	ND		48.4	38.5		ug/Kg		80	64 - 137	9	20	
tert-Butylbenzene	ND		48.4	47.0		ug/Kg		97	63 - 134	16	20	
Carbon disulfide	ND		48.4	52.4		ug/Kg		108	10 - 150	9	20	
Carbon tetrachloride	ND		48.4	56.3		ug/Kg		116	54 - 130	16	20	
Chlorobenzene	ND		48.4	49.3		ug/Kg		102	70 - 130	7	20	
Chloroethane	ND		48.4	66.5	F	ug/Kg		138	61 - 130	1	20	
Chloroform	ND		48.4	59.0		ug/Kg		122	67 - 130	5	20	
Chloromethane	ND		48.4	52.4		ug/Kg		108	50 - 131	0	20	
2-Chlorotoluene	ND		48.4	60.0	F	ug/Kg		124	70 - 130	21	20	
4-Chlorotoluene	ND		48.4	57.6		ug/Kg		119	70 - 130	20	20	
Chlorodibromomethane	ND		48.4	53.6		ug/Kg		111	60 - 141	1	20	
1,2-Dichlorobenzene	ND		48.4	42.0		ug/Kg		87	70 - 130	2	20	
1,3-Dichlorobenzene	ND		48.4	45.5		ug/Kg		94	70 - 130	9	20	
1,4-Dichlorobenzene	ND		48.4	45.1		ug/Kg		93	70 - 130	7	20	
1,3-Dichloropropane	ND		48.4	55.5		ug/Kg		115	70 - 130	0	20	
1,1-Dichloropropene	ND		48.4	57.1		ug/Kg		118	67 - 130	16	20	
1,2-Dibromo-3-Chloropropane	ND		48.4	61.1		ug/Kg		126	57 - 130	2	20	
Ethylene Dibromide	ND		48.4	54.9		ug/Kg		114	66 - 135	1	20	
Dibromomethane	ND		48.4	57.8		ug/Kg		120	65 - 131	1	20	
Dichlorodifluoromethane	ND		48.4	49.9		ug/Kg		103	38 - 130	1	20	
1,1-Dichloroethane	ND		48.4	59.0		ug/Kg		122	67 - 130	5	20	
1,2-Dichloroethane	ND		48.4	55.1		ug/Kg		114	70 - 130	2	20	
1,1-Dichloroethene	ND		48.4	62.9		ug/Kg		130	64 - 130	10	20	
cis-1,2-Dichloroethene	ND		48.4	65.6	F	ug/Kg		136	68 - 131	5	20	
trans-1,2-Dichloroethene	ND		48.4	52.8		ug/Kg		109	70 - 130	7	20	
1,2-Dichloropropane	ND		48.4	55.1		ug/Kg		114	65 - 133	5	20	
cis-1,3-Dichloropropene	ND		48.4	58.0		ug/Kg		120	46 - 139	3	20	
trans-1,3-Dichloropropene	ND		48.4	58.4		ug/Kg		121	55 - 131	2	20	
Ethylbenzene	ND		48.4	47.8		ug/Kg		99	65 - 130	13	20	
Hexachlorobutadiene	ND		48.4	12.3	F	ug/Kg		26	58 - 132	24	20	
2-Hexanone	ND		242	267		ug/Kg		110	44 - 150	4	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: 720-37616-2 MSD**

**Matrix: Solid**

**Analysis Batch: 99553**

**Client Sample ID: BB-4.5'**

**Prep Type: Total/NA**

**Prep Batch: 99570**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
Isopropylbenzene	ND		48.4	38.5		ug/Kg		80	65 - 130	7	20	
4-Isopropyltoluene	ND		48.4	38.9		ug/Kg		80	69 - 134	9	20	
Methylene Chloride	ND		48.4	61.5		ug/Kg		123	63 - 130	4	20	
4-Methyl-2-pentanone (MIBK)	ND		242	269		ug/Kg		111	51 - 140	5	20	
Naphthalene	ND		48.4	27.7	F	ug/Kg		57	45 - 146	25	20	
N-Propylbenzene	ND		48.4	52.6	F	ug/Kg		109	70 - 130	21	20	
Styrene	ND		48.4	47.0		ug/Kg		97	58 - 135	5	20	
1,1,1,2-Tetrachloroethane	ND		48.4	51.8		ug/Kg		107	64 - 133	4	20	
1,1,1,2,2-Tetrachloroethane	ND		48.4	ND	F	ug/Kg		0	70 - 131	NC	20	
Tetrachloroethene	ND		48.4	44.1		ug/Kg		91	67 - 130	16	20	
Toluene	ND		48.4	58.2		ug/Kg		119	70 - 130	12	20	
1,2,3-Trichlorobenzene	ND		48.4	15.1	F	ug/Kg		31	58 - 138	33	20	
1,2,4-Trichlorobenzene	ND		48.4	17.3	F	ug/Kg		36	49 - 144	25	20	
1,1,1-Trichloroethane	ND		48.4	59.4		ug/Kg		123	57 - 133	11	20	
1,1,2-Trichloroethane	ND		48.4	50.1		ug/Kg		104	68 - 132	2	20	
Trichloroethene	ND		48.4	103	F	ug/Kg		213	66 - 130	12	20	
Trichlorofluoromethane	ND		48.4	59.4		ug/Kg		123	61 - 130	0	20	
1,2,3-Trichloropropane	ND		48.4	88.2	F	ug/Kg		182	62 - 150	13	20	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		48.4	55.7		ug/Kg		115	52 - 130	15	20	
1,2,4-Trimethylbenzene	ND		48.4	51.5		ug/Kg		104	64 - 140	16	20	
1,3,5-Trimethylbenzene	ND		48.4	53.4		ug/Kg		109	67 - 134	19	20	
Vinyl acetate	ND		48.4	ND	F	ug/Kg		0	52 - 150	NC	20	
Vinyl chloride	ND		48.4	60.9		ug/Kg		126	62 - 130	1	20	
m-Xylene & p-Xylene	ND		96.7	94.4		ug/Kg		96	70 - 130	11	20	
o-Xylene	ND		48.4	46.4		ug/Kg		95	68 - 130	8	20	
2,2-Dichloropropane	ND		48.4	68.5	F	ug/Kg		142	63 - 130	9	20	

Surrogate	MSD	MSD	Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	84		45 - 131
1,2-Dichloroethane-d4 (Surr)	96		60 - 140
Toluene-d8 (Surr)	95		58 - 140

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

**Lab Sample ID: MB 720-99543/1-A**

**Matrix: Solid**

**Analysis Batch: 99487**

**Client Sample ID: Method Blank**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99543**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/22/11 17:16	09/22/11 23:19	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/22/11 17:16	09/22/11 23:19	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
Capric Acid (Surr)	0.1		0 - 5	09/22/11 17:16	09/22/11 23:19	1
p-Terphenyl	92		38 - 148	09/22/11 17:16	09/22/11 23:19	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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

**Lab Sample ID: LCS 720-99543/2-A**

**Matrix: Solid**

**Analysis Batch: 99487**

**Client Sample ID: Lab Control Sample**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99543**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits	
Diesel Range Organics [C10-C28]	83.1	75.9		mg/Kg		91	50 - 150	
<b>Surrogate</b>		<b>LCS % Recovery</b>	<b>LCS Qualifier</b>				<b>Limits</b>	
<i>p-Terphenyl</i>		95					38 - 148	

**Lab Sample ID: LCSD 720-99543/3-A**

**Matrix: Solid**

**Analysis Batch: 99487**

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

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99543**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD	Limit
Diesel Range Organics [C10-C28]	83.5	77.4		mg/Kg		93	50 - 150		2	35
<b>Surrogate</b>		<b>LCSD % Recovery</b>	<b>LCSD Qualifier</b>				<b>Limits</b>			
<i>p-Terphenyl</i>		93					38 - 148			

**Lab Sample ID: 720-37616-1 MS**

**Matrix: Solid**

**Analysis Batch: 99488**

**Client Sample ID: BA-4.5'**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99543**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits	
Diesel Range Organics [C10-C28]	200		82.9	217	F	mg/Kg		17	50 - 150	
<b>Surrogate</b>		<b>MS % Recovery</b>		<b>MS Qualifier</b>					<b>Limits</b>	
<i>p-Terphenyl</i>		0		D					38 - 148	

**Lab Sample ID: 720-37616-1 MSD**

**Matrix: Solid**

**Analysis Batch: 99488**

**Client Sample ID: BA-4.5'**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99543**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD	Limit
Diesel Range Organics [C10-C28]	200		83.3	206	F	mg/Kg		3	50 - 150		5	20
<b>Surrogate</b>		<b>MSD % Recovery</b>		<b>MSD Qualifier</b>					<b>Limits</b>			
<i>p-Terphenyl</i>		0		D					38 - 148			

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

## GC/MS VOA

### Analysis Batch: 99536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37616-1	BA-4.5'	Total/NA	Solid	8260B/CA_LUFT MS	99550
720-37616-3	BC-6'	Total/NA	Solid	8260B/CA_LUFT MS	99550
LCS 720-99550/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99550
LCS 720-99550/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99550
LCSD 720-99550/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99550
LCSD 720-99550/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99550
MB 720-99550/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	99550

### Prep Batch: 99550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37616-1	BA-4.5'	Total/NA	Solid	5030B	
720-37616-3	BC-6'	Total/NA	Solid	5030B	
LCS 720-99550/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-99550/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 720-99550/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
LCSD 720-99550/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-99550/1-A	Method Blank	Total/NA	Solid	5030B	

### Analysis Batch: 99553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37616-2	BB-4.5'	Total/NA	Solid	8260B/CA_LUFT MS	99570
720-37616-2 MS	BB-4.5'	Total/NA	Solid	8260B/CA_LUFT MS	99570
720-37616-2 MSD	BB-4.5'	Total/NA	Solid	8260B/CA_LUFT MS	99570
LCS 720-99570/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99570
LCS 720-99570/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99570
LCSD 720-99570/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99570
LCSD 720-99570/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99570
MB 720-99570/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	99570

### Prep Batch: 99570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37616-2	BB-4.5'	Total/NA	Solid	5030B	
720-37616-2 MS	BB-4.5'	Total/NA	Solid	5030B	
720-37616-2 MSD	BB-4.5'	Total/NA	Solid	5030B	
LCS 720-99570/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-99570/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 720-99570/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
LCSD 720-99570/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-99570/1-A	Method Blank	Total/NA	Solid	5030B	



# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

## GC Semi VOA

### Analysis Batch: 99487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37616-2	BB-4.5'	Silica Gel Cleanup	Solid	8015B	99543
720-37616-3	BC-6'	Silica Gel Cleanup	Solid	8015B	99543
LCS 720-99543/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	99543
LCSD 720-99543/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	99543
MB 720-99543/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	99543

### Analysis Batch: 99488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37616-1	BA-4.5'	Silica Gel Cleanup	Solid	8015B	99543
720-37616-1 MS	BA-4.5'	Silica Gel Cleanup	Solid	8015B	99543
720-37616-1 MSD	BA-4.5'	Silica Gel Cleanup	Solid	8015B	99543

### Prep Batch: 99543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37616-1	BA-4.5'	Silica Gel Cleanup	Solid	3546	
720-37616-1 MS	BA-4.5'	Silica Gel Cleanup	Solid	3546	
720-37616-1 MSD	BA-4.5'	Silica Gel Cleanup	Solid	3546	
720-37616-2	BB-4.5'	Silica Gel Cleanup	Solid	3546	
720-37616-3	BC-6'	Silica Gel Cleanup	Solid	3546	
LCS 720-99543/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-99543/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-99543/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

# Certification Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

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

- 1
- 2
- 3
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- 13

# Method Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

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 San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



# Sample Summary

Client: Engeo, Inc.  
Project/Site: Macedo Property

TestAmerica Job ID: 720-37616-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-37616-1	BA-4.5'	Solid	09/22/11 11:00	09/22/11 15:18
720-37616-2	BB-4.5'	Solid	09/22/11 11:15	09/22/11 15:18
720-37616-3	BC-6'	Solid	09/22/11 14:30	09/22/11 15:18

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

Attn: Jeff Adams  
 Company: ENGEO  
 Address: 2010 Crow Canyon Place  
 Phone: 925-395-2506 Email: jadams@engeo.com  
 Bill To: ENGEO Sampled By: M. J.  
 Attn: \_\_\_\_\_ Phone: \_\_\_\_\_

- TPH EPA - 8260B
- Gas w/ BTEX
- MTBE
- TEPH EPA 8015M\*  Silica Gel
- Diesel  Motor Oil  Other
- EPA 8260B:  Gas  BTEX
- 5 Oxygenates  DCA, ED8  Ethanol
- (HVOCS) EPA 8021 by 8260B
- Volatile Organics GC/MS (VOCs)
- EPA 8260B  624
- Semivolatiles GC/MS
- EPA 8270  625
- Oil and Grease  Petroleum (EPA 1664)  Total
- Pesticides  EPA 8081  608
- PCBs  EPA 8082  608
- PNAs by  8270  8310
- CAM17 Metals (EPA 6010/7470/7471)
- Metals:  Lead  LUFT  RCRA
- Other: \_\_\_\_\_
- Low Level Metals by EPA 200.8/6020 (ICP-MS):
- W.E.T (STLC)
- TCLP
- Hexavalent Chromium
- pH (24h hold time for H<sub>2</sub>O)
- Spec. Cond.  Alkalinity
- TSS  TDS
- Anions:  Cl  SO<sub>4</sub>  NO<sub>3</sub>  F
- Br  NO<sub>2</sub>  PO<sub>4</sub>

Sample ID	Date	Time	Mat rix	Preserv	TPH EPA - 8260B	Gas w/ BTEX	MTBE	TEPH EPA 8015M* <input checked="" type="checkbox"/> Silica Gel	Diesel <input checked="" type="checkbox"/> Motor Oil <input type="checkbox"/> Other	EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX	5 Oxygenates <input type="checkbox"/> DCA, ED8 <input type="checkbox"/> Ethanol	(HVOCS) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs)	EPA 8260B <input type="checkbox"/> 624	Semivolatiles GC/MS	EPA 8270 <input type="checkbox"/> 625	Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608	PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA	Other: _____	Low Level Metals by EPA 200.8/6020 (ICP-MS):	W.E.T (STLC)	TCLP	Hexavalent Chromium	pH (24h hold time for H <sub>2</sub> O)	Spec. Cond. <input type="checkbox"/> Alkalinity	TSS <input type="checkbox"/> TDS	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F	Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Number of Containers		
BA-4.5'	9/22/11	11:00	Soil		X	X		X					X																						
BB-4.5'	↓	11:15	↓		X	X		X					X																						
BC-6'	↓	2:30	↓		X	X		X					X																						

**RUSH**

**Project Info**  
 Project Name: Macedo Property  
 Project#: 738000003  
 PO#: \_\_\_\_\_  
 Credit Card#: \_\_\_\_\_

**Sample Receipt**  
 # of Containers: 3  
 Head Space: \_\_\_\_\_  
 Temp: 23.7°C  
 Conforms to record: \_\_\_\_\_

1) Relinquished by: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Time: 3:18  
 Printed Name: Morgan Johnson Date: 9/22/11  
 Company: \_\_\_\_\_

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

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

TA 5 Day 3 Day 2 Day 1 Day Other: \_\_\_\_\_  
 Report:  Routine  Level 3  Level 4  EDD  State Tank Fund EDF  
 Special Instructions / Comments:  Global ID \_\_\_\_\_

1) Received by: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Time: 3:18  
 Printed Name: \_\_\_\_\_ Date: 9/22/11  
 Company: \_\_\_\_\_

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

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

See Terms and Conditions on reverse  
 \*TestAmerica SF reports 8015M from C<sub>9</sub>-C<sub>24</sub> (industry norm). Default for 8015B is C<sub>10</sub>-C<sub>28</sub>

## Login Sample Receipt Checklist

Client: Engeo, Inc.

Job Number: 720-37616-1

**Login Number: 37616**

**List Source: TestAmerica San Francisco**

**List Number: 1**

**Creator: Hoang, Julie**

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



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

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

TestAmerica Job ID: 720-37555-1  
Client Project/Site: Macedo Remediation  
Revision: 1

For:  
Engeo, Inc.  
580 N Wilma Avenue  
Suite A  
Ripon, California 95366-9502

Attn: Mr. Richard Gandolfo



Authorized for release by:  
09/27/2011 12:23:30 PM

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

### LINKS

Review your project  
results through  
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Have a Question?



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[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.*

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# Definitions/Glossary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Qualifiers

### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
F	RPD of the MS and MSD exceeds the control limits

### Metals

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	RPD of the MS and MSD exceeds the control limits

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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
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: Macedo Remediation

TestAmerica Job ID: 720-37555-1

**Job ID: 720-37555-1**

**Laboratory: TestAmerica San Francisco**

## Narrative

**Job Narrative**  
**720-37555-1**

### Comments

No additional comments.

### Receipt

All samples were received in good condition within temperature requirements.

### GC/MS VOA

No analytical or quality issues were noted.

### GC VOA

No analytical or quality issues were noted.

### GC Semi VOA

Method(s) 8015B: Capric acid surrogate recovery for the following sample(s) was outside control limits: 2-SPB-6 (720-37555-24). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8015B: The matrix spike / matrix spike duplicate (MS/MSD) precision for batch 99430 was outside control limits. Non-homogeneity of the sample matrix is suspected. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision met acceptance criteria.

No other analytical or quality issues were noted.

### Metals

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for prep batch 99454 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

### Organic Prep

No analytical or quality issues were noted.

# Detection Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SP1-A,B COMPOSITE

Lab Sample ID: 720-37555-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.3		0.99		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: 2-SP-2A,B COMPOSITE

Lab Sample ID: 720-37555-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.5		1.0		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: 2-SP3A,B COMPOSITE

Lab Sample ID: 720-37555-9

No Detections

## Client Sample ID: 2-SP4-A,B COMPOSITE

Lab Sample ID: 720-37555-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	9.3		0.99		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: 2-SP5-A,B COMPOSITE

Lab Sample ID: 720-37555-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	3.2		0.99		mg/Kg	1		8015B	Silica Gel Clear

## Client Sample ID: 2-SP6-A,B COMPOSITE

Lab Sample ID: 720-37555-18

No Detections

## Client Sample ID: 2-SPB-1

Lab Sample ID: 720-37555-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.7		0.99		mg/Kg	1		8015B	Silica Gel Clear
Arsenic	5.1		3.9		mg/Kg	4		6010B	Total/NA
Barium	250		1.9		mg/Kg	4		6010B	Total/NA
Chromium	29		1.9		mg/Kg	4		6010B	Total/NA
Cobalt	9.9		0.78		mg/Kg	4		6010B	Total/NA
Copper	21		5.8		mg/Kg	4		6010B	Total/NA
Lead	5.9		1.9		mg/Kg	4		6010B	Total/NA
Nickel	33		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	43		1.9		mg/Kg	4		6010B	Total/NA
Zinc	40		5.8		mg/Kg	4		6010B	Total/NA
Mercury	0.029		0.0098		mg/Kg	1		7471A	Total/NA

## Client Sample ID: 2-SPB-2

Lab Sample ID: 720-37555-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	3.8		1.0		mg/Kg	1		8015B	Silica Gel Clear
Arsenic	4.4		3.3		mg/Kg	4		6010B	Total/NA
Barium	210		1.7		mg/Kg	4		6010B	Total/NA
Chromium	26		1.7		mg/Kg	4		6010B	Total/NA
Cobalt	8.7		0.67		mg/Kg	4		6010B	Total/NA
Copper	19		5.0		mg/Kg	4		6010B	Total/NA
Lead	6.1		1.7		mg/Kg	4		6010B	Total/NA
Nickel	29		1.7		mg/Kg	4		6010B	Total/NA
Vanadium	39		1.7		mg/Kg	4		6010B	Total/NA
Zinc	36		5.0		mg/Kg	4		6010B	Total/NA
Mercury	0.026		0.0094		mg/Kg	1		7471A	Total/NA

# Detection Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SPB-3

## Lab Sample ID: 720-37555-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	3.9		0.99		mg/Kg	1		8015B	Silica Gel Clear
Arsenic	4.0		3.4		mg/Kg	4		6010B	Total/NA
Barium	180		1.7		mg/Kg	4		6010B	Total/NA
Chromium	25		1.7		mg/Kg	4		6010B	Total/NA
Cobalt	9.0		0.68		mg/Kg	4		6010B	Total/NA
Copper	22		5.1		mg/Kg	4		6010B	Total/NA
Lead	6.2		1.7		mg/Kg	4		6010B	Total/NA
Nickel	32		1.7		mg/Kg	4		6010B	Total/NA
Vanadium	37		1.7		mg/Kg	4		6010B	Total/NA
Zinc	39		5.1		mg/Kg	4		6010B	Total/NA
Mercury	0.043		0.0088		mg/Kg	1		7471A	Total/NA

## Client Sample ID: 2-SPB-4

## Lab Sample ID: 720-37555-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.0		0.99		mg/Kg	1		8015B	Silica Gel Clear
Arsenic	4.8		4.0		mg/Kg	4		6010B	Total/NA
Barium	210		2.0		mg/Kg	4		6010B	Total/NA
Chromium	29		2.0		mg/Kg	4		6010B	Total/NA
Cobalt	13		0.79		mg/Kg	4		6010B	Total/NA
Copper	25		5.9		mg/Kg	4		6010B	Total/NA
Lead	11		2.0		mg/Kg	4		6010B	Total/NA
Nickel	31		2.0		mg/Kg	4		6010B	Total/NA
Vanadium	43		2.0		mg/Kg	4		6010B	Total/NA
Zinc	39		5.9		mg/Kg	4		6010B	Total/NA
Mercury	0.042		0.0091		mg/Kg	1		7471A	Total/NA

## Client Sample ID: 2-SPB-5

## Lab Sample ID: 720-37555-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	3.8		0.98		mg/Kg	1		8015B	Silica Gel Clear
Barium	160		1.9		mg/Kg	4		6010B	Total/NA
Chromium	21		1.9		mg/Kg	4		6010B	Total/NA
Cobalt	9.2		0.75		mg/Kg	4		6010B	Total/NA
Copper	20		5.7		mg/Kg	4		6010B	Total/NA
Lead	14		1.9		mg/Kg	4		6010B	Total/NA
Nickel	24		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	30		1.9		mg/Kg	4		6010B	Total/NA
Zinc	34		5.7		mg/Kg	4		6010B	Total/NA
Mercury	0.040		0.0097		mg/Kg	1		7471A	Total/NA

## Client Sample ID: 2-SPB-6

## Lab Sample ID: 720-37555-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	85		2.0		mg/Kg	2		8015B	Silica Gel Clear
Motor Oil Range Organics [C24-C36]	200		100		mg/Kg	2		8015B	Silica Gel Clear
Arsenic	5.3		3.8		mg/Kg	4		6010B	Total/NA
Barium	280		1.9		mg/Kg	4		6010B	Total/NA
Beryllium	0.40		0.38		mg/Kg	4		6010B	Total/NA
Chromium	28		1.9		mg/Kg	4		6010B	Total/NA
Cobalt	10		0.76		mg/Kg	4		6010B	Total/NA
Copper	36		5.7		mg/Kg	4		6010B	Total/NA
Lead	25		1.9		mg/Kg	4		6010B	Total/NA
Nickel	28		1.9		mg/Kg	4		6010B	Total/NA

# Detection Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SPB-6 (Continued)

Lab Sample ID: 720-37555-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	48		1.9		mg/Kg	4		6010B	Total/NA
Zinc	65		5.7		mg/Kg	4		6010B	Total/NA
Mercury	0.11		0.0095		mg/Kg	1		7471A	Total/NA

## Client Sample ID: 2-SPB-7

Lab Sample ID: 720-37555-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	3.9		0.99		mg/Kg	1		8015B	Silica Gel Clear
Arsenic	5.5		3.7		mg/Kg	4		6010B	Total/NA
Barium	250		1.9		mg/Kg	4		6010B	Total/NA
Beryllium	0.43		0.37		mg/Kg	4		6010B	Total/NA
Chromium	32		1.9		mg/Kg	4		6010B	Total/NA
Cobalt	15		0.75		mg/Kg	4		6010B	Total/NA
Copper	29		5.6		mg/Kg	4		6010B	Total/NA
Lead	12		1.9		mg/Kg	4		6010B	Total/NA
Nickel	36		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	48		1.9		mg/Kg	4		6010B	Total/NA
Zinc	100		5.6		mg/Kg	4		6010B	Total/NA
Mercury	0.038		0.0090		mg/Kg	1		7471A	Total/NA

## Client Sample ID: 2-SPB-8

Lab Sample ID: 720-37555-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	2.8		1.0		mg/Kg	1		8015B	Silica Gel Clear
Arsenic	5.1		4.0		mg/Kg	4		6010B	Total/NA
Barium	240		2.0		mg/Kg	4		6010B	Total/NA
Chromium	34		2.0		mg/Kg	4		6010B	Total/NA
Cobalt	13		0.79		mg/Kg	4		6010B	Total/NA
Copper	30		5.9		mg/Kg	4		6010B	Total/NA
Lead	21		2.0		mg/Kg	4		6010B	Total/NA
Nickel	39		2.0		mg/Kg	4		6010B	Total/NA
Vanadium	45		2.0		mg/Kg	4		6010B	Total/NA
Zinc	60		5.9		mg/Kg	4		6010B	Total/NA
Mercury	0.064		0.0097		mg/Kg	1		7471A	Total/NA

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SP1-A,B COMPOSITE

Lab Sample ID: 720-37555-3

Date Collected: 09/20/11 07:55

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg		09/20/11 19:28	09/21/11 04:40	1
Ethylbenzene	ND		5.0		ug/Kg		09/20/11 19:28	09/21/11 04:40	1
Toluene	ND		5.0		ug/Kg		09/20/11 19:28	09/21/11 04:40	1
Xylenes, Total	ND		9.9		ug/Kg		09/20/11 19:28	09/21/11 04:40	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/20/11 19:28	09/21/11 04:40	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		45 - 131	09/20/11 19:28	09/21/11 04:40	1
1,2-Dichloroethane-d4 (Surr)	133		60 - 140	09/20/11 19:28	09/21/11 04:40	1
Toluene-d8 (Surr)	100		58 - 140	09/20/11 19:28	09/21/11 04:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.3		0.99		mg/Kg		09/21/11 10:32	09/21/11 20:09	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/21/11 10:32	09/21/11 20:09	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.1		0 - 5	09/21/11 10:32	09/21/11 20:09	1
p-Terphenyl	94		38 - 148	09/21/11 10:32	09/21/11 20:09	1

## Client Sample ID: 2-SP-2A,B COMPOSITE

Lab Sample ID: 720-37555-6

Date Collected: 09/20/11 08:00

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.8		ug/Kg		09/20/11 19:28	09/21/11 05:10	1
Ethylbenzene	ND		4.8		ug/Kg		09/20/11 19:28	09/21/11 05:10	1
Toluene	ND		4.8		ug/Kg		09/20/11 19:28	09/21/11 05:10	1
Xylenes, Total	ND		9.7		ug/Kg		09/20/11 19:28	09/21/11 05:10	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/20/11 19:28	09/21/11 05:10	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	104		45 - 131	09/20/11 19:28	09/21/11 05:10	1
1,2-Dichloroethane-d4 (Surr)	135		60 - 140	09/20/11 19:28	09/21/11 05:10	1
Toluene-d8 (Surr)	101		58 - 140	09/20/11 19:28	09/21/11 05:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.5		1.0		mg/Kg		09/21/11 10:32	09/21/11 20:32	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/21/11 10:32	09/21/11 20:32	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.06		0 - 5	09/21/11 10:32	09/21/11 20:32	1
p-Terphenyl	104		38 - 148	09/21/11 10:32	09/21/11 20:32	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SP3A,B COMPOSITE

Lab Sample ID: 720-37555-9

Date Collected: 09/20/11 08:10

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.9		ug/Kg		09/20/11 19:28	09/21/11 05:39	1
Ethylbenzene	ND		4.9		ug/Kg		09/20/11 19:28	09/21/11 05:39	1
Toluene	ND		4.9		ug/Kg		09/20/11 19:28	09/21/11 05:39	1
Xylenes, Total	ND		9.7		ug/Kg		09/20/11 19:28	09/21/11 05:39	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/20/11 19:28	09/21/11 05:39	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		45 - 131	09/20/11 19:28	09/21/11 05:39	1
1,2-Dichloroethane-d4 (Surr)	136		60 - 140	09/20/11 19:28	09/21/11 05:39	1
Toluene-d8 (Surr)	99		58 - 140	09/20/11 19:28	09/21/11 05:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/21/11 10:32	09/21/11 20:56	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/21/11 10:32	09/21/11 20:56	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.08		0 - 5	09/21/11 10:32	09/21/11 20:56	1
p-Terphenyl	106		38 - 148	09/21/11 10:32	09/21/11 20:56	1

## Client Sample ID: 2-SP4-A,B COMPOSITE

Lab Sample ID: 720-37555-12

Date Collected: 09/20/11 08:20

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.8		ug/Kg		09/20/11 19:28	09/21/11 07:08	1
Ethylbenzene	ND		4.8		ug/Kg		09/20/11 19:28	09/21/11 07:08	1
Toluene	ND		4.8		ug/Kg		09/20/11 19:28	09/21/11 07:08	1
Xylenes, Total	ND		9.6		ug/Kg		09/20/11 19:28	09/21/11 07:08	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/20/11 19:28	09/21/11 07:08	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	103		45 - 131	09/20/11 19:28	09/21/11 07:08	1
1,2-Dichloroethane-d4 (Surr)	136		60 - 140	09/20/11 19:28	09/21/11 07:08	1
Toluene-d8 (Surr)	101		58 - 140	09/20/11 19:28	09/21/11 07:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	9.3		0.99		mg/Kg		09/21/11 10:32	09/21/11 21:19	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/21/11 10:32	09/21/11 21:19	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.6		0 - 5	09/21/11 10:32	09/21/11 21:19	1
p-Terphenyl	87		38 - 148	09/21/11 10:32	09/21/11 21:19	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SP5-A,B COMPOSITE

Lab Sample ID: 720-37555-15

Date Collected: 09/20/11 08:26

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg		09/20/11 19:28	09/21/11 07:37	1
Ethylbenzene	ND		5.0		ug/Kg		09/20/11 19:28	09/21/11 07:37	1
Toluene	ND		5.0		ug/Kg		09/20/11 19:28	09/21/11 07:37	1
Xylenes, Total	ND		9.9		ug/Kg		09/20/11 19:28	09/21/11 07:37	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/20/11 19:28	09/21/11 07:37	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	105		45 - 131	09/20/11 19:28	09/21/11 07:37	1
1,2-Dichloroethane-d4 (Surr)	133		60 - 140	09/20/11 19:28	09/21/11 07:37	1
Toluene-d8 (Surr)	102		58 - 140	09/20/11 19:28	09/21/11 07:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.2		0.99		mg/Kg		09/21/11 10:32	09/21/11 22:30	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/21/11 10:32	09/21/11 22:30	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.06		0 - 5	09/21/11 10:32	09/21/11 22:30	1
p-Terphenyl	107		38 - 148	09/21/11 10:32	09/21/11 22:30	1

## Client Sample ID: 2-SP6-A,B COMPOSITE

Lab Sample ID: 720-37555-18

Date Collected: 09/20/11 08:35

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.8		ug/Kg		09/20/11 19:28	09/21/11 08:07	1
Ethylbenzene	ND		4.8		ug/Kg		09/20/11 19:28	09/21/11 08:07	1
Toluene	ND		4.8		ug/Kg		09/20/11 19:28	09/21/11 08:07	1
Xylenes, Total	ND		9.7		ug/Kg		09/20/11 19:28	09/21/11 08:07	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/20/11 19:28	09/21/11 08:07	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	105		45 - 131	09/20/11 19:28	09/21/11 08:07	1
1,2-Dichloroethane-d4 (Surr)	136		60 - 140	09/20/11 19:28	09/21/11 08:07	1
Toluene-d8 (Surr)	102		58 - 140	09/20/11 19:28	09/21/11 08:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		09/21/11 10:32	09/21/11 21:43	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/21/11 10:32	09/21/11 21:43	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.1		0 - 5	09/21/11 10:32	09/21/11 21:43	1
p-Terphenyl	92		38 - 148	09/21/11 10:32	09/21/11 21:43	1



# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

**Client Sample ID: 2-SPB-1**

**Lab Sample ID: 720-37555-19**

Date Collected: 09/20/11 07:46

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.9		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
Ethylbenzene	ND		4.9		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
Toluene	ND		4.9		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
Xylenes, Total	ND		9.8		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
Gasoline Range Organics (GRO)	ND		250		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
-C5-C12									
Methyl tert-butyl ether	ND		4.9		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
TBA	ND		9.8		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
Ethyl tert-butyl ether	ND		4.9		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
DIPE	ND		4.9		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
TAME	ND		4.9		ug/Kg		09/20/11 16:03	09/21/11 00:18	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		45 - 131				09/20/11 16:03	09/21/11 00:18	1
1,2-Dichloroethane-d4 (Surr)	115		60 - 140				09/20/11 16:03	09/21/11 00:18	1
Toluene-d8 (Surr)	97		58 - 140				09/20/11 16:03	09/21/11 00:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.7		0.99		mg/Kg		09/21/11 10:32	09/21/11 22:06	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/21/11 10:32	09/21/11 22:06	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.04		0 - 5				09/21/11 10:32	09/21/11 22:06	1
p-Terphenyl	102		38 - 148				09/21/11 10:32	09/21/11 22:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Arsenic	5.1		3.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Barium	250		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Beryllium	ND		0.39		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Cadmium	ND		0.49		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Chromium	29		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Cobalt	9.9		0.78		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Copper	21		5.8		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Lead	5.9		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Molybdenum	ND		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Nickel	33		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Selenium	ND		3.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Silver	ND		0.97		mg/Kg		09/21/11 09:07	09/22/11 12:08	4
Thallium	ND		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Vanadium	43		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:04	4
Zinc	40		5.8		mg/Kg		09/21/11 09:07	09/21/11 18:04	4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.029		0.0098		mg/Kg		09/21/11 15:46	09/22/11 15:31	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

**Client Sample ID: 2-SPB-2**

**Lab Sample ID: 720-37555-20**

Date Collected: 09/20/11 07:38

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
Ethylbenzene	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
Toluene	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
Xylenes, Total	ND		9.3		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
Gasoline Range Organics (GRO)	ND		230		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
-C5-C12									
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
TBA	ND		9.3		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
Ethyl tert-butyl ether	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
DIPE	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
TAME	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 00:51	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		45 - 131				09/20/11 16:03	09/21/11 00:51	1
1,2-Dichloroethane-d4 (Surr)	107		60 - 140				09/20/11 16:03	09/21/11 00:51	1
Toluene-d8 (Surr)	93		58 - 140				09/20/11 16:03	09/21/11 00:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.8		1.0		mg/Kg		09/21/11 10:32	09/21/11 19:22	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/21/11 10:32	09/21/11 19:22	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.07		0 - 5				09/21/11 10:32	09/21/11 19:22	1
p-Terphenyl	94		38 - 148				09/21/11 10:32	09/21/11 19:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Arsenic	4.4		3.3		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Barium	210		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Beryllium	ND		0.33		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Cadmium	ND		0.42		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Chromium	26		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Cobalt	8.7		0.67		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Copper	19		5.0		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Lead	6.1		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Molybdenum	ND		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Nickel	29		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Selenium	ND		3.3		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Silver	ND		0.83		mg/Kg		09/21/11 09:07	09/22/11 12:12	4
Thallium	ND		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Vanadium	39		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:09	4
Zinc	36		5.0		mg/Kg		09/21/11 09:07	09/21/11 18:09	4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.026		0.0094		mg/Kg		09/21/11 15:46	09/22/11 15:33	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

**Client Sample ID: 2-SPB-3**

**Lab Sample ID: 720-37555-21**

Date Collected: 09/20/11 08:40

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 02:27	1
Ethylbenzene	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 02:27	1
Toluene	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 02:27	1
Xylenes, Total	ND		9.9		ug/Kg		09/20/11 16:03	09/21/11 02:27	1
Gasoline Range Organics (GRO)	ND		250		ug/Kg		09/20/11 16:03	09/21/11 02:27	1
-C5-C12									
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 02:27	1
TBA	ND		9.9		ug/Kg		09/20/11 16:03	09/21/11 02:27	1
Ethyl tert-butyl ether	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 02:27	1
DIPE	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 02:27	1
TAME	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 02:27	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		45 - 131	09/20/11 16:03	09/21/11 02:27	1
1,2-Dichloroethane-d4 (Surr)	110		60 - 140	09/20/11 16:03	09/21/11 02:27	1
Toluene-d8 (Surr)	95		58 - 140	09/20/11 16:03	09/21/11 02:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.9		0.99		mg/Kg		09/21/11 10:32	09/21/11 19:45	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/21/11 10:32	09/21/11 19:45	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.4		0 - 5	09/21/11 10:32	09/21/11 19:45	1
p-Terphenyl	86		38 - 148	09/21/11 10:32	09/21/11 19:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Arsenic	4.0		3.4		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Barium	180		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Beryllium	ND		0.34		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Cadmium	ND		0.42		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Chromium	25		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Cobalt	9.0		0.68		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Copper	22		5.1		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Lead	6.2		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Molybdenum	ND		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Nickel	32		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Selenium	ND		3.4		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Silver	ND		0.85		mg/Kg		09/21/11 09:07	09/22/11 12:17	4
Thallium	ND		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Vanadium	37		1.7		mg/Kg		09/21/11 09:07	09/21/11 18:13	4
Zinc	39		5.1		mg/Kg		09/21/11 09:07	09/21/11 18:13	4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.043		0.0088		mg/Kg		09/21/11 15:46	09/22/11 15:35	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

**Client Sample ID: 2-SPB-4**

**Lab Sample ID: 720-37555-22**

Date Collected: 09/20/11 08:50

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 02:59	1
Ethylbenzene	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 02:59	1
Toluene	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 02:59	1
Xylenes, Total	ND		9.5		ug/Kg		09/20/11 16:03	09/21/11 02:59	1
Gasoline Range Organics (GRO)	ND		240		ug/Kg		09/20/11 16:03	09/21/11 02:59	1
-C5-C12									
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 02:59	1
TBA	ND		9.5		ug/Kg		09/20/11 16:03	09/21/11 02:59	1
Ethyl tert-butyl ether	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 02:59	1
DIPE	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 02:59	1
TAME	ND		4.7		ug/Kg		09/20/11 16:03	09/21/11 02:59	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		45 - 131	09/20/11 16:03	09/21/11 02:59	1
1,2-Dichloroethane-d4 (Surr)	127		60 - 140	09/20/11 16:03	09/21/11 02:59	1
Toluene-d8 (Surr)	94		58 - 140	09/20/11 16:03	09/21/11 02:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1.0		0.99		mg/Kg		09/21/11 10:32	09/21/11 20:09	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/21/11 10:32	09/21/11 20:09	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.7		0 - 5	09/21/11 10:32	09/21/11 20:09	1
p-Terphenyl	80		38 - 148	09/21/11 10:32	09/21/11 20:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Arsenic	4.8		4.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Barium	210		2.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Beryllium	ND		0.40		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Cadmium	ND		0.50		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Chromium	29		2.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Cobalt	13		0.79		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Copper	25		5.9		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Lead	11		2.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Molybdenum	ND		2.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Nickel	31		2.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Selenium	ND		4.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Silver	ND		0.99		mg/Kg		09/21/11 09:07	09/22/11 12:21	4
Thallium	ND		2.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Vanadium	43		2.0		mg/Kg		09/21/11 09:07	09/21/11 18:18	4
Zinc	39		5.9		mg/Kg		09/21/11 09:07	09/21/11 18:18	4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.042		0.0091		mg/Kg		09/21/11 15:46	09/22/11 15:38	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

**Client Sample ID: 2-SPB-5**

**Lab Sample ID: 720-37555-23**

Date Collected: 09/20/11 09:00

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 03:32	1
Ethylbenzene	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 03:32	1
Toluene	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 03:32	1
Xylenes, Total	ND		9.9		ug/Kg		09/20/11 16:03	09/21/11 03:32	1
Gasoline Range Organics (GRO)	ND		250		ug/Kg		09/20/11 16:03	09/21/11 03:32	1
-C5-C12									
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 03:32	1
TBA	ND		9.9		ug/Kg		09/20/11 16:03	09/21/11 03:32	1
Ethyl tert-butyl ether	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 03:32	1
DIPE	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 03:32	1
TAME	ND		5.0		ug/Kg		09/20/11 16:03	09/21/11 03:32	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	84		45 - 131	09/20/11 16:03	09/21/11 03:32	1
1,2-Dichloroethane-d4 (Surr)	121		60 - 140	09/20/11 16:03	09/21/11 03:32	1
Toluene-d8 (Surr)	91		58 - 140	09/20/11 16:03	09/21/11 03:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.8		0.98		mg/Kg		09/21/11 10:32	09/21/11 20:32	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		09/21/11 10:32	09/21/11 20:32	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	3		0 - 5	09/21/11 10:32	09/21/11 20:32	1
p-Terphenyl	72		38 - 148	09/21/11 10:32	09/21/11 20:32	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Arsenic	ND		3.8		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Barium	160		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Beryllium	ND		0.38		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Cadmium	ND		0.47		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Chromium	21		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Cobalt	9.2		0.75		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Copper	20		5.7		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Lead	14		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Molybdenum	ND		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Nickel	24		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Selenium	ND		3.8		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Silver	ND		0.94		mg/Kg		09/21/11 09:07	09/22/11 12:26	4
Thallium	ND		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Vanadium	30		1.9		mg/Kg		09/21/11 09:07	09/21/11 18:22	4
Zinc	34		5.7		mg/Kg		09/21/11 09:07	09/21/11 18:22	4

## Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.040		0.0097		mg/Kg		09/21/11 15:46	09/22/11 15:44	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

**Client Sample ID: 2-SPB-6**

**Lab Sample ID: 720-37555-24**

Date Collected: 09/20/11 09:10

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 14:02	1
Ethylbenzene	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 14:02	1
Toluene	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 14:02	1
Xylenes, Total	ND		9.9		ug/Kg		09/21/11 08:00	09/21/11 14:02	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/21/11 08:00	09/21/11 14:02	1
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 14:02	1
TBA	ND		9.9		ug/Kg		09/21/11 08:00	09/21/11 14:02	1
Ethyl tert-butyl ether	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 14:02	1
DIPE	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 14:02	1
TAME	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 14:02	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	72		45 - 131	09/21/11 08:00	09/21/11 14:02	1
1,2-Dichloroethane-d4 (Surr)	108		60 - 140	09/21/11 08:00	09/21/11 14:02	1
Toluene-d8 (Surr)	89		58 - 140	09/21/11 08:00	09/21/11 14:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	85		2.0		mg/Kg		09/21/11 10:32	09/21/11 21:43	2
Motor Oil Range Organics [C24-C36]	200		100		mg/Kg		09/21/11 10:32	09/21/11 21:43	2

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	55	X	0 - 5	09/21/11 10:32	09/21/11 21:43	2
p-Terphenyl	54		38 - 148	09/21/11 10:32	09/21/11 21:43	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Arsenic	5.3		3.8		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Barium	280		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Beryllium	0.40		0.38		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Cadmium	ND		0.48		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Chromium	28		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Cobalt	10		0.76		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Copper	36		5.7		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Lead	25		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Molybdenum	ND		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Nickel	28		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Selenium	ND		3.8		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Silver	ND		0.95		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Thallium	ND		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Vanadium	48		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:43	4
Zinc	65		5.7		mg/Kg		09/21/11 15:29	09/22/11 12:43	4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11		0.0095		mg/Kg		09/21/11 15:46	09/22/11 15:47	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

**Client Sample ID: 2-SPB-7**

**Lab Sample ID: 720-37555-25**

Date Collected: 09/20/11 09:21

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.9		ug/Kg		09/21/11 08:00	09/21/11 14:30	1
Ethylbenzene	ND		4.9		ug/Kg		09/21/11 08:00	09/21/11 14:30	1
Toluene	ND		4.9		ug/Kg		09/21/11 08:00	09/21/11 14:30	1
Xylenes, Total	ND		9.7		ug/Kg		09/21/11 08:00	09/21/11 14:30	1
Gasoline Range Organics (GRO)	ND		240		ug/Kg		09/21/11 08:00	09/21/11 14:30	1
-C5-C12									
Methyl tert-butyl ether	ND		4.9		ug/Kg		09/21/11 08:00	09/21/11 14:30	1
TBA	ND		9.7		ug/Kg		09/21/11 08:00	09/21/11 14:30	1
Ethyl tert-butyl ether	ND		4.9		ug/Kg		09/21/11 08:00	09/21/11 14:30	1
DIPE	ND		4.9		ug/Kg		09/21/11 08:00	09/21/11 14:30	1
TAME	ND		4.9		ug/Kg		09/21/11 08:00	09/21/11 14:30	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	85		45 - 131	09/21/11 08:00	09/21/11 14:30	1
1,2-Dichloroethane-d4 (Surr)	107		60 - 140	09/21/11 08:00	09/21/11 14:30	1
Toluene-d8 (Surr)	95		58 - 140	09/21/11 08:00	09/21/11 14:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.9		0.99		mg/Kg		09/21/11 10:32	09/21/11 20:56	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/21/11 10:32	09/21/11 20:56	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.3		0 - 5	09/21/11 10:32	09/21/11 20:56	1
p-Terphenyl	82		38 - 148	09/21/11 10:32	09/21/11 20:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Arsenic	5.5		3.7		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Barium	250		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Beryllium	0.43		0.37		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Cadmium	ND		0.47		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Chromium	32		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Cobalt	15		0.75		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Copper	29		5.6		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Lead	12		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Molybdenum	ND		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Nickel	36		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Selenium	ND		3.7		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Silver	ND		0.93		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Thallium	ND		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Vanadium	48		1.9		mg/Kg		09/21/11 15:29	09/22/11 12:51	4
Zinc	100		5.6		mg/Kg		09/21/11 15:29	09/22/11 12:51	4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.038		0.0090		mg/Kg		09/21/11 15:46	09/22/11 15:49	1

# Client Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

**Client Sample ID: 2-SPB-8**

**Lab Sample ID: 720-37555-26**

Date Collected: 09/20/11 09:03

Matrix: Solid

Date Received: 09/20/11 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.7		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
Ethylbenzene	ND		4.7		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
Toluene	ND		4.7		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
Xylenes, Total	ND		9.5		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
Methyl tert-butyl ether	ND		4.7		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
TBA	ND		9.5		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
Ethyl tert-butyl ether	ND		4.7		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
DIPE	ND		4.7		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
TAME	ND		4.7		ug/Kg		09/21/11 08:00	09/21/11 14:59	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	85		45 - 131				09/21/11 08:00	09/21/11 14:59	1
1,2-Dichloroethane-d4 (Surr)	114		60 - 140				09/21/11 08:00	09/21/11 14:59	1
Toluene-d8 (Surr)	93		58 - 140				09/21/11 08:00	09/21/11 14:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2.8		1.0		mg/Kg		09/21/11 10:32	09/21/11 21:19	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/21/11 10:32	09/21/11 21:19	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.5		0 - 5				09/21/11 10:32	09/21/11 21:19	1
p-Terphenyl	68		38 - 148				09/21/11 10:32	09/21/11 21:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Arsenic	5.1		4.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Barium	240		2.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Beryllium	ND		0.40		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Cadmium	ND		0.50		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Chromium	34		2.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Cobalt	13		0.79		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Copper	30		5.9		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Lead	21		2.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Molybdenum	ND		2.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Nickel	39		2.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Selenium	ND		4.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Silver	ND		0.99		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Thallium	ND		2.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Vanadium	45		2.0		mg/Kg		09/21/11 15:29	09/22/11 12:56	4
Zinc	60		5.9		mg/Kg		09/21/11 15:29	09/22/11 12:56	4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.064		0.0097		mg/Kg		09/21/11 15:46	09/22/11 15:28	1



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: MB 720-99381/1-A**

**Matrix: Solid**

**Analysis Batch: 99392**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99381**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg		09/20/11 16:03	09/20/11 20:00	1
Ethylbenzene	ND		5.0		ug/Kg		09/20/11 16:03	09/20/11 20:00	1
Toluene	ND		5.0		ug/Kg		09/20/11 16:03	09/20/11 20:00	1
Xylenes, Total	ND		10		ug/Kg		09/20/11 16:03	09/20/11 20:00	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/20/11 16:03	09/20/11 20:00	1
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/20/11 16:03	09/20/11 20:00	1
TBA	ND		10		ug/Kg		09/20/11 16:03	09/20/11 20:00	1
Ethyl tert-butyl ether	ND		5.0		ug/Kg		09/20/11 16:03	09/20/11 20:00	1
DIPE	ND		5.0		ug/Kg		09/20/11 16:03	09/20/11 20:00	1
TAME	ND		5.0		ug/Kg		09/20/11 16:03	09/20/11 20:00	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		45 - 131	09/20/11 16:03	09/20/11 20:00	1
1,2-Dichloroethane-d4 (Surr)	97		60 - 140	09/20/11 16:03	09/20/11 20:00	1
Toluene-d8 (Surr)	98		58 - 140	09/20/11 16:03	09/20/11 20:00	1

**Lab Sample ID: LCS 720-99381/2-A**

**Matrix: Solid**

**Analysis Batch: 99392**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99381**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Benzene	50.0	50.6		ug/Kg		101	82 - 124
Ethylbenzene	50.0	49.6		ug/Kg		99	80 - 137
Toluene	50.0	49.4		ug/Kg		99	83 - 128
m-Xylene & p-Xylene	100	95.4		ug/Kg		95	79 - 146
o-Xylene	50.0	51.6		ug/Kg		103	84 - 140
Methyl tert-butyl ether	50.0	50.8		ug/Kg		102	71 - 144
TBA	1000	874		ug/Kg		87	63 - 119
Ethyl tert-butyl ether	50.0	49.4		ug/Kg		99	76 - 129
DIPE	50.0	51.0		ug/Kg		102	83 - 131
TAME	50.0	50.0		ug/Kg		100	74 - 140

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		45 - 131
1,2-Dichloroethane-d4 (Surr)	95		60 - 140
Toluene-d8 (Surr)	101		58 - 140

**Lab Sample ID: LCS 720-99381/4-A**

**Matrix: Solid**

**Analysis Batch: 99392**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99381**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	1000	898		ug/Kg		90	61 - 128

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	102		45 - 131
1,2-Dichloroethane-d4 (Surr)	102		60 - 140

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: LCS 720-99381/4-A**  
**Matrix: Solid**  
**Analysis Batch: 99392**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 99381**

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
Toluene-d8 (Surr)	99		58 - 140

**Lab Sample ID: LCSD 720-99381/3-A**  
**Matrix: Solid**  
**Analysis Batch: 99392**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99381**

Analyte	Spike Added	LCSD LCSD		Unit	D	% Rec	% Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
Benzene	50.0	52.2		ug/Kg		104	82 - 124	3	20	
Ethylbenzene	50.0	50.0		ug/Kg		100	80 - 137	1	20	
Toluene	50.0	50.2		ug/Kg		100	83 - 128	2	20	
m-Xylene & p-Xylene	100	96.6		ug/Kg		97	79 - 146	1	20	
o-Xylene	50.0	52.6		ug/Kg		105	84 - 140	2	20	
Methyl tert-butyl ether	50.0	52.8		ug/Kg		106	71 - 144	4	20	
TBA	1000	896		ug/Kg		90	63 - 119	2	20	
Ethyl tert-butyl ether	50.0	51.4		ug/Kg		103	76 - 129	4	20	
DIPE	50.0	55.0		ug/Kg		110	83 - 131	8	20	
TAME	50.0	51.8		ug/Kg		104	74 - 140	4	20	

Surrogate	LCSD LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	99		45 - 131
1,2-Dichloroethane-d4 (Surr)	98		60 - 140
Toluene-d8 (Surr)	101		58 - 140

**Lab Sample ID: LCSD 720-99381/5-A**  
**Matrix: Solid**  
**Analysis Batch: 99392**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99381**

Analyte	Spike Added	LCSD LCSD		Unit	D	% Rec	% Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO) -C5-C12	1000	916		ug/Kg		92	61 - 128	2	20	

Surrogate	LCSD LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	102		45 - 131
1,2-Dichloroethane-d4 (Surr)	106		60 - 140
Toluene-d8 (Surr)	100		58 - 140

**Lab Sample ID: 720-37555-20 MS**  
**Matrix: Solid**  
**Analysis Batch: 99392**

**Client Sample ID: 2-SPB-2**  
**Prep Type: Total/NA**  
**Prep Batch: 99381**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	% Rec	% Rec.	
				Result	Qualifier				Limits	RPD
Benzene	ND		47.7	44.8		ug/Kg		94	70 - 130	
Ethylbenzene	ND		47.7	46.0		ug/Kg		96	65 - 130	
Toluene	ND		47.7	45.2		ug/Kg		95	70 - 130	
m-Xylene & p-Xylene	ND		95.4	90.1		ug/Kg		94	70 - 130	
o-Xylene	ND		47.7	49.6		ug/Kg		104	68 - 130	
Methyl tert-butyl ether	ND		47.7	48.1		ug/Kg		101	69 - 130	
TBA	ND		954	848		ug/Kg		89	70 - 130	
Ethyl tert-butyl ether	ND		47.7	46.4		ug/Kg		97	70 - 130	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: 720-37555-20 MS**

**Matrix: Solid**

**Analysis Batch: 99392**

**Client Sample ID: 2-SPB-2**

**Prep Type: Total/NA**

**Prep Batch: 99381**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
DIPE	ND		47.7	47.7		ug/Kg		100	70 - 130	
TAME	ND		47.7	46.8		ug/Kg		98	70 - 130	

Surrogate	MS	MS	Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	98		45 - 131
1,2-Dichloroethane-d4 (Surr)	113		60 - 140
Toluene-d8 (Surr)	102		58 - 140

**Lab Sample ID: 720-37555-20 MSD**

**Matrix: Solid**

**Analysis Batch: 99392**

**Client Sample ID: 2-SPB-2**

**Prep Type: Total/NA**

**Prep Batch: 99381**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Benzene	ND		46.7	44.5		ug/Kg		95	70 - 130	1	20	
Ethylbenzene	ND		46.7	45.8		ug/Kg		98	65 - 130	0	20	
Toluene	ND		46.7	44.9		ug/Kg		96	70 - 130	1	20	
m-Xylene & p-Xylene	ND		93.5	89.5		ug/Kg		96	70 - 130	1	20	
o-Xylene	ND		46.7	49.2		ug/Kg		105	68 - 130	1	20	
Methyl tert-butyl ether	ND		46.7	47.9		ug/Kg		102	69 - 130	1	20	
TBA	ND		935	842		ug/Kg		90	70 - 130	1	20	
Ethyl tert-butyl ether	ND		46.7	46.4		ug/Kg		99	70 - 130	0	20	
DIPE	ND		46.7	48.6		ug/Kg		104	70 - 130	2	20	
TAME	ND		46.7	46.9		ug/Kg		100	70 - 130	0	20	

Surrogate	MSD	MSD	Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	98		45 - 131
1,2-Dichloroethane-d4 (Surr)	109		60 - 140
Toluene-d8 (Surr)	100		58 - 140

**Lab Sample ID: MB 720-99400/1-A**

**Matrix: Solid**

**Analysis Batch: 99399**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99400**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		5.0		ug/Kg		09/20/11 19:28	09/20/11 21:23	1
Ethylbenzene	ND		5.0		ug/Kg		09/20/11 19:28	09/20/11 21:23	1
Toluene	ND		5.0		ug/Kg		09/20/11 19:28	09/20/11 21:23	1
Xylenes, Total	ND		10		ug/Kg		09/20/11 19:28	09/20/11 21:23	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/20/11 19:28	09/20/11 21:23	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	107		45 - 131	09/20/11 19:28	09/20/11 21:23	1
1,2-Dichloroethane-d4 (Surr)	131		60 - 140	09/20/11 19:28	09/20/11 21:23	1
Toluene-d8 (Surr)	102		58 - 140	09/20/11 19:28	09/20/11 21:23	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: LCS 720-99400/2-A**

**Matrix: Solid**

**Analysis Batch: 99399**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99400**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	
Benzene	50.0	51.0		ug/Kg		102	82 - 124	
Ethylbenzene	50.0	50.2		ug/Kg		100	80 - 137	
Toluene	50.0	48.0		ug/Kg		96	83 - 128	
m-Xylene & p-Xylene	100	104		ug/Kg		104	79 - 146	
o-Xylene	50.0	53.6		ug/Kg		107	84 - 140	

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	108		45 - 131
1,2-Dichloroethane-d4 (Surr)	124		60 - 140
Toluene-d8 (Surr)	104		58 - 140

**Lab Sample ID: LCS 720-99400/4-A**

**Matrix: Solid**

**Analysis Batch: 99399**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99400**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	
Gasoline Range Organics (GRO) -C5-C12	1000	906		ug/Kg		91	61 - 128	

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	110		45 - 131
1,2-Dichloroethane-d4 (Surr)	129		60 - 140
Toluene-d8 (Surr)	103		58 - 140

**Lab Sample ID: LCSD 720-99400/3-A**

**Matrix: Solid**

**Analysis Batch: 99399**

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

**Prep Type: Total/NA**

**Prep Batch: 99400**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	
							Limits		RPD	Limit
Benzene	50.0	52.0		ug/Kg		104	82 - 124	2	20	
Ethylbenzene	50.0	50.6		ug/Kg		101	80 - 137	1	20	
Toluene	50.0	48.6		ug/Kg		97	83 - 128	1	20	
m-Xylene & p-Xylene	100	105		ug/Kg		105	79 - 146	1	20	
o-Xylene	50.0	54.0		ug/Kg		108	84 - 140	1	20	

Surrogate	LCSD LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	106		45 - 131
1,2-Dichloroethane-d4 (Surr)	129		60 - 140
Toluene-d8 (Surr)	103		58 - 140

**Lab Sample ID: LCSD 720-99400/5-A**

**Matrix: Solid**

**Analysis Batch: 99399**

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

**Prep Type: Total/NA**

**Prep Batch: 99400**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	
							Limits		RPD	Limit
Gasoline Range Organics (GRO) -C5-C12	1000	902		ug/Kg		90	61 - 128	0	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: LCSD 720-99400/5-A**  
**Matrix: Solid**  
**Analysis Batch: 99399**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99400**

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	111		45 - 131
1,2-Dichloroethane-d4 (Surr)	123		60 - 140
Toluene-d8 (Surr)	102		58 - 140

**Lab Sample ID: 720-37555-9 MS**  
**Matrix: Solid**  
**Analysis Batch: 99399**

**Client Sample ID: 2-SP3A,B COMPOSITE**  
**Prep Type: Total/NA**  
**Prep Batch: 99400**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	% Rec	% Rec. Limits
				Result	Qualifier				
Benzene	ND		49.6	53.4		ug/Kg		108	70 - 130
Ethylbenzene	ND		49.6	51.2		ug/Kg		103	65 - 130
Toluene	ND		49.6	50.8		ug/Kg		102	70 - 130
m-Xylene & p-Xylene	ND		99.2	104		ug/Kg		105	70 - 130
o-Xylene	ND		49.6	54.6		ug/Kg		110	68 - 130

Surrogate	MS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	99		45 - 131
1,2-Dichloroethane-d4 (Surr)	125		60 - 140
Toluene-d8 (Surr)	103		58 - 140

**Lab Sample ID: 720-37555-9 MSD**  
**Matrix: Solid**  
**Analysis Batch: 99399**

**Client Sample ID: 2-SP3A,B COMPOSITE**  
**Prep Type: Total/NA**  
**Prep Batch: 99400**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	% Rec	% Rec. Limits	RPD	Limit
				Result	Qualifier						
Benzene	ND		48.4	46.8		ug/Kg		97	70 - 130	13	20
Ethylbenzene	ND		48.4	45.5		ug/Kg		94	65 - 130	12	20
Toluene	ND		48.4	45.6		ug/Kg		94	70 - 130	11	20
m-Xylene & p-Xylene	ND		96.7	93.4		ug/Kg		97	70 - 130	10	20
o-Xylene	ND		48.4	48.9		ug/Kg		101	68 - 130	11	20

Surrogate	MSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	100		45 - 131
1,2-Dichloroethane-d4 (Surr)	126		60 - 140
Toluene-d8 (Surr)	103		58 - 140

**Lab Sample ID: MB 720-99422/1-A**  
**Matrix: Solid**  
**Analysis Batch: 99412**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 99422**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 10:17	1
Ethylbenzene	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 10:17	1
Toluene	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 10:17	1
Xylenes, Total	ND		10		ug/Kg		09/21/11 08:00	09/21/11 10:17	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		09/21/11 08:00	09/21/11 10:17	1
Methyl tert-butyl ether	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 10:17	1
TBA	ND		10		ug/Kg		09/21/11 08:00	09/21/11 10:17	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: MB 720-99422/1-A**

**Matrix: Solid**

**Analysis Batch: 99412**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 99422**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ethyl tert-butyl ether	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 10:17	1
DIPE	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 10:17	1
TAME	ND		5.0		ug/Kg		09/21/11 08:00	09/21/11 10:17	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	98		45 - 131	09/21/11 08:00	09/21/11 10:17	1
1,2-Dichloroethane-d4 (Surr)	102		60 - 140	09/21/11 08:00	09/21/11 10:17	1
Toluene-d8 (Surr)	99		58 - 140	09/21/11 08:00	09/21/11 10:17	1

**Lab Sample ID: LCS 720-99422/2-A**

**Matrix: Solid**

**Analysis Batch: 99412**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99422**

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Benzene	50.0	46.0		ug/Kg		92	82 - 124
Ethylbenzene	50.0	50.2		ug/Kg		100	80 - 137
Toluene	50.0	48.8		ug/Kg		98	83 - 128
m-Xylene & p-Xylene	100	105		ug/Kg		105	79 - 146
o-Xylene	50.0	52.6		ug/Kg		105	84 - 140
Methyl tert-butyl ether	50.0	49.2		ug/Kg		98	71 - 144
TBA	1000	942		ug/Kg		94	63 - 119
Ethyl tert-butyl ether	50.0	46.2		ug/Kg		92	76 - 129
DIPE	50.0	45.2		ug/Kg		90	83 - 131
TAME	50.0	50.8		ug/Kg		102	74 - 140

Surrogate	LCS	LCS	Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	106		45 - 131
1,2-Dichloroethane-d4 (Surr)	105		60 - 140
Toluene-d8 (Surr)	99		58 - 140

**Lab Sample ID: LCS 720-99422/4-A**

**Matrix: Solid**

**Analysis Batch: 99412**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 99422**

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Gasoline Range Organics (GRO) -C5-C12	1000	1040		ug/Kg		104	61 - 128

Surrogate	LCS	LCS	Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	104		45 - 131
1,2-Dichloroethane-d4 (Surr)	109		60 - 140
Toluene-d8 (Surr)	102		58 - 140

**Lab Sample ID: LCSD 720-99422/3-A**

**Matrix: Solid**

**Analysis Batch: 99412**

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

**Prep Type: Total/NA**

**Prep Batch: 99422**

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec. Limits	RPD	
		Result	Qualifier					RPD	Limit
Benzene	49.9	47.7		ug/Kg		96	82 - 124	4	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: LCSD 720-99422/3-A**

**Matrix: Solid**

**Analysis Batch: 99412**

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

**Prep Type: Total/NA**

**Prep Batch: 99422**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Ethylbenzene	49.9	51.7		ug/Kg		104	80 - 137	3	20	
Toluene	49.9	50.3		ug/Kg		101	83 - 128	3	20	
m-Xylene & p-Xylene	99.8	108		ug/Kg		108	79 - 146	3	20	
o-Xylene	49.9	54.5		ug/Kg		109	84 - 140	4	20	
Methyl tert-butyl ether	49.9	50.3		ug/Kg		101	71 - 144	2	20	
TBA	99.8	949		ug/Kg		95	63 - 119	1	20	
Ethyl tert-butyl ether	49.9	46.7		ug/Kg		94	76 - 129	1	20	
DIPE	49.9	46.7		ug/Kg		94	83 - 131	3	20	
TAME	49.9	51.1		ug/Kg		102	74 - 140	1	20	

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	105		45 - 131
1,2-Dichloroethane-d4 (Surr)	102		60 - 140
Toluene-d8 (Surr)	100		58 - 140

**Lab Sample ID: LCSD 720-99422/5-A**

**Matrix: Solid**

**Analysis Batch: 99412**

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

**Prep Type: Total/NA**

**Prep Batch: 99422**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Gasoline Range Organics (GRO) -C5-C12	1000	982		ug/Kg		98	61 - 128	5	20	

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	103		45 - 131
1,2-Dichloroethane-d4 (Surr)	107		60 - 140
Toluene-d8 (Surr)	101		58 - 140

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

**Lab Sample ID: MB 720-99430/1-A**

**Matrix: Solid**

**Analysis Batch: 99429**

**Client Sample ID: Method Blank**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99430**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		09/21/11 10:32	09/21/11 22:53	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		09/21/11 10:32	09/21/11 22:53	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
Capric Acid (Surr)	0.04		0 - 5	09/21/11 10:32	09/21/11 22:53	1
p-Terphenyl	84		38 - 148	09/21/11 10:32	09/21/11 22:53	1

**Lab Sample ID: LCS 720-99430/2-A**

**Matrix: Solid**

**Analysis Batch: 99429**

**Client Sample ID: Lab Control Sample**

**Prep Type: Silica Gel Cleanup**

**Prep Batch: 99430**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	RPD
Diesel Range Organics [C10-C28]	83.3	52.6		mg/Kg		63	50 - 150	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: LCS 720-99430/2-A**  
**Matrix: Solid**  
**Analysis Batch: 99429**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99430**

	LCS	LCS	
Surrogate	% Recovery	Qualifier	Limits
p-Terphenyl	96		38 - 148

**Lab Sample ID: LCSD 720-99430/3-A**  
**Matrix: Solid**  
**Analysis Batch: 99429**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99430**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Diesel Range Organics [C10-C28]	82.7	54.4		mg/Kg		66	50 - 150	3	35	

	LCSD	LCSD	
Surrogate	% Recovery	Qualifier	Limits
p-Terphenyl	99		38 - 148

**Lab Sample ID: 720-37555-3 MS**  
**Matrix: Solid**  
**Analysis Batch: 99428**

**Client Sample ID: 2-SP1-A,B COMPOSITE**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99430**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec.	
									Limits	RPD
Diesel Range Organics [C10-C28]	1.3		82.8	43.9		mg/Kg		52	50 - 150	

	MS	MS	
Surrogate	% Recovery	Qualifier	Limits
p-Terphenyl	90		38 - 148

**Lab Sample ID: 720-37555-3 MSD**  
**Matrix: Solid**  
**Analysis Batch: 99428**

**Client Sample ID: 2-SP1-A,B COMPOSITE**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 99430**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec.	
									Limits	RPD
Diesel Range Organics [C10-C28]	1.3		82.8	57.0	F	mg/Kg		67	50 - 150	26

	MSD	MSD	
Surrogate	% Recovery	Qualifier	Limits
p-Terphenyl	96		38 - 148

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 720-99419/1-A**  
**Matrix: Solid**  
**Analysis Batch: 99464**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 99419**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		0.50		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Arsenic	ND		1.0		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Barium	ND		0.50		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Beryllium	ND		0.10		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Cadmium	ND		0.13		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Chromium	ND		0.50		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Cobalt	ND		0.20		mg/Kg		09/21/11 09:07	09/21/11 15:53	1



# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: MB 720-99419/1-A**  
**Matrix: Solid**  
**Analysis Batch: 99464**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 99419**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		1.5		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Lead	ND		0.50		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Molybdenum	ND		0.50		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Nickel	ND		0.50		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Selenium	ND		1.0		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Silver	ND		0.25		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Thallium	ND		0.50		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Vanadium	ND		0.50		mg/Kg		09/21/11 09:07	09/21/11 15:53	1
Zinc	ND		1.5		mg/Kg		09/21/11 09:07	09/21/11 15:53	1

**Lab Sample ID: LCS 720-99419/2-A**  
**Matrix: Solid**  
**Analysis Batch: 99464**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 99419**

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.	
		Result	Qualifier				Limits	
Antimony	50.0	47.2		mg/Kg		94	80 - 120	
Arsenic	50.0	47.2		mg/Kg		94	80 - 120	
Barium	50.0	47.1		mg/Kg		94	80 - 120	
Beryllium	50.0	47.8		mg/Kg		96	80 - 120	
Cadmium	50.0	49.1		mg/Kg		98	80 - 120	
Chromium	50.0	47.9		mg/Kg		96	80 - 120	
Cobalt	50.0	48.7		mg/Kg		97	80 - 120	
Copper	50.0	49.2		mg/Kg		98	80 - 120	
Lead	50.0	48.8		mg/Kg		98	80 - 120	
Molybdenum	50.0	50.5		mg/Kg		101	80 - 120	
Nickel	50.0	49.6		mg/Kg		99	80 - 120	
Selenium	50.0	46.1		mg/Kg		92	80 - 120	
Silver	25.0	22.2		mg/Kg		89	80 - 120	
Thallium	50.0	49.1		mg/Kg		98	80 - 120	
Vanadium	50.0	47.3		mg/Kg		95	80 - 120	
Zinc	50.0	47.1		mg/Kg		94	80 - 120	

**Lab Sample ID: LCSD 720-99419/3-A**  
**Matrix: Solid**  
**Analysis Batch: 99464**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99419**

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec.		RPD	
		Result	Qualifier				Limits	RPD	Limit	
Antimony	50.0	47.6		mg/Kg		95	80 - 120	1	20	
Arsenic	50.0	47.4		mg/Kg		95	80 - 120	0	20	
Barium	50.0	47.2		mg/Kg		94	80 - 120	0	20	
Beryllium	50.0	47.9		mg/Kg		96	80 - 120	0	20	
Cadmium	50.0	48.8		mg/Kg		98	80 - 120	1	20	
Chromium	50.0	47.8		mg/Kg		96	80 - 120	0	20	
Cobalt	50.0	48.7		mg/Kg		97	80 - 120	0	20	
Copper	50.0	49.3		mg/Kg		99	80 - 120	0	20	
Lead	50.0	48.7		mg/Kg		97	80 - 120	0	20	
Molybdenum	50.0	50.7		mg/Kg		101	80 - 120	0	20	
Nickel	50.0	49.4		mg/Kg		99	80 - 120	0	20	
Selenium	50.0	46.1		mg/Kg		92	80 - 120	0	20	
Silver	25.0	22.5		mg/Kg		90	80 - 120	1	20	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: LCSD 720-99419/3-A**  
**Matrix: Solid**  
**Analysis Batch: 99464**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 99419**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD Limit
							Limits	RPD	
Thallium	50.0	49.1		mg/Kg		98	80 - 120	0	20
Vanadium	50.0	47.2		mg/Kg		94	80 - 120	0	20
Zinc	50.0	47.0		mg/Kg		94	80 - 120	0	20

**Lab Sample ID: LCSSRM 720-99419/25-A**  
**Matrix: Solid**  
**Analysis Batch: 99464**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 99419**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	% Rec	% Rec.		RPD Limit
							Limits	RPD	
Antimony	105	69.2		mg/Kg		66	11 - 101		
Arsenic	79.4	71.0		mg/Kg		89	69 - 119		
Barium	391	331		mg/Kg		85	61 - 117		
Beryllium	304	262		mg/Kg		86	56 - 102		
Cadmium	48.3	41.8		mg/Kg		87	67 - 118		
Chromium	171	148		mg/Kg		87	67 - 121		
Cobalt	59.2	51.7		mg/Kg		87	64 - 133		
Copper	327	286		mg/Kg		87	68 - 126		
Lead	181	148		mg/Kg		82	62 - 113		
Molybdenum	156	145		mg/Kg		93	62 - 128		
Nickel	76.0	66.0		mg/Kg		87	65 - 117		
Selenium	76.9	65.5		mg/Kg		85	63 - 126		
Silver	29.1	24.6		mg/Kg		85	51 - 130		
Thallium	192	156		mg/Kg		81	64 - 124		
Vanadium	213	187		mg/Kg		88	67 - 123		
Zinc	256	217		mg/Kg		85	62 - 110		

**Lab Sample ID: MB 720-99454/1-A**  
**Matrix: Solid**  
**Analysis Batch: 99529**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 99454**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		0.50		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Arsenic	ND		1.0		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Barium	ND		0.50		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Beryllium	ND		0.10		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Cadmium	ND		0.13		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Chromium	ND		0.50		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Cobalt	ND		0.20		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Copper	ND		1.5		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Lead	ND		0.50		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Molybdenum	ND		0.50		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Nickel	ND		0.50		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Selenium	ND		1.0		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Silver	ND		0.25		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Thallium	ND		0.50		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Vanadium	ND		0.50		mg/Kg		09/21/11 15:29	09/22/11 12:17	1
Zinc	ND		1.5		mg/Kg		09/21/11 15:29	09/22/11 12:17	1

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

Lab Sample ID: LCS 720-99454/2-A

Matrix: Solid

Analysis Batch: 99529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 99454

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	
Antimony	50.0	48.6		mg/Kg		97	80 - 120	
Arsenic	50.0	49.6		mg/Kg		99	80 - 120	
Barium	50.0	51.3		mg/Kg		103	80 - 120	
Beryllium	50.0	51.8		mg/Kg		104	80 - 120	
Cadmium	50.0	49.9		mg/Kg		100	80 - 120	
Chromium	50.0	49.9		mg/Kg		100	80 - 120	
Cobalt	50.0	51.2		mg/Kg		102	80 - 120	
Copper	50.0	50.4		mg/Kg		101	80 - 120	
Lead	50.0	51.6		mg/Kg		103	80 - 120	
Molybdenum	50.0	52.0		mg/Kg		104	80 - 120	
Nickel	50.0	51.7		mg/Kg		103	80 - 120	
Selenium	50.0	48.8		mg/Kg		98	80 - 120	
Silver	25.0	24.0		mg/Kg		96	80 - 120	
Thallium	50.0	51.5		mg/Kg		103	80 - 120	
Vanadium	50.0	49.9		mg/Kg		100	80 - 120	
Zinc	50.0	49.7		mg/Kg		99	80 - 120	

Lab Sample ID: LCSD 720-99454/3-A

Matrix: Solid

Analysis Batch: 99529

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 99454

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	
							Limits		RPD	Limit
Antimony	50.0	49.2		mg/Kg		98	80 - 120	1	20	
Arsenic	50.0	50.3		mg/Kg		101	80 - 120	1	20	
Barium	50.0	52.7		mg/Kg		105	80 - 120	3	20	
Beryllium	50.0	52.7		mg/Kg		105	80 - 120	2	20	
Cadmium	50.0	50.5		mg/Kg		101	80 - 120	1	20	
Chromium	50.0	50.7		mg/Kg		101	80 - 120	2	20	
Cobalt	50.0	51.7		mg/Kg		103	80 - 120	1	20	
Copper	50.0	51.4		mg/Kg		103	80 - 120	2	20	
Lead	50.0	51.7		mg/Kg		103	80 - 120	0	20	
Molybdenum	50.0	52.2		mg/Kg		104	80 - 120	0	20	
Nickel	50.0	51.7		mg/Kg		103	80 - 120	0	20	
Selenium	50.0	49.1		mg/Kg		98	80 - 120	1	20	
Silver	25.0	24.7		mg/Kg		99	80 - 120	3	20	
Thallium	50.0	51.4		mg/Kg		103	80 - 120	0	20	
Vanadium	50.0	50.6		mg/Kg		101	80 - 120	1	20	
Zinc	50.0	50.2		mg/Kg		100	80 - 120	1	20	

Lab Sample ID: LCSSRM 720-99454/11-A

Matrix: Solid

Analysis Batch: 99529

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 99454

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	% Rec	% Rec.	
							Limits	
Antimony	105	74.3		mg/Kg		71	11 - 101	
Arsenic	79.4	77.6		mg/Kg		98	69 - 119	
Barium	391	382		mg/Kg		98	61 - 117	
Beryllium	304	303		mg/Kg		100	56 - 102	
Cadmium	48.3	44.2		mg/Kg		92	67 - 118	
Chromium	171	163		mg/Kg		95	67 - 121	

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

**Lab Sample ID: LCSSRM 720-99454/11-A**  
**Matrix: Solid**  
**Analysis Batch: 99529**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 99454**

Analyte	Spike Added	LCSSRM		Unit	D	% Rec	% Rec. Limits
		Result	Qualifier				
Cobalt	59.2	56.7		mg/Kg		96	64 - 133
Copper	327	315		mg/Kg		96	68 - 126
Lead	181	166		mg/Kg		92	62 - 113
Molybdenum	156	156		mg/Kg		100	62 - 128
Nickel	76.0	71.1		mg/Kg		94	65 - 117
Selenium	76.9	71.6		mg/Kg		93	63 - 126
Silver	29.1	27.5		mg/Kg		94	51 - 130
Thallium	192	175		mg/Kg		91	64 - 124
Vanadium	213	209		mg/Kg		98	67 - 123
Zinc	256	233		mg/Kg		91	62 - 110

**Lab Sample ID: 720-37555-24 MS**  
**Matrix: Solid**  
**Analysis Batch: 99529**

**Client Sample ID: 2-SPB-6**  
**Prep Type: Total/NA**  
**Prep Batch: 99454**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	% Rec	% Rec. Limits
				Result	Qualifier				
Antimony	ND		47.2	20.1	F	mg/Kg		42	75 - 125
Arsenic	5.3		47.2	52.9		mg/Kg		101	75 - 125
Barium	280		47.2	303	4	mg/Kg		58	75 - 125
Beryllium	0.40		47.2	52.7		mg/Kg		111	75 - 125
Cadmium	ND		47.2	46.9		mg/Kg		99	75 - 125
Chromium	28		47.2	74.2		mg/Kg		97	75 - 125
Cobalt	10		47.2	57.9		mg/Kg		101	75 - 125
Copper	36		47.2	81.4		mg/Kg		96	75 - 125
Lead	25		47.2	74.8		mg/Kg		107	75 - 125
Molybdenum	ND		47.2	45.3		mg/Kg		94	75 - 125
Nickel	28		47.2	77.6		mg/Kg		104	75 - 125
Selenium	ND		47.2	46.4		mg/Kg		97	75 - 125
Silver	ND		23.6	23.6		mg/Kg		100	75 - 125
Thallium	ND		47.2	47.5		mg/Kg		101	75 - 125
Vanadium	48		47.2	91.4		mg/Kg		93	75 - 125
Zinc	65		47.2	112		mg/Kg		100	75 - 125

**Lab Sample ID: 720-37555-24 MSD**  
**Matrix: Solid**  
**Analysis Batch: 99529**

**Client Sample ID: 2-SPB-6**  
**Prep Type: Total/NA**  
**Prep Batch: 99454**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	% Rec	% Rec. Limits	RPD	
				Result	Qualifier					RPD	Limit
Antimony	ND		45.9	17.5	F	mg/Kg		37	75 - 125	14	20
Arsenic	5.3		45.9	48.5		mg/Kg		94	75 - 125	9	20
Barium	280		45.9	298	4	mg/Kg		50	75 - 125	1	20
Beryllium	0.40		45.9	52.2		mg/Kg		113	75 - 125	1	20
Cadmium	ND		45.9	45.1		mg/Kg		98	75 - 125	4	20
Chromium	28		45.9	73.7		mg/Kg		99	75 - 125	1	20
Cobalt	10		45.9	55.6		mg/Kg		99	75 - 125	4	20
Copper	36		45.9	101	F	mg/Kg		142	75 - 125	22	20
Lead	25		45.9	768	F	mg/Kg		1620	75 - 125	164	20
Molybdenum	ND		45.9	41.8		mg/Kg		89	75 - 125	8	20
Nickel	28		45.9	73.7		mg/Kg		99	75 - 125	5	20
Selenium	ND		45.9	44.0		mg/Kg		94	75 - 125	5	20

# QC Sample Results

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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

Lab Sample ID: 720-37555-24 MSD  
Matrix: Solid  
Analysis Batch: 99529

Client Sample ID: 2-SPB-6  
Prep Type: Total/NA  
Prep Batch: 99454

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.		RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	
Silver	ND		22.9	23.2		mg/Kg		101	75 - 125	2	20
Thallium	ND		45.9	45.6		mg/Kg		100	75 - 125	4	20
Vanadium	48		45.9	86.8		mg/Kg		85	75 - 125	5	20
Zinc	65		45.9	116		mg/Kg		113	75 - 125	4	20

## Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 720-99457/1-A  
Matrix: Solid  
Analysis Batch: 99537

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 99457

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.010		mg/Kg		09/21/11 15:46	09/22/11 15:16	1

Lab Sample ID: LCS 720-99457/2-A  
Matrix: Solid  
Analysis Batch: 99537

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 99457

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.	
		Result	Qualifier				Limits	RPD
Mercury	0.833	0.771		mg/Kg		93	80 - 120	

Lab Sample ID: LCSD 720-99457/3-A  
Matrix: Solid  
Analysis Batch: 99537

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 99457

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec.	
		Result	Qualifier				Limits	RPD
Mercury	0.833	0.798		mg/Kg		96	80 - 120	3

Lab Sample ID: 720-37555-26 MS  
Matrix: Solid  
Analysis Batch: 99537

Client Sample ID: 2-SPB-8  
Prep Type: Total/NA  
Prep Batch: 99457

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD
Mercury	0.064		0.694	0.743		mg/Kg		98	75 - 125	

Lab Sample ID: 720-37555-26 MSD  
Matrix: Solid  
Analysis Batch: 99537

Client Sample ID: 2-SPB-8  
Prep Type: Total/NA  
Prep Batch: 99457

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD
Mercury	0.064		0.833	0.867		mg/Kg		96	75 - 125	15

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## GC/MS VOA

### Prep Batch: 99381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-19	2-SPB-1	Total/NA	Solid	5030B	
720-37555-20	2-SPB-2	Total/NA	Solid	5030B	
720-37555-20 MS	2-SPB-2	Total/NA	Solid	5030B	
720-37555-20 MSD	2-SPB-2	Total/NA	Solid	5030B	
720-37555-21	2-SPB-3	Total/NA	Solid	5030B	
720-37555-22	2-SPB-4	Total/NA	Solid	5030B	
720-37555-23	2-SPB-5	Total/NA	Solid	5030B	
LCS 720-99381/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-99381/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-99381/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
LCS 720-99381/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-99381/1-A	Method Blank	Total/NA	Solid	5030B	

### Analysis Batch: 99392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-19	2-SPB-1	Total/NA	Solid	8260B/CA_LUFT MS	99381
720-37555-20	2-SPB-2	Total/NA	Solid	8260B/CA_LUFT MS	99381
720-37555-20 MS	2-SPB-2	Total/NA	Solid	8260B/CA_LUFT MS	99381
720-37555-20 MSD	2-SPB-2	Total/NA	Solid	8260B/CA_LUFT MS	99381
720-37555-21	2-SPB-3	Total/NA	Solid	8260B/CA_LUFT MS	99381
720-37555-22	2-SPB-4	Total/NA	Solid	8260B/CA_LUFT MS	99381
720-37555-23	2-SPB-5	Total/NA	Solid	8260B/CA_LUFT MS	99381
LCS 720-99381/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99381
LCS 720-99381/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99381
LCS 720-99381/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99381
LCS 720-99381/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99381
MB 720-99381/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	99381

### Analysis Batch: 99399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-3	2-SP1-A,B COMPOSITE	Total/NA	Solid	8260B/CA_LUFT MS	99400
720-37555-6	2-SP-2A,B COMPOSITE	Total/NA	Solid	8260B/CA_LUFT MS	99400
720-37555-9	2-SP3A,B COMPOSITE	Total/NA	Solid	8260B/CA_LUFT MS	99400
720-37555-9 MS	2-SP3A,B COMPOSITE	Total/NA	Solid	8260B/CA_LUFT MS	99400
720-37555-9 MSD	2-SP3A,B COMPOSITE	Total/NA	Solid	8260B/CA_LUFT MS	99400
720-37555-12	2-SP4-A,B COMPOSITE	Total/NA	Solid	8260B/CA_LUFT MS	99400
720-37555-15	2-SP5-A,B COMPOSITE	Total/NA	Solid	8260B/CA_LUFT MS	99400

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## GC/MS VOA (Continued)

### Analysis Batch: 99399 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-18	2-SP6-A,B COMPOSITE	Total/NA	Solid	8260B/CA_LUFT MS	99400
LCS 720-99400/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99400
LCS 720-99400/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99400
LCSD 720-99400/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99400
LCSD 720-99400/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99400
MB 720-99400/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	99400

### Prep Batch: 99400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-3	2-SP1-A,B COMPOSITE	Total/NA	Solid	5030B	
720-37555-6	2-SP-2A,B COMPOSITE	Total/NA	Solid	5030B	
720-37555-9	2-SP3A,B COMPOSITE	Total/NA	Solid	5030B	
720-37555-9 MS	2-SP3A,B COMPOSITE	Total/NA	Solid	5030B	
720-37555-9 MSD	2-SP3A,B COMPOSITE	Total/NA	Solid	5030B	
720-37555-12	2-SP4-A,B COMPOSITE	Total/NA	Solid	5030B	
720-37555-15	2-SP5-A,B COMPOSITE	Total/NA	Solid	5030B	
720-37555-18	2-SP6-A,B COMPOSITE	Total/NA	Solid	5030B	
LCS 720-99400/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-99400/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 720-99400/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
LCSD 720-99400/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-99400/1-A	Method Blank	Total/NA	Solid	5030B	

### Analysis Batch: 99412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-24	2-SPB-6	Total/NA	Solid	8260B/CA_LUFT MS	99422
720-37555-25	2-SPB-7	Total/NA	Solid	8260B/CA_LUFT MS	99422
720-37555-26	2-SPB-8	Total/NA	Solid	8260B/CA_LUFT MS	99422
LCS 720-99422/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99422
LCS 720-99422/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	99422
LCSD 720-99422/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99422
LCSD 720-99422/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	99422
MB 720-99422/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	99422

### Prep Batch: 99422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-24	2-SPB-6	Total/NA	Solid	5030B	
720-37555-25	2-SPB-7	Total/NA	Solid	5030B	
720-37555-26	2-SPB-8	Total/NA	Solid	5030B	
LCS 720-99422/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-99422/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 720-99422/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## GC/MS VOA (Continued)

### Prep Batch: 99422 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-99422/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-99422/1-A	Method Blank	Total/NA	Solid	5030B	

## GC Semi VOA

### Analysis Batch: 99428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-3	2-SP1-A,B COMPOSITE	Silica Gel Cleanup	Solid	8015B	99430
720-37555-3 MS	2-SP1-A,B COMPOSITE	Silica Gel Cleanup	Solid	8015B	99430
720-37555-3 MSD	2-SP1-A,B COMPOSITE	Silica Gel Cleanup	Solid	8015B	99430
720-37555-6	2-SP-2A,B COMPOSITE	Silica Gel Cleanup	Solid	8015B	99430
720-37555-9	2-SP3A,B COMPOSITE	Silica Gel Cleanup	Solid	8015B	99430
720-37555-12	2-SP4-A,B COMPOSITE	Silica Gel Cleanup	Solid	8015B	99430
720-37555-15	2-SP5-A,B COMPOSITE	Silica Gel Cleanup	Solid	8015B	99430
720-37555-18	2-SP6-A,B COMPOSITE	Silica Gel Cleanup	Solid	8015B	99430
720-37555-19	2-SPB-1	Silica Gel Cleanup	Solid	8015B	99430

### Analysis Batch: 99429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-20	2-SPB-2	Silica Gel Cleanup	Solid	8015B	99430
720-37555-21	2-SPB-3	Silica Gel Cleanup	Solid	8015B	99430
720-37555-22	2-SPB-4	Silica Gel Cleanup	Solid	8015B	99430
720-37555-23	2-SPB-5	Silica Gel Cleanup	Solid	8015B	99430
720-37555-24	2-SPB-6	Silica Gel Cleanup	Solid	8015B	99430
720-37555-25	2-SPB-7	Silica Gel Cleanup	Solid	8015B	99430
720-37555-26	2-SPB-8	Silica Gel Cleanup	Solid	8015B	99430
LCS 720-99430/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	99430
LCSD 720-99430/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	99430
MB 720-99430/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	99430

### Prep Batch: 99430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-3	2-SP1-A,B COMPOSITE	Silica Gel Cleanup	Solid	3546	
720-37555-3 MS	2-SP1-A,B COMPOSITE	Silica Gel Cleanup	Solid	3546	
720-37555-3 MSD	2-SP1-A,B COMPOSITE	Silica Gel Cleanup	Solid	3546	
720-37555-6	2-SP-2A,B COMPOSITE	Silica Gel Cleanup	Solid	3546	
720-37555-9	2-SP3A,B COMPOSITE	Silica Gel Cleanup	Solid	3546	
720-37555-12	2-SP4-A,B COMPOSITE	Silica Gel Cleanup	Solid	3546	
720-37555-15	2-SP5-A,B COMPOSITE	Silica Gel Cleanup	Solid	3546	
720-37555-18	2-SP6-A,B COMPOSITE	Silica Gel Cleanup	Solid	3546	
720-37555-19	2-SPB-1	Silica Gel Cleanup	Solid	3546	
720-37555-20	2-SPB-2	Silica Gel Cleanup	Solid	3546	
720-37555-21	2-SPB-3	Silica Gel Cleanup	Solid	3546	
720-37555-22	2-SPB-4	Silica Gel Cleanup	Solid	3546	
720-37555-23	2-SPB-5	Silica Gel Cleanup	Solid	3546	
720-37555-24	2-SPB-6	Silica Gel Cleanup	Solid	3546	
720-37555-25	2-SPB-7	Silica Gel Cleanup	Solid	3546	
720-37555-26	2-SPB-8	Silica Gel Cleanup	Solid	3546	
LCS 720-99430/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-99430/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-99430/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	



# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Metals

### Prep Batch: 99419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-19	2-SPB-1	Total/NA	Solid	3050B	
720-37555-20	2-SPB-2	Total/NA	Solid	3050B	
720-37555-21	2-SPB-3	Total/NA	Solid	3050B	
720-37555-22	2-SPB-4	Total/NA	Solid	3050B	
720-37555-23	2-SPB-5	Total/NA	Solid	3050B	
LCS 720-99419/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-99419/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-99419/25-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-99419/1-A	Method Blank	Total/NA	Solid	3050B	

### Prep Batch: 99454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-24	2-SPB-6	Total/NA	Solid	3050B	
720-37555-24 MS	2-SPB-6	Total/NA	Solid	3050B	
720-37555-24 MSD	2-SPB-6	Total/NA	Solid	3050B	
720-37555-25	2-SPB-7	Total/NA	Solid	3050B	
720-37555-26	2-SPB-8	Total/NA	Solid	3050B	
LCS 720-99454/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-99454/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-99454/11-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-99454/1-A	Method Blank	Total/NA	Solid	3050B	

### Prep Batch: 99457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-19	2-SPB-1	Total/NA	Solid	7471A	
720-37555-20	2-SPB-2	Total/NA	Solid	7471A	
720-37555-21	2-SPB-3	Total/NA	Solid	7471A	
720-37555-22	2-SPB-4	Total/NA	Solid	7471A	
720-37555-23	2-SPB-5	Total/NA	Solid	7471A	
720-37555-24	2-SPB-6	Total/NA	Solid	7471A	
720-37555-25	2-SPB-7	Total/NA	Solid	7471A	
720-37555-26	2-SPB-8	Total/NA	Solid	7471A	
720-37555-26 MS	2-SPB-8	Total/NA	Solid	7471A	
720-37555-26 MSD	2-SPB-8	Total/NA	Solid	7471A	
LCS 720-99457/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 720-99457/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
MB 720-99457/1-A	Method Blank	Total/NA	Solid	7471A	

### Analysis Batch: 99464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-99419/2-A	Lab Control Sample	Total/NA	Solid	6010B	99419
LCSD 720-99419/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	99419
LCSSRM 720-99419/25-A	Lab Control Sample	Total/NA	Solid	6010B	99419
MB 720-99419/1-A	Method Blank	Total/NA	Solid	6010B	99419

### Analysis Batch: 99471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-19	2-SPB-1	Total/NA	Solid	6010B	99419
720-37555-20	2-SPB-2	Total/NA	Solid	6010B	99419
720-37555-21	2-SPB-3	Total/NA	Solid	6010B	99419
720-37555-22	2-SPB-4	Total/NA	Solid	6010B	99419
720-37555-23	2-SPB-5	Total/NA	Solid	6010B	99419

# QC Association Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Metals (Continued)

### Analysis Batch: 99519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-19	2-SPB-1	Total/NA	Solid	6010B	99419
720-37555-20	2-SPB-2	Total/NA	Solid	6010B	99419
720-37555-21	2-SPB-3	Total/NA	Solid	6010B	99419
720-37555-22	2-SPB-4	Total/NA	Solid	6010B	99419
720-37555-23	2-SPB-5	Total/NA	Solid	6010B	99419

### Analysis Batch: 99529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-24	2-SPB-6	Total/NA	Solid	6010B	99454
720-37555-24 MS	2-SPB-6	Total/NA	Solid	6010B	99454
720-37555-24 MSD	2-SPB-6	Total/NA	Solid	6010B	99454
720-37555-25	2-SPB-7	Total/NA	Solid	6010B	99454
720-37555-26	2-SPB-8	Total/NA	Solid	6010B	99454
LCS 720-99454/2-A	Lab Control Sample	Total/NA	Solid	6010B	99454
LCSD 720-99454/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	99454
LCSSRM 720-99454/11-A	Lab Control Sample	Total/NA	Solid	6010B	99454
MB 720-99454/1-A	Method Blank	Total/NA	Solid	6010B	99454

### Analysis Batch: 99537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-37555-19	2-SPB-1	Total/NA	Solid	7471A	99457
720-37555-20	2-SPB-2	Total/NA	Solid	7471A	99457
720-37555-21	2-SPB-3	Total/NA	Solid	7471A	99457
720-37555-22	2-SPB-4	Total/NA	Solid	7471A	99457
720-37555-23	2-SPB-5	Total/NA	Solid	7471A	99457
720-37555-24	2-SPB-6	Total/NA	Solid	7471A	99457
720-37555-25	2-SPB-7	Total/NA	Solid	7471A	99457
720-37555-26	2-SPB-8	Total/NA	Solid	7471A	99457
720-37555-26 MS	2-SPB-8	Total/NA	Solid	7471A	99457
720-37555-26 MSD	2-SPB-8	Total/NA	Solid	7471A	99457
LCS 720-99457/2-A	Lab Control Sample	Total/NA	Solid	7471A	99457
LCSD 720-99457/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	99457
MB 720-99457/1-A	Method Blank	Total/NA	Solid	7471A	99457

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SP1-A,B COMPOSITE

Lab Sample ID: 720-37555-3

Date Collected: 09/20/11 07:55

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99400	09/20/11 19:28	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99399	09/21/11 04:40	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99428	09/21/11 20:09	DH	TAL SF

## Client Sample ID: 2-SP2-A,B COMPOSITE

Lab Sample ID: 720-37555-6

Date Collected: 09/20/11 08:00

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99400	09/20/11 19:28	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99399	09/21/11 05:10	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99428	09/21/11 20:32	DH	TAL SF

## Client Sample ID: 2-SP3A,B COMPOSITE

Lab Sample ID: 720-37555-9

Date Collected: 09/20/11 08:10

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99400	09/20/11 19:28	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99399	09/21/11 05:39	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99428	09/21/11 20:56	DH	TAL SF

## Client Sample ID: 2-SP4-A,B COMPOSITE

Lab Sample ID: 720-37555-12

Date Collected: 09/20/11 08:20

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99400	09/20/11 19:28	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99399	09/21/11 07:08	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99428	09/21/11 21:19	DH	TAL SF

## Client Sample ID: 2-SP5-A,B COMPOSITE

Lab Sample ID: 720-37555-15

Date Collected: 09/20/11 08:26

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99400	09/20/11 19:28	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99399	09/21/11 07:37	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99428	09/21/11 22:30	DH	TAL SF

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SP6-A,B COMPOSITE

Lab Sample ID: 720-37555-18

Date Collected: 09/20/11 08:35

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99400	09/20/11 19:28	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99399	09/21/11 08:07	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99428	09/21/11 21:43	DH	TAL SF

## Client Sample ID: 2-SPB-1

Lab Sample ID: 720-37555-19

Date Collected: 09/20/11 07:46

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99381	09/20/11 16:03	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99392	09/21/11 00:18	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99428	09/21/11 22:06	DH	TAL SF
Total/NA	Prep	3050B			99419	09/21/11 09:07	ET	TAL SF
Total/NA	Analysis	6010B		4	99471	09/21/11 18:04	CAM	TAL SF
Total/NA	Analysis	6010B		4	99519	09/22/11 12:08	CAM	TAL SF
Total/NA	Prep	7471A			99457	09/21/11 15:46	SK	TAL SF
Total/NA	Analysis	7471A		1	99537	09/22/11 15:31	SK	TAL SF

## Client Sample ID: 2-SPB-2

Lab Sample ID: 720-37555-20

Date Collected: 09/20/11 07:38

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99381	09/20/11 16:03	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99392	09/21/11 00:51	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99429	09/21/11 19:22	DH	TAL SF
Total/NA	Prep	3050B			99419	09/21/11 09:07	ET	TAL SF
Total/NA	Analysis	6010B		4	99471	09/21/11 18:09	CAM	TAL SF
Total/NA	Analysis	6010B		4	99519	09/22/11 12:12	CAM	TAL SF
Total/NA	Prep	7471A			99457	09/21/11 15:46	SK	TAL SF
Total/NA	Analysis	7471A		1	99537	09/22/11 15:33	SK	TAL SF

## Client Sample ID: 2-SPB-3

Lab Sample ID: 720-37555-21

Date Collected: 09/20/11 08:40

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99381	09/20/11 16:03	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99392	09/21/11 02:27	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99429	09/21/11 19:45	DH	TAL SF

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SPB-3

Lab Sample ID: 720-37555-21

Date Collected: 09/20/11 08:40

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			99419	09/21/11 09:07	ET	TAL SF
Total/NA	Analysis	6010B		4	99471	09/21/11 18:13	CAM	TAL SF
Total/NA	Analysis	6010B		4	99519	09/22/11 12:17	CAM	TAL SF
Total/NA	Prep	7471A			99457	09/21/11 15:46	SK	TAL SF
Total/NA	Analysis	7471A		1	99537	09/22/11 15:35	SK	TAL SF

## Client Sample ID: 2-SPB-4

Lab Sample ID: 720-37555-22

Date Collected: 09/20/11 08:50

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99381	09/20/11 16:03	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99392	09/21/11 02:59	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99429	09/21/11 20:09	DH	TAL SF
Total/NA	Prep	3050B			99419	09/21/11 09:07	ET	TAL SF
Total/NA	Analysis	6010B		4	99471	09/21/11 18:18	CAM	TAL SF
Total/NA	Analysis	6010B		4	99519	09/22/11 12:21	CAM	TAL SF
Total/NA	Prep	7471A			99457	09/21/11 15:46	SK	TAL SF
Total/NA	Analysis	7471A		1	99537	09/22/11 15:38	SK	TAL SF

## Client Sample ID: 2-SPB-5

Lab Sample ID: 720-37555-23

Date Collected: 09/20/11 09:00

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99381	09/20/11 16:03	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99392	09/21/11 03:32	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99429	09/21/11 20:32	DH	TAL SF
Total/NA	Prep	3050B			99419	09/21/11 09:07	ET	TAL SF
Total/NA	Analysis	6010B		4	99471	09/21/11 18:22	CAM	TAL SF
Total/NA	Analysis	6010B		4	99519	09/22/11 12:26	CAM	TAL SF
Total/NA	Prep	7471A			99457	09/21/11 15:46	SK	TAL SF
Total/NA	Analysis	7471A		1	99537	09/22/11 15:44	SK	TAL SF

## Client Sample ID: 2-SPB-6

Lab Sample ID: 720-37555-24

Date Collected: 09/20/11 09:10

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99422	09/21/11 08:00	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99412	09/21/11 14:02	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF

# Lab Chronicle

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

## Client Sample ID: 2-SPB-6

Lab Sample ID: 720-37555-24

Date Collected: 09/20/11 09:10

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Silica Gel Cleanup	Analysis	8015B		2	99429	09/21/11 21:43	DH	TAL SF
Total/NA	Prep	3050B			99454	09/21/11 15:29	SK	TAL SF
Total/NA	Analysis	6010B		4	99529	09/22/11 12:43	EFH	TAL SF
Total/NA	Prep	7471A			99457	09/21/11 15:46	SK	TAL SF
Total/NA	Analysis	7471A		1	99537	09/22/11 15:47	SK	TAL SF

## Client Sample ID: 2-SPB-7

Lab Sample ID: 720-37555-25

Date Collected: 09/20/11 09:21

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99422	09/21/11 08:00	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99412	09/21/11 14:30	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99429	09/21/11 20:56	DH	TAL SF
Total/NA	Prep	3050B			99454	09/21/11 15:29	SK	TAL SF
Total/NA	Analysis	6010B		4	99529	09/22/11 12:51	EFH	TAL SF
Total/NA	Prep	7471A			99457	09/21/11 15:46	SK	TAL SF
Total/NA	Analysis	7471A		1	99537	09/22/11 15:49	SK	TAL SF

## Client Sample ID: 2-SPB-8

Lab Sample ID: 720-37555-26

Date Collected: 09/20/11 09:03

Matrix: Solid

Date Received: 09/20/11 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			99422	09/21/11 08:00	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	99412	09/21/11 14:59	LL	TAL SF
Silica Gel Cleanup	Prep	3546			99430	09/21/11 10:32	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	99429	09/21/11 21:19	DH	TAL SF
Total/NA	Prep	3050B			99454	09/21/11 15:29	SK	TAL SF
Total/NA	Analysis	6010B		4	99529	09/22/11 12:56	EFH	TAL SF
Total/NA	Prep	7471A			99457	09/21/11 15:46	SK	TAL SF
Total/NA	Analysis	7471A		1	99537	09/22/11 15:28	SK	TAL SF

**Laboratory References:**

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

# Certification Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

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

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- 13
- 14

# Method Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

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
6010B	Metals (ICP)	SW846	TAL SF
7471A	Mercury (CVAA)	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 San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919





# Sample Summary

Client: Engeo, Inc.  
Project/Site: Macedo Remediation

TestAmerica Job ID: 720-37555-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-37555-3	2-SP1-A,B COMPOSITE	Solid	09/20/11 07:55	09/20/11 10:10
720-37555-6	2-SP-2A,B COMPOSITE	Solid	09/20/11 08:00	09/20/11 10:10
720-37555-9	2-SP3A,B COMPOSITE	Solid	09/20/11 08:10	09/20/11 10:10
720-37555-12	2-SP4-A,B COMPOSITE	Solid	09/20/11 08:20	09/20/11 10:10
720-37555-15	2-SP5-A,B COMPOSITE	Solid	09/20/11 08:26	09/20/11 10:10
720-37555-18	2-SP6-A,B COMPOSITE	Solid	09/20/11 08:35	09/20/11 10:10
720-37555-19	2-SPB-1	Solid	09/20/11 07:46	09/20/11 10:10
720-37555-20	2-SPB-2	Solid	09/20/11 07:38	09/20/11 10:10
720-37555-21	2-SPB-3	Solid	09/20/11 08:40	09/20/11 10:10
720-37555-22	2-SPB-4	Solid	09/20/11 08:50	09/20/11 10:10
720-37555-23	2-SPB-5	Solid	09/20/11 09:00	09/20/11 10:10
720-37555-24	2-SPB-6	Solid	09/20/11 09:10	09/20/11 10:10
720-37555-25	2-SPB-7	Solid	09/20/11 09:21	09/20/11 10:10
720-37555-26	2-SPB-8	Solid	09/20/11 09:03	09/20/11 10:10

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

Attn: <u>Richard Grandolfo</u>		<input type="checkbox"/> TPH EPA 8260B <input checked="" type="checkbox"/> Gas w/ BTEX <input type="checkbox"/> MTBE <input checked="" type="checkbox"/> TEPH EPA 8015M* <input checked="" type="checkbox"/> Silica Gel <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other <input type="checkbox"/> EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> 5 Oxygenates <input type="checkbox"/> DCA, ED8 <input type="checkbox"/> Ethanol <input type="checkbox"/> (HVOCs) EPA 8021 by 8260B <input type="checkbox"/> Volatile Organics GC/MS (VOCs) <input type="checkbox"/> EPA 8260B <input type="checkbox"/> 824 <input type="checkbox"/> Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 825 <input type="checkbox"/> Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total <input type="checkbox"/> Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 <input type="checkbox"/> PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608 <input type="checkbox"/> PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310 <input type="checkbox"/> CAM17 Metals (EPA 6010/7470/7471) <input type="checkbox"/> Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: <input type="checkbox"/> Low Level Metals by EPA 200.8/6020 (ICP-MS) <input type="checkbox"/> W.E.T (STLC) <input type="checkbox"/> TCLP <input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24h hold time for H <sub>2</sub> O) <input type="checkbox"/> Spec. Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> TDS Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>
Company: <u>ENGEO</u>		
Address:		
Phone: <u>on file</u>	Email:	
Bill To: <u>on file</u>	Sampled By: <u>R. Grandolfo</u>	
Attn:	Phone:	

Sample ID	Date	Time	Mat	Preserv	TPH EPA 8260B	TEPH EPA 8015M*	EPA 8260B	(HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs)	Semivolatiles GC/MS	Oil and Grease (EPA 1664)	Pesticides	PCBs	PNAs by	CAM17 Metals (EPA 6010/7470/7471)	Metals: Lead LUFT RCRA	Low Level Metals by EPA 200.8/6020 (ICP-MS)	W.E.T (STLC)	Hexavalent Chromium	pH (24h hold time for H <sub>2</sub> O)	Spec. Cond. Alkalinity	TSS TDS	Anions: Cl SO <sub>4</sub> NO <sub>3</sub> F Br NO <sub>2</sub> PO <sub>4</sub>	Number of Containers
<u>2-SP1-A</u>	<u>9/20/11</u>	<u>7:55</u>	<u>S</u>	<u>ice</u>	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
<u>2-SP1-B</u>		<u>7:15</u>			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
<u>2-SP2-A</u>		<u>8:00</u>			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
<u>2-SP2-B</u>		<u>8:00</u>			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
<u>2-SP3-A</u>		<u>8:10</u>			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
<u>2-SP3-B</u>		<u>8:10</u>			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
<u>2-SP4-A</u>		<u>8:20</u>			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
<u>2-SP4-B</u>		<u>8:20</u>			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
<u>2-SP5-A</u>		<u>8:26</u>			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
<u>2-SP5-B</u>	<u>9</u>	<u>8:26</u>	<u>↓</u>	<u>↓</u>	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1

Project Info	Sample Receipt	Relinquished by:
Project Name: <u>Macebo</u>	# of Containers: <u>20</u>	1) Relinquished by: <u>[Signature]</u> <u>10:10</u> Signature _____ Time _____
Project#: <u>7380.000.003</u>	Head Space:	Richard Grandolfo <u>9/20/11</u> Printed Name _____ Date _____
PO#:	Temp: <u>2.22</u>	ENGEO Company _____
Credit Card#:	Conforms to record:	2) Relinquished by: _____ Signature _____ Time _____ Printed Name _____ Date _____ Company _____
TAT: <u>5</u> Day	3 Day	3) Relinquished by: _____ Signature _____ Time _____ Printed Name _____ Date _____ Company _____
2 Day	1 Day	Other: _____
Report: <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDI	Special Instructions / Comments: <input type="checkbox"/> Global ID _____ <u>Composite A-B samples</u>	1) Received by: <u>[Signature]</u> <u>10/10</u> Signature _____ Time _____
		Mullen <u>9-20-11</u> Printed Name _____ Date _____
		test America Company _____
		2) Received by: _____ Signature _____ Time _____ Printed Name _____ Date _____ Company _____
		3) Received by: _____ Signature _____ Time _____ Printed Name _____ Date _____ Company _____

See Terms and Conditions on reverse  
 \*TestAmerica SF reports 8015M from C<sub>6</sub>-C<sub>24</sub> (industry norm). Default for 8015B is C<sub>10</sub>-C<sub>28</sub>

Report To					Analysis Request																
Attn: <u>R. Gandolfo</u>																					
Company: <u>ENGEO</u>																					
Address:																					
Phone: <u>on file</u> Email:																					
Bill To:																					
Sampled By: <u>R. Gandolfo</u>																					
Attn: Phone:																					
Sample ID	Date	Time	Mat fix	Preserv	TPH EPA - <input checked="" type="checkbox"/> 8260B <input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	TEPH EPA-8015M* <input checked="" type="checkbox"/> Silica Gel <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other	EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> 5 Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol	(HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) <input type="checkbox"/> EPA 8260B <input type="checkbox"/> 624	Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625	Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 <input type="checkbox"/> PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 601074707471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other:	Low Level Metals by EPA 200.8/6020 (ICP-MS): <input type="checkbox"/> W.E.T (STLC) <input type="checkbox"/> TCLP	Hexavalent Chromium <input type="checkbox"/> pH (24h hold time for H <sub>2</sub> O)	Spec. Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> TDS	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Number of Containers	
<u>2-SPG-A</u>	<u>9/20/11</u>	<u>8:35</u>	<u>5</u>	<u>ice</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															
<u>2-SPG-B</u>	<u>"</u>	<u>8:35</u>	<u>↓</u>	<u>↓</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															

Project Info		Sample Receipt		1) Relinquished by:		2) Relinquished by:		3) Relinquished by:	
Project Name: <u>Macedo</u>	# of Containers: <u>20</u>	Project#: <u>7320.000.003</u>	Head Space:	Signature: <u>[Signature]</u>	Time: <u>10:10</u>	Signature: _____	Time: _____	Signature: _____	Time: _____
PO#:	Temp: <u>2.22</u>	Credit Card#:	Conforms to record:	Printed Name: <u>Richard Gandolfo</u>	Date: <u>9/24/11</u>	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
TAT: <u>5</u> Day		Other:		Signature: <u>[Signature]</u>	Time: <u>10:10</u>	Signature: _____	Time: _____	Signature: _____	Time: _____
Report: <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDF		Special Instructions / Comments: <u>Composite A-B</u>		Printed Name: <u>Mullen</u>	Date: <u>9-20-11</u>	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____
See Terms and Conditions on reverse		*TestAmerica SF reports 8015M from C <sub>9</sub> -C <sub>24</sub> (industry norm). Default for 8015B is C <sub>10</sub> -C <sub>28</sub>		Company: <u>ENGEO</u>	Company: _____	Company: _____	Company: _____	Company: _____	Company: _____

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

Attn: <u>Richard Gandolfo</u>		TPH EPA-8260B <input checked="" type="checkbox"/> MTBE <input checked="" type="checkbox"/> Gas w/ BTEX <input checked="" type="checkbox"/> Silica Gel TEPH EPA 8015M* <input checked="" type="checkbox"/> Diesel/Motor Oil <input type="checkbox"/> Other _____ EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> 5 Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol (HVOCs) EPA 8021 by 8260B Volatile Organics GC/MS (VOCs) <input type="checkbox"/> EPA 8260B <input type="checkbox"/> 624 Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625 Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 <input type="checkbox"/> PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608 PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310 CAM17 Metals (EPA 6010/7470/7471) Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____ Low Level Metals by EPA 200.8/6020 (ICP-MS): <input type="checkbox"/> WET (STLC) <input type="checkbox"/> TCLP <input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24h hold time for H <sub>2</sub> O) <input type="checkbox"/> Spec. Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> TDS Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>
Company: <u>ENGEO</u>		
Address:		
Phone: <u>on file</u>	Email:	
Bill To: <u>on file</u>	Sampled By: <u>R. Gandolfo</u>	
Attn:	Phone:	

Sample ID	Date	Time	Mat IX	Preserv	TPH EPA-8260B <input checked="" type="checkbox"/> Gas w/ BTEX <input checked="" type="checkbox"/> Silica Gel Diesel/Motor Oil <input type="checkbox"/> Other _____	EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> 5 Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) <input type="checkbox"/> EPA 8260B <input type="checkbox"/> 624	Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625	Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 <input type="checkbox"/> PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____	Low Level Metals by EPA 200.8/6020 (ICP-MS): <input type="checkbox"/> WET (STLC) <input type="checkbox"/> TCLP	<input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24h hold time for H <sub>2</sub> O)	<input type="checkbox"/> Spec. Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> TDS	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Number of Containers	
2-SPB-1	9/20/11	7:40	5	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
2-SPB-2		7:38			/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
2-SPB-3		8:40			/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
2-SPB-4		8:50			/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
2-SPB-5		9:00			/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
2-SPB-6		9:10			/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
2-SPB-7		9:21			/	/	/	/	/	/	/	/	/	/	/	/	/	/	1
2-SPB-8	9/20/11	9:30	5	10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1

Project Info		Sample Receipt		1) Relinquished by:		2) Relinquished by:		3) Relinquished by:		
Project Name: <u>Macedo</u>	# of Containers: <u>20</u>	Signature: <u>[Signature]</u>	Time: <u>10:10</u>	Signature: _____	Time: _____	Signature: _____	Time: _____	Signature: _____	Time: _____	
Project#: <u>7380.000.003</u>	Head Space:	Printed Name: <u>Richard Gandolfo</u>	Date: <u>9/20/11</u>	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	
PO#: _____	Temp: <u>2.2i</u>	Company: <u>ENGEO</u>	Company: _____	Company: _____	Company: _____	Company: _____	Company: _____	Company: _____	Company: _____	
Credit Card#: _____	Conforms to record:	1) Received by: <u>[Signature]</u> <u>1010</u>		2) Received by: _____		3) Received by: _____				
T A T	<input checked="" type="checkbox"/> Day	<input type="checkbox"/> 3 Day	<input type="checkbox"/> 2 Day	<input type="checkbox"/> 1 Day	Signature: <u>[Signature]</u>	Time: <u>9-20-11</u>	Signature: _____	Time: _____	Signature: _____	Time: _____
Report: <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDF	Special Instructions / Comments: <input type="checkbox"/> Global ID _____	Printed Name: <u>testAmin</u>	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	Printed Name: _____	Date: _____	
See Terms and Conditions on reverse *TestAmerica SF reports 8015M from C <sub>9</sub> -C <sub>24</sub> (Industry norm). Default for 8015B is C <sub>10</sub> -C <sub>24</sub>		Company: _____	Company: _____	Company: _____	Company: _____	Company: _____	Company: _____	Company: _____	Company: _____	

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# Login Sample Receipt Checklist

Client: Engeo, Inc.

Job Number: 720-37555-1

**Login Number: 37555**

**List Source: TestAmerica San Francisco**

**List Number: 1**

**Creator: Mullen, Joan**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



## **APPENDIX B**

Soil Off-haul Summary Report and Sample Manifest Ticket



**PLEASANTON PLANT**  
SMARA #91-01-0010

September 14, 2011

Attention:

Subject: A33 - 3/4" x 1/2" Crushed Aggregate

The Pleasanton 3/4" x 1/2" Crushed produced by Vulcan Materials Company is an aggregate produced at the Pleasanton, California Plant, SMARA No. 91-01-0010. The Typical physical properties of the aggregate are summarized below.

**A33**  
**3/4" x 1/2" CRUSHED AGGREGATE**

SIEVE SIZE	PERCENT PASSING	GRADATION	
		VMC HMA SPEC.	
1 1/2" (37.5 mm)	100	100	
1" (25 mm)	100	100	
3/4" (19 mm)	85	75-100	
1/2" (12.5 mm)	16	5-25	
3/8" (9.5 mm)	3	0-10	
No. 4 (4.75 mm)	1	0 - 5	
No. 8 (2.36 mm)	1	0 - 3	

**PHYSICAL PROPERTIES**

ASTM STANDARD	COARSE AGGREGATE ASTM C 33 TABLE 3
ASTM C 127 - Specific Gravity (SSD)	2.730
Absorption	1.1%
CTM 227 - Cleanness Value	88
ASTM C 29 - Dry Rodded Unit Weight	100.0 lbs/cu. ft.
ASTM C 117 - Material Finer Than #200	1.0%
ASTM C 131 - Los Angeles Abrasion (500 Revs)	27.0% Loss
ASTM C 142 - Clay Lumps & Friable Particles	0.5%
ASTM C 289 - Alkali Silica Reaction (ASR)	Innocuous

If you require any additional information, please do not hesitate to call.

Respectfully,  
Vulcan Materials Company

Greg Vinson  
Technical Services Manager - Northern California

**Natural Sand and Gravel**

**SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

<b>Product Name:</b> Natural Sand and Gravel		<b>Formula:</b> Not applicable
<b>Synonyms/Common Names:</b> Construction Aggregate		
<b>Manufacturer/Contact Info:</b> CalMat Co., d/b/a/ Vulcan Materials, Western Division Safety, Health and Environmental Department 3200 San Fernando Road Los Angeles, CA 90065-1415		<b>General Phone Number:</b> 323.258.2777 (8-5 PST, M-F)  <b>Emergency Phone Number:</b> 1.866.401.5424 (3E Company, 24 hours/day, 7 days/week)

**SECTION 2. COMPOSITION INFORMATION ON INGREDIENTS**

Hazardous Components	CAS No.	% by Weight
Natural Sand and Gravel* *Composition varies naturally-typically contains some quartz (crystalline silica)	None 14808-60-7	100 >1

**SECTION 3. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**WARNING**

Dust may irritate the eyes, skin and respiratory tract. Avoid breathing excessive dust. Breathing silica-containing dust for prolonged periods in the workplace can cause lung damage and a lung disease called silicosis. Several scientific organizations have classified crystalline silica as causing lung cancer in humans. Silicosis or lung cancer can result in permanent injury or death.

**POTENTIAL HEALTH EFFECTS**

**Primary Routes of Exposure:**

Inhalation and contact with the eyes and skin.

**Eye Contact:**

Dust particles can scratch the eye causing tearing, redness, a stinging or burning feeling, or swelling of the eyes with blurred vision.

**Skin Contact:**

Dust particles can scratch and irritate the skin with redness, an itching or burning feeling, swelling of the skin, and/or rash.

**Skin Absorption:**

Not expected to be a significant exposure route.

**Inhalation:**

Dusts may irritate the nose, throat and respiratory tract by mechanical abrasion. Coughing sneezing and shortness of breath may occur.

**Ingestion:**

Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation including nausea, vomiting diarrhea and blockage.

**Effects Following Prolonged or Repeated Exposure:**

Exposure to high levels of respirable crystalline silica is associated with silicosis, lung cancer, and autoimmune disorders. For additional information, see Section 11.

**Carcinogenicity:**

Crystalline silica, a component in this product, has been listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), and/or the Occupational Safety and Health Administration (OSHA). For additional information, see Section 11.



**POTENTIAL HEALTH EFFECTS****Signs and Symptoms of Exposure:**

Symptoms of silicosis may include (but are not limited) to shortness of breath, difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; right heart enlargement and/or failure.

**Medical Conditions Aggravated by Exposure:**

Pre-existing medical conditions that may be aggravated by exposure include disorders of the eye, skin and lung (including asthma and other breathing disorders). If addicted to tobacco, smoking will impair the ability of the lungs to clear themselves of dust.

**SECTION 4. FIRST AID MEASURES****Eyes:**

Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.

**Skin:**

Wash affected areas thoroughly with mild soap and fresh water. Contact a physician if irritation persists or later develops.

**Inhalation:**

Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or if breathing is difficult.

**Ingestion:**

If person is conscious, do not induce vomiting. Give large quantity of water and get medical attention. Never attempt to make an unconscious person drink.

**Notes to Physician:**

Not all individuals with silicosis will exhibit symptoms of the disease. However, silicosis can be progressive, and symptoms can appear at any time, even years after exposures have ceased. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.

For emergencies, contact 3E Company at **1-866-401-5424** (24 hours/day, 7 days/week).

**SECTION 5. FIREFIGHTING MEASURES****Flash Point (Method Used):**

Not applicable

**Flammable Limits:**

LEL: Not applicable

UEL: Not applicable

**Autoignition Temperature:**

Not applicable

**Extinguishing Media:**

The presence of this material in a fire does not hinder the use of any standard extinguishing medium. Use extinguishing medium for surrounding fire.

**Special Firefighting Procedures:**

None

**Unusual Fire and Explosion Hazards:**

Contact with powerful oxidizing agents may cause fire and/or explosions (see Section 10 of MSDS).

**SECTION 6. ACCIDENTAL RELEASE MEASURES****Precautions if Material is Spilled or Released:**

Persons involved in cleanup processes should first observe precautions (as appropriate) identified in Section 8 of this MSDS. Spilled material, where dust is generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Do not dry sweep or use compressed air for clean-up. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Prevent spilled materials from entering streams, drains, or sewers.

For emergencies, contact 3E Company at **1-866-401-5424** (24 hours/day, 7 days/week).

**Waste Disposal Methods:**

Dispose of waste materials in accordance with applicable federal, state and local laws and regulations.

**Environmental Precautions:**

Not applicable

## SECTION 7. HANDLING AND STORAGE

### Storage:

Do not store near food and beverages or smoking materials.

### Handling:

Respirable crystalline silica-containing dust may be generated during processing, handling, and storage. Use personal protection and controls identified in Section 8 of this MSDS as appropriate.

**MANUFACTURED SAND MADE FROM THIS PRODUCT MUST NOT BE USED AS AN ABRASIVE BLASTING AGENT.**

## SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Legend:

NE = Not Established; PEL = Permissible Exposure Limit; TLV = Threshold Limit Value; REL = Recommended Exposure Limit; OSHA = Occupational Safety and Health Administration; MSHA = Mine Safety and Health Administration; NIOSH = National Institute for Occupational Safety and Health; ACGIH = American Conference of Governmental Industrial Hygienists

Component	OSHA/MSHA PEL	ACGIH TLV	NIOSH REL
Particulates not otherwise classified	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)	10 mg/m <sup>3</sup> (inhalable fraction) 3 mg/m <sup>3</sup> (respirable fraction)	NE
Respirable dust containing silica	10 mg/m <sup>3</sup> ÷ (% silica + 2)	Use Respirable Silica TLV	Use Respirable Silica REL
Total dust containing silica	OSHA: 30 mg/m <sup>3</sup> ÷ (% silica + 2) MSHA: 30 mg/m <sup>3</sup> ÷ (% silica + 3)	NE	NE
Respirable Crystalline Silica (quartz)	NE - Use respirable dust PEL	0.025 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>
Respirable Tridymite and Cristobalite (other forms of crystalline silica)	½ of OSHA and MSHA respirable dust PEL	0.025 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>

### Eye Protection:

Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated.

### Skin Protection (Protective Gloves/Clothing):

Use gloves to provide hand protection from abrasion. In dusty conditions, use long sleeve shirts. Wash work clothes after each use.

### Respiratory Protection:

All respirators must be NIOSH-approved for the exposure levels present. (See NIOSH Respirator Selection Guide). The need for respiratory protection should be evaluated by a qualified safety and health professional. Activities that generate dust require the use of an appropriate dust respirator where dust levels exceed or are likely to exceed allowable exposure limits. For respirable silica levels that exceed or are likely to exceed an 8 hr Time Weighted Average (TWA) of 0.5 mg/m<sup>3</sup>, a high efficiency particulate filter respirator must be worn at a minimum, however; if respirable silica levels exceed or are likely to exceed an 8 hr TWA of 5.0 mg/m<sup>3</sup> a positive pressure, full face respirator or equivalent is required. Respirator use must comply with applicable MSHA (42 CFR 84) or OSHA (29 CFR 1910.134) standards, which include provisions for a user training program, respirator inspection, repair and cleaning, respirator fit testing, medical surveillance and other requirements.

### Engineering Controls:

Activities that generate dust require the use of general ventilation, local exhaust and/or wet suppression methods to maintain exposures below allowable exposure limits.

### Other:

Respirable dust and quartz levels should be monitored regularly to determine worker exposure levels. Exposure levels in excess of allowable exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee workstations.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Boiling Point:</b> Not applicable	<b>pH:</b> Not applicable	<b>Specific Gravity (H<sub>2</sub>O = 1):</b> 2.55 - 2.80
<b>Evaporation Rate (Butyl Acetate = 1):</b> 0	<b>Melting Point:</b> Not applicable	<b>Vapor Pressure (mm Hg.):</b> Not applicable
<b>Solubility in Water:</b> 0	<b>Vapor Density (Air = 1):</b> Not applicable	<b>% Volatile:</b> Not applicable

### Appearance and Odor:

Angular or round multicolored particles. No odor.

## SECTION 10. STABILITY AND REACTIVITY

### Stability:

Stable under normal temperatures and pressures.

### Conditions to Avoid:

Contact with incompatible materials should be avoided (see below). See Sections 5 and 7 for additional information.

### Incompatibility (Materials to Avoid):

Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, an oxygen difluoride may cause fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas-silicon tetrafluoride.

### Hazardous Decomposition or Byproducts:

Silica-containing respirable dust particles may be generated. When heated, quartz is slowly transformed into tridymite (above 860°C/1580°F) and cristobalite (above 1470°C/2678°F). Both tridymite and cristobalite are other forms of crystalline silica and are considered more fibrogenic to the lungs than quartz.

### Hazardous Polymerization:

Not known to occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute Effects:

No specific data on product.

### Effects Following Prolonged or Repeated Exposure:

Prolonged overexposure to respirable dusts in excess of allowable exposure limits can cause inflammation of the lungs leading to possible fibrotic changes, a medical condition known as pneumoconiosis.

Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of allowable exposure limits may cause a chronic form of silicosis, an incurable lung disease that may result in permanent lung damage or death. Chronic silicosis generally occurs after 10 years or more of overexposure; a more accelerated type of silicosis may occur between 5 and 10 years of higher levels of exposure. In early stages of silicosis, not all individuals will exhibit symptoms (signs) of the disease. However, silicosis can be progressive, and symptoms can appear at any time, even years after exposure has ceased. Symptoms of silicosis may include, but are not limited to, the following: shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; right heart enlargement and/or failure. Persons with silicosis have an increased risk of pulmonary tuberculosis infection.

Repeated overexposures to very high levels of respirable crystalline silica (quartz, cristobalite, tridymite) for periods as short as six months may cause acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include (but are not limited to): shortness of breath, cough, fever, weight loss, and chest pain.

Respirable dust containing newly broken silica particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size. Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken particles of silica.

There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with autoimmune disorders and other adverse health effects involving the kidney. In particular, the incidence of scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) appears to be higher in silicotic individuals. To date, the evidence does not conclusively determine a causal relationship between silica exposure and these adverse health effects.

### Carcinogenicity:

Epidemiology studies on the association between crystalline silica exposure and lung cancer have had both positive and negative results. There is some speculation that the source and type of crystalline silica may play a role. Studies of persons with silicosis indicate an increased risk of developing lung cancer, a risk that increases with the level and duration of exposure. It is not clear whether or not lung cancer develops in non-silicotic patients. Several studies of silicotics do not account for lung cancer confounders, especially smoking, which have been shown to increase the risk of developing lung disorders, including emphysema and lung cancer.

In October 1996, an IARC Working Group designated respirable crystalline silica as carcinogenic (Group 1). The NTP's Report on Carcinogens, 9th edition, lists respirable crystalline silica as a "known human carcinogen." In year 2000, the American Conference of Governmental Industrial Hygienists (ACGIH) listed respirable crystalline silica (quartz) as a suspected human carcinogen (A-2). These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.

## SECTION 12. ECOLOGICAL INFORMATION

### Aquatic Ecotoxicological Data:

No specific data on this product. Not expected to be toxic to aquatic organisms.

### Environmental Fate Data:

No specific data on this product.

### Other:

No specific data on this product.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Place contaminated materials in appropriate containers and dispose of in a manner consistent with applicable federal, state, and local regulations. Prevent from entering drainage, sewer systems, and unintended bodies of water. It is the responsibility of the user to determine, at the time of disposal, whether product meets criteria for hazardous waste. Product uses, transformations, mixture and processes, may render the resulting material hazardous.

**SECTION 14. TRANSPORT INFORMATION [Note: Not intended to be all-inclusive.]****DOT Proper Shipping Name:**

Not regulated.

**DOT Hazard Classification:**

Not applicable.

**UN/NA Number:**

Not regulated.

**DOT Packing Group:**

Not applicable.

**Labeling Requirements:**

Not applicable. Label as required by the OSHA Hazard Communication standard [29 CFR 1910.1200(f)], MSHA Hazard Communication standard [30 CFR Part 47] and applicable state and local regulations.

**SECTION 15. REGULATORY INFORMATION [Note: Not intended to be all-inclusive.]****Toxic Substances Control Act (TSCA):**

The components in this product are listed on the TSCA Inventory or are exempt.

**Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):**

Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act.

**Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III:**Section 302 extremely hazardous substances:

None

Section 311/312 hazard categories:

Delayed Health

Section 313 reportable ingredients at or above de minimus concentrations:

None

**California Proposition 65:**

This product contains a chemical (crystalline silica) known to the State of California to cause cancer.

**State Regulatory Lists:**

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list or all state regulations. Therefore, the user should review the components listed in Section 2 and consult state or local authorities for specific regulations that apply.

**SECTION 16. OTHER INFORMATION**Disclaimer of Liability

Vulcan Materials Company believes the information contained herein is accurate, however, Vulcan Materials Company makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein by any party. The provision of the information contained herein is not intended to be and should not be construed as legal advice or as ensuring compliance with and federal, state, or local laws and regulations. Any party using this product should review all such laws, rules or regulations prior to use.

**NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.**

**CalMat Co., d/b/a/ Vulcan Materials,  
Western Division  
Safety, Health and Environmental Department  
3200 San Fernando Road  
Los Angeles, CA 90065-1415**

MSDS 3239-003-WT



Dear Customer/Contractor:

Please find attached a material safety data sheet (MSDS) for the product that you purchased from Vulcan Materials Company. This is a revised MSDS and replaces any previous versions of the MSDS for this product. This MSDS is provided to you as required by the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Mine Safety and Health Administration's (MSHA) Hazard Communication Standard (30 CFR Part 47), and/or any applicable state Right-to-Know laws.

It is the responsibility of your company to communicate this information to your employees, customers, and contractors who may use or come in contact with this product. Further, if you distribute this product, Vulcan Materials Company requests, and applicable laws may require, that you forward this MSDS to your customers.

Please direct this information to the person responsible for safety and health compliance at your company. If you have questions about the MSDS, please contact Vulcan Materials Company at the address and phone number listed on page one of the MSDS.

If you need additional copies of this or any other Vulcan Materials Company MSDS or a Spanish language version, you can obtain them at [www.vulcanmaterials.com](http://www.vulcanmaterials.com) or by calling 1-866-401-5424.

La MSDS puede obtenerse en [www.vulcanmaterials.com](http://www.vulcanmaterials.com) o llamando al 1-866-401-5424.

Sincerely,

A handwritten signature in black ink that reads "Kelly F. Bailey". The signature is written in a cursive style.

Kelly F. Bailey, C.I.H.

Corporate Director,  
Industrial Hygiene and Health Services

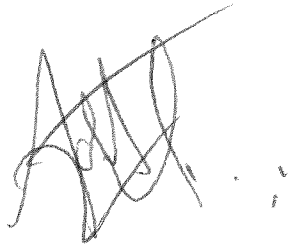
Date: 10/3/11

Subject: 1000 N. Vasco Road, Livermore California  
Fuel Leak Case No. RO0003073

**PERJURY STATEMENT**

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

Submitted by Responsible Party:

A handwritten signature in black ink, appearing to read 'SM', is written over a horizontal line. The signature is stylized and somewhat illegible.

Scott Menard  
Arbor Development Group  
3650 Mt. Diablo Blvd. Suite 200  
Lafayette, CA 94549

On behalf of:  
Eugene and Shirley Macedo Trust  
c/o Matt Macedo  
2995 Taylor Way  
Byron, CA 94514