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*By Alameda County Environmental Health at 11:07 am, Mar 18, 2015*

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Mr. Josh Baker  
Concreteworks  
c/o Artthaus  
2415 17<sup>th</sup> Street  
San Francisco, California 94110

*Sent Via Electronic Mail to: Joshua@risainc.com*

Subject: Limited Subsurface Investigation Summary  
Former Allied Engineering Site  
2421 Blanding Avenue, Alameda, California

Dear Mr. Baker:

AEI Consultants (AEI) appreciates the opportunity to present this summary of the recently performed limited subsurface investigation at the former Allied Engineering site located at 2421 Blanding Avenue in Alameda, California ("the Site"). The investigation included advancing ten soil borings to collect soil and groundwater samples and collected shallow soil samples at 7 locations. Soil vapor sampling was attempted, but could not be completed due to the tight soils present at the Site. These activities were performed per the scope of work described in our proposals dated December 19, 2014 and January 9, 2015 (Reference No. 39776).

Consistent with previous soil and groundwater data collected at the Site, volatile organic compounds (VOCs) were found in soil and groundwater samples collected and analyzed. A brief background of the Site, a description of the field activities completed by AEI, and our assessment of the environmental concerns are presented below.

#### Background

The Site is an approximately 2.92-acre facility including an approximate 83,500 square foot building that has been used for metal machining and fabrication for more than 60-years. Multiple subsurface environmental investigations have been performed at the Site to assess the nature and extent of petroleum hydrocarbons identified during the removal of a fuel underground storage tank (UST) in January 2004 and recently a limited Phase II investigation was performed to assess whether past operations at the site, in addition to the UST, have potentially impacted the Site.

- There is an active leaking underground storage tank (LUST) case related to the former 2,000-gallon gasoline UST and dispensers, with the lead regulatory agency as Alameda County. Petroleum hydrocarbon impacts to soil and groundwater were observed during UST removal activities and eight soil borings were advanced and three monitoring wells have been installed at the Site. Three years of semi-annual groundwater monitoring of the wells has shown generally decreasing trends of total petroleum hydrocarbons as gasoline (TPHg) and benzene in wells MW-1 and MW-2, from maximum concentrations of 2,600 micrograms per liter ( $\mu\text{g/L}$ ) and 240  $\mu\text{g/L}$ , respectively, to non-detect at less than 50  $\mu\text{g/L}$  and 7.1  $\mu\text{g/L}$  for TPHg and benzene, respectively.
- There is an open SLIC case under the jurisdiction of the Water Board, however no other information is available.

#### Completed Field Activities

On January 12, 2014 AEI implemented our proposed scope of work including advancing ten soil borings to collect soil and groundwater samples and seven shallow soil borings to assess surface metals concentrations as described below.

#### Preliminary Field Activities

Prior to mobilizing to the Site, AEI obtained a drilling permit from the Alameda County Department of Public Works for the soil borings being advanced to groundwater, and a copy is included as Attachment A. Underground Service Alert was notified to mark public utilities at the Site. AEI contracted a private utility locating service to further clear each of the proposed soil boring locations of potential subsurface utilities or obstructions.

#### VOC Assessment – Soil and Groundwater

AEI contracted a State of California-licensed drilling company to advance each of the ten soil borings to a depth of approximately 15 feet below ground surface (bgs) at the locations show on Figure 1. Each soil boring was advanced using a direct push drill rig. Soil core was collected continuously in acetate liners for lithologic description and sample collection. Collected soil core was described in accordance with the Unified Soil Classification System (USCS) and Munsell Color Chart. The USCS description, photoionization detector (PID) measurement, samples collected, and other notable features including observations of odor or staining were recorded on field boring logs. Completed boring logs are included in Attachment B.

Soil samples were collected directly from the soil core using En Core type samplers to minimize the potential for the loss of VOCs. Three samples were collected in the acetate sleeves, sealed with Teflon tape and plastic end caps. Each collected sample was labeled and placed in an ice filled cooler for transport to the analytical laboratory under

chain-of-custody protocol. Soil samples were generally collected at depths of 2, 5, 10, and 15 feet bgs, and at locations where other notable features were observed. A total of 31 soil samples were collected for potential chemical analysis.

One groundwater sample was collected from each soil boring using a temporary well casing placed in the open borehole. Groundwater samples were collected using a ball and check valve in borings SB-1 through SB-3 and disposable plastic bailers for the remaining borings. Groundwater was then decanted into laboratory supplied, appropriately preserved, bottles, which were sealed and labeled. Upon sample collection, each sample was immediately transferred to the on-site laboratory for chemical analysis. A total of ten groundwater samples were collected.

Upon the completion of soil and groundwater sampling, each soil boring was backfilled with neat cement grout (Portland Type I/II or equivalent) from the base of the borehole to the ground surface. The surface completion was finished with concrete to match the existing ground surface. Mr. Steve Miller with Alameda County observed the destruction of soil borings SB-2 and SB-6, and provided verbal confirmation to grout the remaining boreholes.

Soil cuttings and cleaning fluids were placed in DOT-approved 55-gallon drums pending profiling and proper disposal.

#### **VOC Assessment – Soil Vapor**

AEI contracted a State of California-licensed drilling company to advance and construct each of the proposed ten proposed soil vapor sample probes. At each location a soil vapor probe was advanced to a depth of approximately five-feet bgs using a direct push drill rig. Once advanced, the driller tested the flow of soil vapor from the soil vapor probe. Due to the high percentage of fine soils (silts and clays) in the shallow soils at the Site, soil vapor samples were not able to be collected. AEI had the driller advance and test soil vapor probes at SB-1, SB-9 and SB-10, and at each location there was not sufficient soil vapor for sampling. Therefore, AEI terminated this portion of the scope of work.

#### **Metals in Shallow Soils**

To further assess the extent of metals in shallow soils at the Site, AEI collected shallow soil samples at seven locations across the bare soil at the Site. Soil samples were collected at the surface and at depths of one and two feet bgs at each location, with the exception of sample locations SS-3 and SS-6. A two foot sample could not be collected from SS-3 and only a surface sample could be collected from SS-6 due to difficult drilling conditions. At each location, soil borings were advanced using a hand auger. Soil samples were collected in metal sleeves, sealed with Teflon tape and plastic end caps,

labeled, and placed in an ice filled cooler for transport to the analytical laboratory under chain-of-custody protocol. A total of 18 soil samples were collected for potential chemical analysis.

Collected soil samples were submitted to State of California certified laboratory for chemical analysis of California Assessment Manual (CAM) seventeen metals on a 24-hour turn around basis.

### Analytical Results

This section presents a summary of the analytical results for the various medial analyses performed for samples collected during this investigation. Copies of the laboratory analytical results and chain-of-custody documentation are included as Attachment C. AEI understands that appropriate measures to address the chemicals and metals found that the Site will be presented separately.

#### **VOCs in Soil**

Select soil samples were analyzed for VOCs using US EPA Testing Method 8260B. To assess for the potential surface sources of VOCs, AEI analyzed near surface soil samples collected as shown on Table 1, which presents a summary of the chemicals detected in soil samples collected and analyzed. A total of ten soil samples were collected and analyzed. Trichloroethylene (TCE) was observed in one soil sample, soil sample SB-6-2, at a concentration of 0.022 milligrams per kilogram (mg/kg). Freon 113 was observed in one soil sample, soil sample SB-7-2, at a concentration of 0.011 mg/kg. No other VOCs were detected in soil samples analyzed.

#### **VOCs in Soil Vapor**

As described above, soil vapor samples could not be collected do to the soil types encountered at the Site. Soil vapor samples were intended to be analyzed in an on-site mobile laboratory, however since soil vapor samples could not be collected, the on-site mobile laboratory was used to analyze the groundwater samples collected.

#### **VOCs in Groundwater**

Collected groundwater samples were analyzed for VOCs using US EPA Testing Method 8260B in the on-site mobile laboratory. Table 2 presents a summary of VOCs detected in groundwater samples. The results of the VOC analysis of groundwater samples included:

- Tetrachloroethylene (PCE) was observed in two of the groundwater samples collected and analyzed at concentrations of 3.0 and 1,000 micrograms per liter ( $\mu\text{g/L}$ ), in groundwater collected from SB-1 and SB-3, respectively.

- TCE was observed in four groundwater samples collected and analyzed at a maximum concentration of 310 µg/L.
- Cis-1,2-dichloroethylene (cis-1,2-DCE) was observed in three groundwater samples at a maximum concentration of 67 µg/L.
- Vinyl chloride was observed in one groundwater sample collected and analyzed at a concentration of 14 µg/L in the groundwater sample collected from SB-1.
- Benzene, toluene, ethylbenzene, and total xylenes (collectively "BTEX compounds") were not observed in the groundwater samples collected and analyzed.

#### **Metals in Shallow Soils**

Collected shallow soil samples were analyzed for California Assessment Manual (CAM) seventeen (CAM-17) metals using US EPA Testing Method 6020. At each location, AEI requested that the laboratory analyze the surface and one-foot shallow soil samples as shown on Table 3, with the exception of location SS-6 where a one-foot sample could not be collected. Table 3 presents a summary of CAM-17 metals detected in shallow soil samples. The results of the CAM-17 analysis of soil samples included:

- Arsenic was detected in each soil sample collected and analyzed. Two soil samples yielded arsenic concentrations greater than 10 mg/kg, at a maximum concentration of 22 mg/kg.
- Total Chromium was detected in each of the soil samples collected and analyzed. Three surface samples yielded total chromium at concentrations ranging between 1,100 and 1,300 mg/kg.
- Lead was detected in each of the soil samples collected and analyzed and at the most elevated concentrations. Six soil samples yielded lead at concentrations ranging between 2,100 and 33,000 mg/kg.

Other CAM-17 metals were detected in the analyzed soil samples as shown in Table 3.

**Limited Subsurface  
Investigation Summary**

2421 Blanding Avenue, Alameda, California

**Closing**

AEI appreciates working with Concreteworks on this important project. If you have any questions or comments, please do not hesitate to contact Mr. Trent Weise, P.E. at (408) 559-7600 (tweise@aeiconsultants.com).

Sincerely,

**AEI** Consultants



Trent A. Weise, P.E. (C 64480)  
Vice President



Enclosures



# **AEI** Consultants

Environmental & Engineering Services

Tables

TABLE 1  
Summary of Soil Analytical Results - Chemicals  
2421 Blanding Avenue, Alameda, California

Sample ID	Sample Date	Sample Depth	TCE (mg/kg)	Freon 113 (mg/kg)	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Acetone (mg/kg)
<b><i>Current Investigation Results</i></b>												
SB-1-3.5	1/12/2015	3.5	<0.0081	<0.081	--	--	--	<0.0081	<0.0081	<0.0081	<0.0081	<0.16
SB-2-3.5	1/12/2015	3.5	<0.029	<0.29	--	--	--	<0.029	<0.029	<0.029	<0.029	<0.57
SB-3-2	1/12/2015	2	<0.012	<0.12	--	--	--	<0.012	<0.012	<0.012	<0.012	<0.23
SB-4-5	1/12/2015	5	<0.0040	<0.040	--	--	--	<0.0040	<0.0040	<0.0040	<0.0040	<0.080
SB-5-5	1/12/2015	5	<0.0040	<0.040	--	--	--	<0.0040	<0.0040	<0.0040	<0.0040	<0.079
SB-6-2	1/12/2015	2	<b>0.022</b>	<0.043	--	--	--	<0.0043	<0.0043	<0.0043	<0.0043	<0.086
SB-7-2	1/12/2015	2	<0.0050	<b>0.011</b>	--	--	--	<0.0050	<0.0050	<0.0050	<0.0050	<0.10
SB-8-2	1/12/2015	2	<0.0042	<0.042	--	--	--	<0.0042	<0.0042	<0.0042	<0.0042	<0.084
SB-9-2	1/12/2015	2	<0.0044	<0.044	--	--	--	<0.0044	<0.0044	<0.0044	<0.0044	<0.088
SB-10-2	1/12/2015	2	<0.0042	<0.042	--	--	--	<0.0042	<0.0042	<0.0042	<0.0042	<0.083
<b><i>Previous Investigation Results</i></b>												
TP-1-8.5'	7/14/2014	8.5	ND	--	ND	<b>4.6</b>	ND	ND	ND	ND	ND	<57
A-1-4'	7/14/2014	4	ND	--	NA	<b>1.2</b>	ND	ND	ND	ND	ND	<57
A-2-4'	<i>No soil samples analyzed</i>											
A-3-4'	7/14/2014	4	ND	--	ND	<b>20</b>	ND	ND	ND	ND	ND	<b>96</b>
A-4-4'	7/14/2014	4	ND	--	ND	ND	ND	ND	ND	ND	ND	<57
A-5-4'	<i>No soil samples analyzed</i>											
A-6-4'	7/14/2014	4	ND	--	ND	<b>2.3</b>	ND	ND	ND	ND	ND	<57
A-7-4'	7/14/2014	4	ND	--	ND	<b>43</b>	<b>120</b>	ND	ND	ND	ND	<57
A-8-4'	7/14/2014	4	ND	--	ND	ND	ND	ND	ND	ND	ND	<57
A-9-4'	7/14/2014	4	ND	--	ND	ND	ND	ND	ND	ND	ND	<57

**Abbreviations / Notes:**

mg/kg = milligrams per kilogram

ND = not detected at or above laboratory method detection limit (unspecified)

<0.050 = not detected at or above the specified laboratory method detection limit

TPHg = total petroleum hydrocarbons as gasoline

TPHd = total petroleum hydrocarbons as diesel

TPHmo = total petroleum hydrocarbons as motor oil

TCE = trichloroethylene



TABLE 2  
Summary of Groundwater Analytical Results - Chemicals  
2421 Blanding Avenue, Alameda, California

Sample ID	Sample Date	Sample Depth	BTEX												
			TPHg (mg/L)	TPHd (mg/L)	TPHmo (mg/L)	Compound (ug/L)	MTBE (ug/L)	Acetone (ug/L)	PCE (ug/L)	TCE (ug/L)	cis-1,2-DCE (ug/L)	trans-1,2-DCE (ug/L)	1,1-DCE (ug/L)	1,2-DCA (ug/L)	Vinyl Chloride (ug/L)
Screening Levels			500	640	640		180	1,500	8.9	81	590	260	3.2	99	530
<b>Current Investigation Results *</b>															
SB-1	1/12/2015		--	--	--	<1.0	--	--	<b>3.0</b>	<b>110</b>	<b>54</b>	<b>4.1</b>	<1.0	<1.0	<b>14</b>
SB-2	1/12/2015		--	--	--	<1.0	--	--	<1.0	<b>1.5</b>	<1.0	<1.0	<1.0	<1.0	<1.0
SB-3	1/12/2015		--	--	--	<1.0	--	--	<b>1,000</b>	<b>310</b>	<b>67</b>	<b>1.8</b>	<1.0	<1.0	<1.0
SB-4	1/12/2015		--	--	--	<1.0	--	--	<1.0	<b>5.0</b>	<b>3.9</b>	<1.0	<1.0	<1.0	<1.0
SB-5	1/12/2015		--	--	--	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-6	1/12/2015		--	--	--	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-7	1/12/2015		--	--	--	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-8	1/12/2015		--	--	--	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-9	1/12/2015		--	--	--	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-10	1/12/2015		--	--	--	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Previous Investigation Results</b>															
TP-1	7/14/2014	9	ND	<b>8.3</b>	<b>2.6</b>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A-1A	7/14/2014	16	ND	ND	<b>0.18</b>	ND	<b>2.6</b>	ND	<b>120</b>	<b>70</b>	<b>19</b>	<b>0.52</b>	ND	ND	ND
A-2	<i>No groundwater samples analyzed</i>														
A-3	7/14/2014	16	ND	<b>8.5</b>	<b>9.9</b>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A-4	7/14/2014	16	ND	ND	ND	ND	<b>1.1</b>	ND	ND	ND	ND	ND	ND	ND	<b>4</b>
A-5	7/14/2014	16	ND	ND	ND	ND	<b>6.1</b>	ND	<b>160</b>	<b>48</b>	<b>13</b>	ND	ND	ND	ND
A-6	<i>No groundwater samples analyzed</i>														
A-7	<i>No groundwater samples analyzed</i>														
A-8	7/14/2014	16	ND	ND	ND	ND	ND	ND	<b>9.8</b>	<b>69</b>	<b>54</b>	<b>10</b>	<b>0.79</b>	<b>1.7</b>	<b>1.8</b>
A-9	7/14/2014	16	ND	ND	ND	ND	ND	ND	ND	<b>4.6</b>	<b>19</b>	<b>2.8</b>	ND	ND	ND

**Abbreviations / Notes:**

\* Preliminary results provided by the laboratory, AEI is currently awaiting the final report from the laboratory. Some results may change.

ug/L = micrograms per liter

mg/L = milligrams per liter

ND = not detected at or above laboratory method detection limit (unspecified)

<0.050 = not detected at or above the specified laboratory method detection limit

TPHg = total petroleum hydrocarbons as gasoline

TPHd = total petroleum hydrocarbons as diesel

TPHmo = total petroleum hydrocarbons as motor oil

PCE = tetrachloroethylene

TCE = trichloroethylene

cis-1,2-DCE = cis-1,2-dichloroethylene

trans-1,2-DCE = trans-1,2-dichloroethylene

1,1-DCE = 1,1-dichloroethylene

1,2-DCA = 1,2-dichloroethane

Screening Level = Environmental Screening Level for surface water, estuary habitats (Table F-2c). See report text for additional information.

TABLE 3  
Summary of Soil Analytical Results -Metals  
2421 Blanding Avenue, Alameda, California

Sample ID	Sample Date	Sample Depth	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
Screening Level			410	1.6	190,000	200	1,000	1,500,000/110	300	41,000	320	88	5,100	19,000	5,100	5,100	10	5,100	310,000
<b>Current Investigation Results</b>																			
SS-1-S	1/12/2015	S	200	13	250	<0.50	9.3	1,200	44	290	22,000	0.14	23	870	<0.50	0.96	<0.50	22	1,900
SS-2-S	1/12/2015	S	9.4	22	240	<0.50	7.7	1,300	39	330	33,000	0.10	23	350	<0.50	<0.50	<0.50	23	2,900
SS-3-S	1/12/2015	S	0.92	3.5	120	<0.50	0.4	43	6.8	30	93	0.064	1.0	56	<0.50	<0.50	<0.50	24	130
SS-4-S	1/12/2015	S	0.96	5.8	180	<0.50	0.53	39	8.2	38	180	0.19	1.6	46	<0.50	<0.50	<0.50	32	260
SS-5-S	1/12/2015	S	1.4	6.9	100	<0.50	8.3	65	9.2	55	93	0.099	1.0	60	<0.50	<0.50	<0.50	41	100
SS-6-S	1/12/2015	S	1.8	5.4	280	<0.50	2.2	58	8.7	67	420	0.36	1.3	48	<0.50	1.2	<0.50	36	580
SS-7-S	1/12/2015	S	3.3	3.2	94	<0.50	2.2	1,100	30	46	5,500	0.082	5.0	670	<0.50	<0.50	<0.50	16	390
SS-1-1	1/12/2015	1	0.76	4.7	120	<0.50	<0.25	35	5.9	17	120	0.21	<0.50	22	<0.50	<0.50	<0.50	25	44
SS-2-1	1/12/2015	1	2.0	4.4	150	<0.50	0.63	110	7.9	45	3,700	0.21	0.84	37	<0.50	<0.50	<0.50	35	250
SS-3-1	1/12/2015	1	5.7	6.9	220	<0.50	2.7	150	37	120	770	0.42	1.1	34	<0.50	<0.50	<0.50	36	590
SS-4-1	1/12/2015	1	26	9.0	440	<0.50	2.0	86	9.4	530	2,100	0.59	1.1	51	<0.50	0.58	<0.50	39	970
SS-5-1	1/12/2015	1	2.2	5.6	77	<0.50	0.78	780	22	100	520	<0.050	32	560	<0.50	<0.50	<0.50	18	75
SS-6-1	No soil samples analyzed																		
SS-7-1	1/12/2015	1	6.3	9.6	160	<0.50	22	820	37	130	3,700	0.065	25	410	<0.50	1.2	<0.50	36	660
<b>Previous Investigation Results</b>																			
TP-1-8.5'	7/14/2014	8.5	ND	2.2	77	0.35	0.1	39	4.4	12	5.8	0.087	ND	36	ND	ND	ND	25	30
A-1-4'	7/14/2014	4	ND	2.5	150	0.3	ND	26	4.7	14	55	0.043	ND	28	ND	ND	ND	18	23
A-2-4'	No soil samples analyzed																		
A-3-4'	7/14/2014	4	9	15	180	ND	ND	100	8.3	130	290	0.42	6.6	33	ND	ND	ND	32	250
A-4-4'	7/14/2014	4	ND	2.8	57	0.22	ND	35	4.3	8.4	2	0.02	ND	37	ND	ND	ND	21	20
A-5-4'	No soil samples analyzed																		
A-6-4'	7/14/2014	4	ND	2.4	65	0.27	ND	30	1.6	7.1	7	0.039	ND	22	ND	ND	ND	20	22
A-7-4'	7/14/2014	4	ND	1.3	220	0.56	0.16	35	6.5	26	14	0.44	ND	54	ND	ND	ND	22	45
A-8-4'	7/14/2014	4	ND	2	100	0.28	ND	24	5.1	9	3.8	0.031	ND	21	ND	ND	ND	15	13
A-9-4'	7/14/2014	4	ND	2.2	48	0.24	ND	27	1.6	4.1	2.4	0.025	ND	19	ND	ND	ND	19	16

**Abbreviations / Notes:**

mg/kg = milligrams per kilogram

ND = not detected at or above laboratory method detection limit (unspecified)

<0.050 = not detected at or above the specified laboratory method detection limit

Screening Level = Environmental Screening Level for commercial direct contact (Table K-2). See report text for additional information.

TABLE 4  
Summary of Groundwater Analytical Results - Dissolved Metals  
2421 Blanding Avenue, Alameda, California

Sample ID	Sample Date	Sample Depth	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Lead (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Thallium (mg/L)	Vanadium (mg/L)	Zinc (mg/L)
Screening Level			0.03	0.00014	1	0.00053	0.00025	0.180 / 0.011	0.0003	0.0031	0.0025	0.000025	0.24	0.0082	0.005	0.00019	0.004	0.019	0.081
TP-1	7/14/2014	9	ND	ND	<b>0.49</b>	ND	ND	ND	<b>0.0053</b>	ND	<b>0.046</b>	ND	<b>0.018</b>	<b>0.033</b>	ND	ND	ND	ND	<b>0.070</b>
A-1A	7/14/2014	16	ND	ND	<b>0.098</b>	ND	ND	ND	<b>0.0022</b>	ND	<b>0.013</b>	ND	<b>0.016</b>	<b>0.01</b>	ND	ND	ND	ND	<b>0.022</b>
A-2	<i>No groundwater samples analyzed</i>																		
A-3	7/14/2014	16	ND	ND	<b>0.32</b>	ND	ND	ND	<b>0.086</b>	ND	ND	<b>0.0011</b>	<b>0.067</b>	<b>0.34</b>	ND	ND	ND	ND	<b>0.044</b>
A-4	7/14/2014	16	ND	ND	<b>0.11</b>	ND	ND	ND	ND	ND	<b>0.0095</b>	ND	<b>0.015</b>	ND	ND	ND	ND	ND	<b>0.020</b>
A-5	7/14/2014	16	ND	ND	<b>0.15</b>	ND	ND	ND	ND	ND	<b>0.0067</b>	ND	<b>0.019</b>	ND	ND	ND	ND	<b>0.110</b>	ND
A-6	<i>No groundwater samples analyzed</i>																		
A-7	<i>No groundwater samples analyzed</i>																		
A-8	7/14/2014	16	ND	ND	<b>0.087</b>	ND	ND	ND	ND	ND	<b>0.0094</b>	ND	<b>0.022</b>	<b>0.023</b>	ND	ND	ND	<b>0.047</b>	ND
A-9	7/14/2014	16	ND	ND	<b>0.220</b>	ND	ND	ND	ND	ND	<b>0.0094</b>	ND	<b>0.036</b>	<b>0.037</b>	ND	ND	ND	ND	ND

**Abbreviations / Notes:**

mg/L = milligrams per liter

ND = not detected at or above laboratory method detection limit (unspecified)

<0.050 = not detected at or above the specified laboratory method detection limit

Data presented in this table was collected by others. AEI has not verified the accuracy of the data.

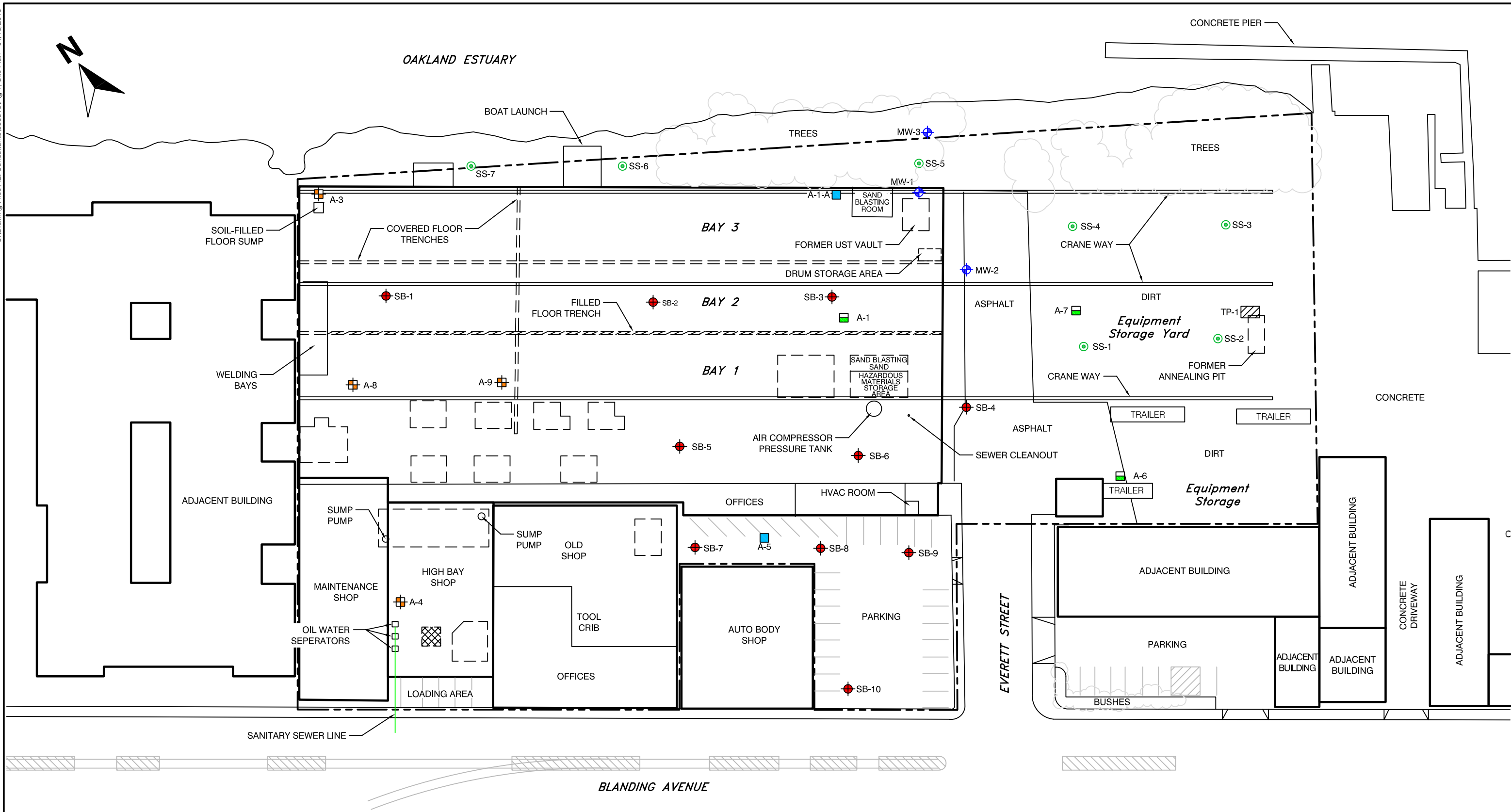
Screening Level = Environmental Screening Level for surface water, estuary habitats (Table F-2c). See report text for additional information.



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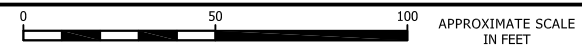
Environmental & Engineering Services

Figures



**LEGEND**

- MW-1 Existing Monitoring Well
- A-1 Soil (only) Sampling Location (July 2014)
- A-9 Soil and Groundwater Sampling Location (July 2014)
- A-5 Groundwater (only) Sampling Location (July 2014)
- Test Pit Location
- SB-1 Soil Boring Location
- SS-1 Shallow Surface Samples (Soil Only)
- Open Sub-Grade Machinery Pit
- Covered Sub-Grade Machinery Pit
- Approximate Property Boundary



**AEI Consultants**

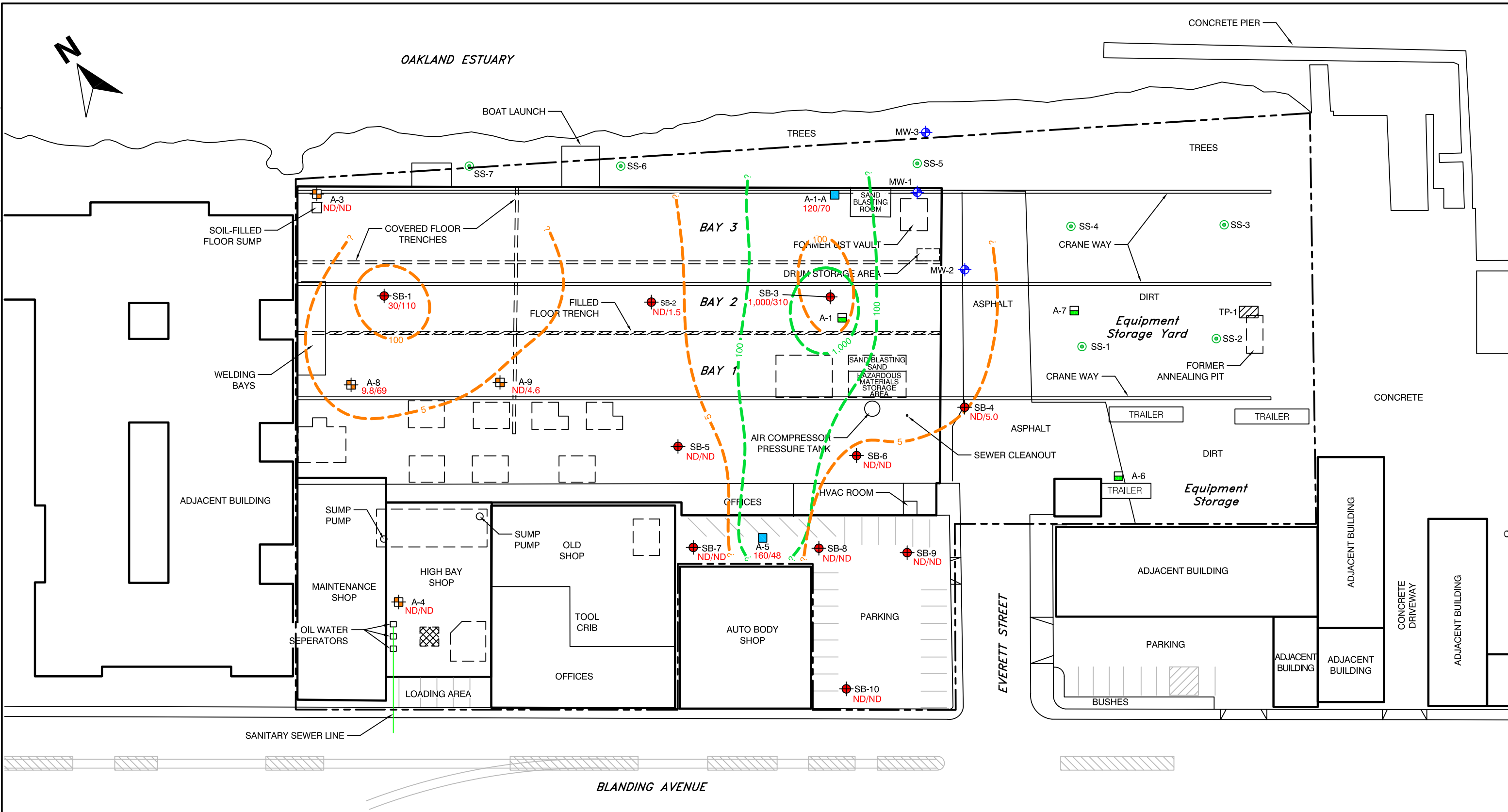
San Jose, California

**SITE PLAN**

Former Allied Engineering & Production Corporation  
2421 Blanding Avenue  
Alameda, California

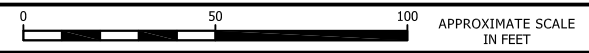
**FIGURE 1**  
Project No. 338315

C:\Drawing Files\AEI Consultants\338315\Fig 2\_VOCs In GW - 01/15/2015



**LEGEND**

- MW-1 Existing Monitoring Well
- A-1 Soil (only) Sampling Location (July 2014)
- A-9 Soil and Groundwater Sampling Location (July 2014)
- A-5 Groundwater (only) Sampling Location (July 2014)
- Test Pit Location
- SB-1 Soil Boring Location
- SS-1 Shallow Surface Samples (Soil Only)
- Open Sub-Grade Machinery Pit
- Covered Sub-Grade Machinery Pit
- Approximate Property Boundary
- 30/110 PCE/TCE Concentrations in Groundwater ( $\mu\text{g/L}$ )
- PCE Isoconcentration Contour
- TCE Isoconcentration Contour



**AEI Consultants**  
San Jose, California

**VOCs IN GROUNDWATER**

Former Allied Engineering & Production Corporation 2421 Blanding Avenue Alameda, California	<b>FIGURE 2</b> Project No. 338315
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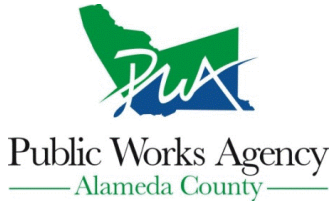
# **AEI** Consultants

Environmental & Engineering Services

Attachment A  
Soil Boring Permit



# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

**Application Approved on: 01/08/2015 By jamesy**

**Permit Numbers: W2015-0005**  
**Permits Valid from 01/12/2015 to 01/13/2015**

**Application Id:** 1419883922951  
**Site Location:** 2421 Blanding Avenue, Alameda, CA

**City of Project Site:**Alameda

**Project Start Date:** Former Allied Engineering property  
01/12/2015  
**Assigned Inspector:** Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

**Completion Date:**01/13/2015

**Applicant:** AEI Consultants - Trent Weise  
3880 S. Bascom Avenue, Suite 109, San Jose, CA 95124  
**Property Owner:** Sharon Miller  
Allied Land Company, 2421 Blanding Avenue, Alameda, CA 94501  
**Client:** Paul DiCarlo  
160 Franklin St, Suite 3000, Oakland, CA 94607  
**Contact:** Trent Weise

**Phone:** 408-559-7600  
**Phone:** --  
**Phone:** 415-710-3657  
**Phone:** 408-559-7600  
**Cell:** 408-656-1738

	<b>Total Due:</b>	\$265.00
<b>Receipt Number: WR2015-0005</b>	<b>Total Amount Paid:</b>	\$265.00
<b>Payer Name : Trent Weise</b>	<b>Paid By: VISA</b>	<b>PAID IN FULL</b>

**Works Requesting Permits:**

Borehole(s) for Investigation-Contamination Study - 10 Boreholes  
Driller: TEG Northern California - Lic #: 706568 - Method: DP

**Work Total: \$265.00**

**Specifications**

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2015-0005	01/08/2015	04/12/2015	10	1.50 in.	15.00 ft

**Specific Work Permit Conditions**

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the

## Alameda County Public Works Agency - Water Resources Well Permit

permits and requirements have been approved or obtained.

5. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

7. NOTE:

Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

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# **AEI** Consultants

Environmental & Engineering Services

Attachment B

Soil Boring Logs



AEI Consultants

**BORING NUMBER SB-1**

PAGE 1 OF 1

CLIENT Concreteworks  
 PROJECT NUMBER 338315  
 DATE STARTED 1/12/15 COMPLETED 1/12/15  
 DRILLING CONTRACTOR TEG Northern California  
 DRILLING METHOD Direct Push  
 LOGGED BY John Pendleton CHECKED BY Trent Weise  
 NOTES Borehole backfilled with neat cement grout

PROJECT NAME Former Allied Engineering Site  
 PROJECT LOCATION 2421 Blanding Avenue, Alameda, CA  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 2.25 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 AT END OF DRILLING ---  
 AFTER DRILLING 10.00 ft

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.6					Concrete	
5.0	SB-1-3.5	0			(SM) Poor recovery (10%) , silty sand with gravel, light brown, poorly graded, fine, moist, loose	
5.0	SB-1-5	0			(ML) Sandy silt, light brown/gray, poorly graded, fine, moist, soft	
10.0	SB-1-10	0			(SM) Silty sand, light brown/gray, orange mottling, poorly graded, fine, wet, loose	
13.0					(SP) Sand, poorly graded, fine, gray, wet, loose	
15.0	SB-1-15	0				

Bottom of borehole at 15.0 feet.



AEI Consultants

**BORING NUMBER SB-2**

PAGE 1 OF 1

**CLIENT** Concreteworks **PROJECT NAME** Former Allied Engineering Site  
**PROJECT NUMBER** 338315 **PROJECT LOCATION** 2421 Blanding Avenue, Alameda, CA  
**DATE STARTED** 1/12/15 **COMPLETED** 1/12/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 2.25 inches  
**DRILLING CONTRACTOR** TEG Northern California **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** John Pendleton **CHECKED BY** Trent Weise **AT END OF DRILLING** ---  
**NOTES** Borehole backfilled with neat cement grout **▼ AFTER DRILLING** 12.30 ft

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.6					Concrete	
4.0	SB-2-3.5	0			(ML) Silt with gravel, gray, dry, soft	
5.0	SB-2-5	0			(ML) Silty sand, light brown/gray, poorly graded, fine, moist, soft	
10.0	SB-2-10	0			(SM) Silty sand, gray, orange mottling, poorly graded, fine, moist, loose	
13.5					(SM) Sand, poorly graded, fine, gray, wet, loose	
15.0	SB-2-15	0				

Bottom of borehole at 15.0 feet.



AEI Consultants

**BORING NUMBER SB-3**

PAGE 1 OF 1

**CLIENT** Concreteworks **PROJECT NAME** Former Allied Engineering Site  
**PROJECT NUMBER** 338315 **PROJECT LOCATION** 2421 Blanding Avenue, Alameda, CA  
**DATE STARTED** 1/12/15 **COMPLETED** 1/12/15 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 2.25 inches  
**DRILLING CONTRACTOR** TEG Northern California **GROUND WATER LEVELS:**  
**DRILLING METHOD** Direct Push **AT TIME OF DRILLING** ---  
**LOGGED BY** John Pendleton **CHECKED BY** Trent Weise **AT END OF DRILLING** ---  
**NOTES** Borehole backfilled with neat cement grout **▼ AFTER DRILLING** 12.20 ft

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.6					Concrete	
2.5	SB-3-2		0		(ML) Silt with gravel, dark brown, damp, soft	
5.5	SB-3-5		0		(ML) Clayey silt, black, non plastic, damp, soft	
10.5	SB-3-10		0		(SM) Silty sand, gray, orange mottling, poorly graded, fine, moist, soft	
12.5					(SP) Sand, poorly graded, fine, gray, wet, loose	
15.0	SB-3-15		0			

Bottom of borehole at 15.0 feet.



AEI Consultants

**BORING NUMBER SB-4**

PAGE 1 OF 1

CLIENT Concreteworks  
 PROJECT NUMBER 338315  
 DATE STARTED 1/12/15 COMPLETED 1/12/15  
 DRILLING CONTRACTOR Cascade Drilling, Inc.  
 DRILLING METHOD Direct Push  
 LOGGED BY Diego Gonzalez CHECKED BY Trent Weise  
 NOTES Borehole backfilled with neat cement grout

PROJECT NAME Former Allied Engineering Site  
 PROJECT LOCATION 2421 Blanding Avenue, Alameda, CA  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 2.25 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 AT END OF DRILLING ---  
 AFTER DRILLING 8.00 ft

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.4				Asphalt	Asphalt	
10.8	SB-4-2		10.8		(SM) Silty sand, 2/1 10yr, medium dense, low-non plastic, very fine sand, poorly graded	
4.0					(CH) Sandy clay, gray, very stiff, high plasticity, moist	
22.8	SB-4-5		22.8			
9.5					(SM) Silty sand, brownish yellow, loose to medium dense, moist to wet, well graded	
18.7	SB-4-10		18.7			
12.0					(SM) Silty sand, loose to medium dense, moist to wet, well graded	
8.9	SB-4-15		8.9			
15.0						

Bottom of borehole at 15.0 feet.



AEI Consultants

**BORING NUMBER SB-5**

PAGE 1 OF 1

CLIENT Concreteworks  
 PROJECT NUMBER 338315  
 DATE STARTED 1/12/15 COMPLETED 1/12/15  
 DRILLING CONTRACTOR Cascade Drilling, Inc.  
 DRILLING METHOD Direct Push  
 LOGGED BY Diego Gonzalez CHECKED BY Trent Weise  
 NOTES Borehole backfilled with neat cement grout

PROJECT NAME Former Allied Engineering Site  
 PROJECT LOCATION 2421 Blanding Avenue, Alameda, CA  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 2.25 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 AT END OF DRILLING ---  
 AFTER DRILLING 9.70 ft

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.6					Concrete	
9	SB-5-2		9		(SM) Silty sand, 2/1 10yr, medium dense, low-non plastic, very fine sand, poorly graded	
4.0					(CH) Sandy clay, gray, very stiff, high plasticity, moist	
11.1	SB-5-5		11.1			
9.5					9.5	
9.9	SB-5-10		9.9		(SM) Silty sand, brownish yellow, loose to medium dense, moist to wet, well graded	
12.0					(SM) Silty sand, loose to medium dense, moist to wet, well graded, stained blue-green	
10.9	SB-5-12		10.9			
14.0					(SM) Silty sand, brownish yellow, loose to medium dense, moist to wet, well graded	
15.0	SB-5-15		9.3			
15.0						

Bottom of borehole at 15.0 feet.





AEI Consultants

**BORING NUMBER SB-6**

PAGE 1 OF 1

CLIENT Concreteworks  
 PROJECT NUMBER 338315  
 DATE STARTED 1/12/15 COMPLETED 1/12/15  
 DRILLING CONTRACTOR Cascade Drilling, Inc.  
 DRILLING METHOD Direct Push  
 LOGGED BY Diego Gonzalez CHECKED BY Trent Weise  
 NOTES Borehole backfilled with neat cement grout

PROJECT NAME Former Allied Engineering Site  
 PROJECT LOCATION 2421 Blanding Avenue, Alameda, CA  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 2.25 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 AT END OF DRILLING ---  
 AFTER DRILLING 8.00 ft

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.6					Concrete	
7.1	SB-6-2		7.1		(SM) Silty sand, 2/1 10yr, medium dense, low-non plastic, very fine sand, poorly graded	
4.0					(CH) Sandy clay, gray, very stiff, high plasticity, moist	
3.8	SB-6-5		3.8			
9.5						
2.3	SB-6-10		2.3		(SM) Silty sand, brownish yellow, loose to medium dense, moist to wet, well graded	
12.0					(SM) Silty sand, loose to medium dense, moist to wet, well graded	
2	SB-6-15		2			
15.0						

Bottom of borehole at 15.0 feet.



AEI Consultants

**BORING NUMBER SB-7**

PAGE 1 OF 1

CLIENT Concreteworks  
 PROJECT NUMBER 338315  
 DATE STARTED 1/12/15 COMPLETED 1/12/15  
 DRILLING CONTRACTOR Cascade Drilling, Inc.  
 DRILLING METHOD Direct Push  
 LOGGED BY Diego Gonzalez CHECKED BY Trent Weise  
 NOTES Borehole backfilled with neat cement grout

PROJECT NAME Former Allied Engineering Site  
 PROJECT LOCATION 2421 Blanding Avenue, Alameda, CA  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 2.25 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 AT END OF DRILLING ---  
 AFTER DRILLING 6.50 ft

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.4				Asphalt	Asphalt	
3	SB-7-2		3	(SM) Silty sand, black, 2/1 10yr, moist, moderately loose, low to non plastic, fine sand	(SM) Silty sand, black, 2/1 10yr, moist, moderately loose, low to non plastic, fine sand	
5.1	SB-7-5		5.1	(SC) Silty clayey sand, greenish black, 7/N GLEY1, moist, stiff to hard, high plasticity, fine sand, poorly graded	(SC) Silty clayey sand, greenish black, 7/N GLEY1, moist, stiff to hard, high plasticity, fine sand, poorly graded	
9.0	SB-7-10		3.3	(SC) Clayey sand, 5/4 7.5yr, moist to wet, fine sand, poorly graded	(SC) Clayey sand, 5/4 7.5yr, moist to wet, fine sand, poorly graded	
12.0	SB-7-12.5		2.2	(SM) Silty sand, 4/5 G Gley 1, wet, fine sand, well graded, loose	(SM) Silty sand, 4/5 G Gley 1, wet, fine sand, well graded, loose	
13.5				(SM) Silty sand, 5/4 10 yr, wet, fine sand, well graded, loose	(SM) Silty sand, 5/4 10 yr, wet, fine sand, well graded, loose	
15.0	SB-7-15		4.6			

Bottom of borehole at 15.0 feet.



AEI Consultants

# BORING NUMBER SB-8

PAGE 1 OF 1

**CLIENT** Concreteworks  
**PROJECT NUMBER** 338315  
**DATE STARTED** 1/12/15 **COMPLETED** 1/12/15  
**DRILLING CONTRACTOR** Cascade Drilling, Inc.  
**DRILLING METHOD** Direct Push  
**LOGGED BY** Diego Gonzalez **CHECKED BY** Trent Weise  
**NOTES** Borehole backfilled with neat cement grout

**PROJECT NAME** Former Allied Engineering Site  
**PROJECT LOCATION** 2421 Blanding Avenue, Alameda, CA  
**GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 2.25 inches  
**GROUND WATER LEVELS:**  
**AT TIME OF DRILLING** ---  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5				Asphalt/Fill	Asphalt/Fill	
2.6	SB-8-2		2.6	(SM) Silty sand, black, 2/1 10yr, fine sand, moist, dense, poorly graded	(SM) Silty sand, black, 2/1 10yr, fine sand, moist, dense, poorly graded	
5.0	SB-8-5		2	(SC) Clayey sand, 6/1 10 yr, stiff/dense, moderately plastic, moist, fine to very fine sand, poorly graded	(SC) Clayey sand, 6/1 10 yr, stiff/dense, moderately plastic, moist, fine to very fine sand, poorly graded	
9.5	SB-8-10		2.9	(SM) Silty sand, 6/1 10 yr, wet, fine sand, well graded, color changed to green/blue (staining) between 11.6' bgs and 13' bgs	(SM) Silty sand, 6/1 10 yr, wet, fine sand, well graded, color changed to green/blue (staining) between 11.6' bgs and 13' bgs	
3.1	SB-8-12		3.1			
2.7	SB-8-15		2.7			
15.0						

Bottom of borehole at 15.0 feet.



AEI Consultants

**BORING NUMBER SB-9**

PAGE 1 OF 1

CLIENT Concreteworks  
 PROJECT NUMBER 338315  
 DATE STARTED 1/12/15 COMPLETED 1/12/15  
 DRILLING CONTRACTOR Cascade Drilling, Inc.  
 DRILLING METHOD Direct Push  
 LOGGED BY Diego Gonzalez CHECKED BY Trent Weise  
 NOTES Borehole backfilled with neat cement grout

PROJECT NAME Former Allied Engineering Site  
 PROJECT LOCATION 2421 Blanding Avenue, Alameda, CA  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 2.25 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 AT END OF DRILLING ---  
 AFTER DRILLING 5.00 ft

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5				Asphalt	Asphalt	
8.3	SB-9-2		8.3		(SM) Silty sand, 2/1 10yr, black, moist, very fine sand, moderately dense, poorly graded	
10.6	SB-9-5		10.6		(SC) Clayey sand with silt, 6/1 10yr, very dense, moderately plastic, very fine to fine sand, poorly graded	
16.1	SB-9-10		16.1		(SM) Silty sand with clay, 6/1 10yr, brown streaks, very fine to fine sand, medium dense, low plasticity, poorly graded	
24.8	SB-9-15		24.8		(SM) Silty sand with clay, very dense, very fine to fine sand, well graded, moist to wet	
					(SM) Sand with silt, 4/5 G Gley1, wet, fine sand, poorly graded, very loose	
					(SM) Sand with silt, 5/4 10yr, wet, very loose	

Bottom of borehole at 15.0 feet.



AEI Consultants

**BORING NUMBER SB-10**

PAGE 1 OF 1

CLIENT Concreteworks  
 PROJECT NUMBER 338315  
 DATE STARTED 1/12/15 COMPLETED 1/12/15  
 DRILLING CONTRACTOR Cascade Drilling, Inc.  
 DRILLING METHOD Direct Push  
 LOGGED BY Diego Gonzalez CHECKED BY Trent Weise  
 NOTES Borehole backfilled with neat cement grout

PROJECT NAME Former Allied Engineering Site  
 PROJECT LOCATION 2421 Blanding Avenue, Alameda, CA  
 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 2.25 inches  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING ---  
 AT END OF DRILLING ---  
 AFTER DRILLING 6.00 ft

AEI BORING - GINT STD US LAB.GDT - 1/15/15 14:04 - P:\SITE MITIGATION PROJECTS\330000 SERIES\338315 PHII (PAUL DICARLO)\ALAMEDA - JMP\GINT BORING LOGS\ALAMEDA BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0						
0.5				Asphalt	Asphalt	
3.5	SB-10-2		8.3		(SM) Silty sand, 2/1 10yr, loose, moist, very fine to fine sand, non plastic, clay at 3.5-4' bgs	
4.0					(SM) Silty sand, brownish yellow, 6/6 10yr, medium dense, moist to wet, fine sand, well graded to loose	
5.0	SB-10-5		6.7			
6.5					▼	
6.5					(SC) Silty clayey sand, 6/6 10yr, medium dense, low plasticity, moist	
8.0					(SM) Silty sand, moist to wet, 5/4 2.5y, dense, firm sand, well graded	
10.0	SB-10-10		5.4			
15.0	SB-10-15		8.3			

Bottom of borehole at 15.0 feet.



# **AEI** Consultants

Environmental & Engineering Services

Attachment C  
Laboratory Analytical Reports



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1501274

**Report Created for:** AEI Consultants  
2500 Camino Diablo, Ste.#200  
Walnut Creek, CA 94597

**Project Contact:** John Mark Pendleton  
**Project P.O.:** #74293  
**Project Name:** #338315; Allied Engineering

**Project Received:** 01/12/2015

Analytical Report reviewed & approved for release on 01/14/2015 by:

*Question about  
your data?*

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**WorkOrder:** 1501274

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

### Analytical Qualifiers

a9 reporting limit near, but not identical to, our standard reporting limit due to variable Encore/Solid sample weight

### Quality Control Qualifiers

F2 LCS recovery for this compound is outside of acceptance limits.





## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-8-2'	1501274-006A	Soil	01/12/2015 08:55	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.084	1	01/13/2015 10:56
tert-Amyl methyl ether (TAME)	ND	0.0042	1	01/13/2015 10:56
Benzene	ND	0.0042	1	01/13/2015 10:56
Bromobenzene	ND	0.0042	1	01/13/2015 10:56
Bromochloromethane	ND	0.0042	1	01/13/2015 10:56
Bromodichloromethane	ND	0.0042	1	01/13/2015 10:56
Bromoform	ND	0.0042	1	01/13/2015 10:56
Bromomethane	ND	0.0042	1	01/13/2015 10:56
2-Butanone (MEK)	ND	0.017	1	01/13/2015 10:56
t-Butyl alcohol (TBA)	ND	0.042	1	01/13/2015 10:56
n-Butyl benzene	ND	0.0042	1	01/13/2015 10:56
sec-Butyl benzene	ND	0.0042	1	01/13/2015 10:56
tert-Butyl benzene	ND	0.0042	1	01/13/2015 10:56
Carbon Disulfide	ND	0.0042	1	01/13/2015 10:56
Carbon Tetrachloride	ND	0.0042	1	01/13/2015 10:56
Chlorobenzene	ND	0.0042	1	01/13/2015 10:56
Chloroethane	ND	0.0042	1	01/13/2015 10:56
Chloroform	ND	0.0042	1	01/13/2015 10:56
Chloromethane	ND	0.0042	1	01/13/2015 10:56
2-Chlorotoluene	ND	0.0042	1	01/13/2015 10:56
4-Chlorotoluene	ND	0.0042	1	01/13/2015 10:56
Dibromochloromethane	ND	0.0042	1	01/13/2015 10:56
1,2-Dibromo-3-chloropropane	ND	0.0034	1	01/13/2015 10:56
1,2-Dibromoethane (EDB)	ND	0.0034	1	01/13/2015 10:56
Dibromomethane	ND	0.0042	1	01/13/2015 10:56
1,2-Dichlorobenzene	ND	0.0042	1	01/13/2015 10:56
1,3-Dichlorobenzene	ND	0.0042	1	01/13/2015 10:56
1,4-Dichlorobenzene	ND	0.0042	1	01/13/2015 10:56
Dichlorodifluoromethane	ND	0.0042	1	01/13/2015 10:56
1,1-Dichloroethane	ND	0.0042	1	01/13/2015 10:56
1,2-Dichloroethane (1,2-DCA)	ND	0.0042	1	01/13/2015 10:56
1,1-Dichloroethene	ND	0.0042	1	01/13/2015 10:56
cis-1,2-Dichloroethene	ND	0.0042	1	01/13/2015 10:56
trans-1,2-Dichloroethene	ND	0.0042	1	01/13/2015 10:56
1,2-Dichloropropane	ND	0.0042	1	01/13/2015 10:56
1,3-Dichloropropane	ND	0.0042	1	01/13/2015 10:56
2,2-Dichloropropane	ND	0.0042	1	01/13/2015 10:56
1,1-Dichloropropene	ND	0.0042	1	01/13/2015 10:56

(Cont.)



# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-8-2'	1501274-006A	Soil	01/12/2015 08:55	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0042	1	01/13/2015 10:56
trans-1,3-Dichloropropene	ND	0.0042	1	01/13/2015 10:56
Diisopropyl ether (DIPE)	ND	0.0042	1	01/13/2015 10:56
Ethylbenzene	ND	0.0042	1	01/13/2015 10:56
Ethyl tert-butyl ether (ETBE)	ND	0.0042	1	01/13/2015 10:56
Freon 113	ND	0.042	1	01/13/2015 10:56
Hexachlorobutadiene	ND	0.0042	1	01/13/2015 10:56
Hexachloroethane	ND	0.0042	1	01/13/2015 10:56
2-Hexanone	ND	0.0042	1	01/13/2015 10:56
Isopropylbenzene	ND	0.0042	1	01/13/2015 10:56
4-Isopropyl toluene	ND	0.0042	1	01/13/2015 10:56
Methyl-t-butyl ether (MTBE)	ND	0.0042	1	01/13/2015 10:56
Methylene chloride	ND	0.0042	1	01/13/2015 10:56
4-Methyl-2-pentanone (MIBK)	ND	0.0042	1	01/13/2015 10:56
Naphthalene	ND	0.0042	1	01/13/2015 10:56
n-Propyl benzene	ND	0.0042	1	01/13/2015 10:56
Styrene	ND	0.0042	1	01/13/2015 10:56
1,1,1,2-Tetrachloroethane	ND	0.0042	1	01/13/2015 10:56
1,1,2,2-Tetrachloroethane	ND	0.0042	1	01/13/2015 10:56
Tetrachloroethene	ND	0.0042	1	01/13/2015 10:56
Toluene	ND	0.0042	1	01/13/2015 10:56
1,2,3-Trichlorobenzene	ND	0.0042	1	01/13/2015 10:56
1,2,4-Trichlorobenzene	ND	0.0042	1	01/13/2015 10:56
1,1,1-Trichloroethane	ND	0.0042	1	01/13/2015 10:56
1,1,2-Trichloroethane	ND	0.0042	1	01/13/2015 10:56
Trichloroethene	ND	0.0042	1	01/13/2015 10:56
Trichlorofluoromethane	ND	0.0042	1	01/13/2015 10:56
1,2,3-Trichloropropane	ND	0.0042	1	01/13/2015 10:56
1,2,4-Trimethylbenzene	ND	0.0042	1	01/13/2015 10:56
1,3,5-Trimethylbenzene	ND	0.0042	1	01/13/2015 10:56
Vinyl Chloride	ND	0.0042	1	01/13/2015 10:56
Xylenes, Total	ND	0.0042	1	01/13/2015 10:56

(Cont.)



# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-8-2'	1501274-006A	Soil	01/12/2015 08:55	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits	Analytical Comments: a9	
Dibromofluoromethane	91	70-130		01/13/2015 10:56
Toluene-d8	89	70-130		01/13/2015 10:56
4-BFB	101	70-130		01/13/2015 10:56

Analyst(s): KF



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-9-2'	1501274-011A	Soil	01/12/2015 09:40	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.088	1	01/13/2015 11:38
tert-Amyl methyl ether (TAME)	ND	0.0044	1	01/13/2015 11:38
Benzene	ND	0.0044	1	01/13/2015 11:38
Bromobenzene	ND	0.0044	1	01/13/2015 11:38
Bromochloromethane	ND	0.0044	1	01/13/2015 11:38
Bromodichloromethane	ND	0.0044	1	01/13/2015 11:38
Bromoform	ND	0.0044	1	01/13/2015 11:38
Bromomethane	ND	0.0044	1	01/13/2015 11:38
2-Butanone (MEK)	ND	0.018	1	01/13/2015 11:38
t-Butyl alcohol (TBA)	ND	0.044	1	01/13/2015 11:38
n-Butyl benzene	ND	0.0044	1	01/13/2015 11:38
sec-Butyl benzene	ND	0.0044	1	01/13/2015 11:38
tert-Butyl benzene	ND	0.0044	1	01/13/2015 11:38
Carbon Disulfide	ND	0.0044	1	01/13/2015 11:38
Carbon Tetrachloride	ND	0.0044	1	01/13/2015 11:38
Chlorobenzene	ND	0.0044	1	01/13/2015 11:38
Chloroethane	ND	0.0044	1	01/13/2015 11:38
Chloroform	ND	0.0044	1	01/13/2015 11:38
Chloromethane	ND	0.0044	1	01/13/2015 11:38
2-Chlorotoluene	ND	0.0044	1	01/13/2015 11:38
4-Chlorotoluene	ND	0.0044	1	01/13/2015 11:38
Dibromochloromethane	ND	0.0044	1	01/13/2015 11:38
1,2-Dibromo-3-chloropropane	ND	0.0035	1	01/13/2015 11:38
1,2-Dibromoethane (EDB)	ND	0.0035	1	01/13/2015 11:38
Dibromomethane	ND	0.0044	1	01/13/2015 11:38
1,2-Dichlorobenzene	ND	0.0044	1	01/13/2015 11:38
1,3-Dichlorobenzene	ND	0.0044	1	01/13/2015 11:38
1,4-Dichlorobenzene	ND	0.0044	1	01/13/2015 11:38
Dichlorodifluoromethane	ND	0.0044	1	01/13/2015 11:38
1,1-Dichloroethane	ND	0.0044	1	01/13/2015 11:38
1,2-Dichloroethane (1,2-DCA)	ND	0.0044	1	01/13/2015 11:38
1,1-Dichloroethene	ND	0.0044	1	01/13/2015 11:38
cis-1,2-Dichloroethene	ND	0.0044	1	01/13/2015 11:38
trans-1,2-Dichloroethene	ND	0.0044	1	01/13/2015 11:38
1,2-Dichloropropane	ND	0.0044	1	01/13/2015 11:38
1,3-Dichloropropane	ND	0.0044	1	01/13/2015 11:38
2,2-Dichloropropane	ND	0.0044	1	01/13/2015 11:38
1,1-Dichloropropene	ND	0.0044	1	01/13/2015 11:38

(Cont.)



# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-9-2'	1501274-011A	Soil	01/12/2015 09:40	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0044	1	01/13/2015 11:38
trans-1,3-Dichloropropene	ND	0.0044	1	01/13/2015 11:38
Diisopropyl ether (DIPE)	ND	0.0044	1	01/13/2015 11:38
Ethylbenzene	ND	0.0044	1	01/13/2015 11:38
Ethyl tert-butyl ether (ETBE)	ND	0.0044	1	01/13/2015 11:38
Freon 113	ND	0.044	1	01/13/2015 11:38
Hexachlorobutadiene	ND	0.0044	1	01/13/2015 11:38
Hexachloroethane	ND	0.0044	1	01/13/2015 11:38
2-Hexanone	ND	0.0044	1	01/13/2015 11:38
Isopropylbenzene	ND	0.0044	1	01/13/2015 11:38
4-Isopropyl toluene	ND	0.0044	1	01/13/2015 11:38
Methyl-t-butyl ether (MTBE)	ND	0.0044	1	01/13/2015 11:38
Methylene chloride	ND	0.0044	1	01/13/2015 11:38
4-Methyl-2-pentanone (MIBK)	ND	0.0044	1	01/13/2015 11:38
Naphthalene	ND	0.0044	1	01/13/2015 11:38
n-Propyl benzene	ND	0.0044	1	01/13/2015 11:38
Styrene	ND	0.0044	1	01/13/2015 11:38
1,1,1,2-Tetrachloroethane	ND	0.0044	1	01/13/2015 11:38
1,1,2,2-Tetrachloroethane	ND	0.0044	1	01/13/2015 11:38
Tetrachloroethene	ND	0.0044	1	01/13/2015 11:38
Toluene	ND	0.0044	1	01/13/2015 11:38
1,2,3-Trichlorobenzene	ND	0.0044	1	01/13/2015 11:38
1,2,4-Trichlorobenzene	ND	0.0044	1	01/13/2015 11:38
1,1,1-Trichloroethane	ND	0.0044	1	01/13/2015 11:38
1,1,2-Trichloroethane	ND	0.0044	1	01/13/2015 11:38
Trichloroethene	ND	0.0044	1	01/13/2015 11:38
Trichlorofluoromethane	ND	0.0044	1	01/13/2015 11:38
1,2,3-Trichloropropane	ND	0.0044	1	01/13/2015 11:38
1,2,4-Trimethylbenzene	ND	0.0044	1	01/13/2015 11:38
1,3,5-Trimethylbenzene	ND	0.0044	1	01/13/2015 11:38
Vinyl Chloride	ND	0.0044	1	01/13/2015 11:38
Xylenes, Total	ND	0.0044	1	01/13/2015 11:38

(Cont.)



# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-9-2'	1501274-011A	Soil	01/12/2015 09:40	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: a9	
Dibromofluoromethane	89	70-130		01/13/2015 11:38
Toluene-d8	89	70-130		01/13/2015 11:38
4-BFB	99	70-130		01/13/2015 11:38

Analyst(s): KF



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-10-2'	1501274-015A	Soil	01/12/2015 10:20	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.083	1	01/13/2015 12:20
tert-Amyl methyl ether (TAME)	ND	0.0042	1	01/13/2015 12:20
Benzene	ND	0.0042	1	01/13/2015 12:20
Bromobenzene	ND	0.0042	1	01/13/2015 12:20
Bromochloromethane	ND	0.0042	1	01/13/2015 12:20
Bromodichloromethane	ND	0.0042	1	01/13/2015 12:20
Bromoform	ND	0.0042	1	01/13/2015 12:20
Bromomethane	ND	0.0042	1	01/13/2015 12:20
2-Butanone (MEK)	ND	0.017	1	01/13/2015 12:20
t-Butyl alcohol (TBA)	ND	0.042	1	01/13/2015 12:20
n-Butyl benzene	ND	0.0042	1	01/13/2015 12:20
sec-Butyl benzene	ND	0.0042	1	01/13/2015 12:20
tert-Butyl benzene	ND	0.0042	1	01/13/2015 12:20
Carbon Disulfide	ND	0.0042	1	01/13/2015 12:20
Carbon Tetrachloride	ND	0.0042	1	01/13/2015 12:20
Chlorobenzene	ND	0.0042	1	01/13/2015 12:20
Chloroethane	ND	0.0042	1	01/13/2015 12:20
Chloroform	ND	0.0042	1	01/13/2015 12:20
Chloromethane	ND	0.0042	1	01/13/2015 12:20
2-Chlorotoluene	ND	0.0042	1	01/13/2015 12:20
4-Chlorotoluene	ND	0.0042	1	01/13/2015 12:20
Dibromochloromethane	ND	0.0042	1	01/13/2015 12:20
1,2-Dibromo-3-chloropropane	ND	0.0033	1	01/13/2015 12:20
1,2-Dibromoethane (EDB)	ND	0.0033	1	01/13/2015 12:20
Dibromomethane	ND	0.0042	1	01/13/2015 12:20
1,2-Dichlorobenzene	ND	0.0042	1	01/13/2015 12:20
1,3-Dichlorobenzene	ND	0.0042	1	01/13/2015 12:20
1,4-Dichlorobenzene	ND	0.0042	1	01/13/2015 12:20
Dichlorodifluoromethane	ND	0.0042	1	01/13/2015 12:20
1,1-Dichloroethane	ND	0.0042	1	01/13/2015 12:20
1,2-Dichloroethane (1,2-DCA)	ND	0.0042	1	01/13/2015 12:20
1,1-Dichloroethene	ND	0.0042	1	01/13/2015 12:20
cis-1,2-Dichloroethene	ND	0.0042	1	01/13/2015 12:20
trans-1,2-Dichloroethene	ND	0.0042	1	01/13/2015 12:20
1,2-Dichloropropane	ND	0.0042	1	01/13/2015 12:20
1,3-Dichloropropane	ND	0.0042	1	01/13/2015 12:20
2,2-Dichloropropane	ND	0.0042	1	01/13/2015 12:20
1,1-Dichloropropene	ND	0.0042	1	01/13/2015 12:20

(Cont.)



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-10-2'	1501274-015A	Soil	01/12/2015 10:20	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0042	1	01/13/2015 12:20
trans-1,3-Dichloropropene	ND	0.0042	1	01/13/2015 12:20
Diisopropyl ether (DIPE)	ND	0.0042	1	01/13/2015 12:20
Ethylbenzene	ND	0.0042	1	01/13/2015 12:20
Ethyl tert-butyl ether (ETBE)	ND	0.0042	1	01/13/2015 12:20
Freon 113	ND	0.042	1	01/13/2015 12:20
Hexachlorobutadiene	ND	0.0042	1	01/13/2015 12:20
Hexachloroethane	ND	0.0042	1	01/13/2015 12:20
2-Hexanone	ND	0.0042	1	01/13/2015 12:20
Isopropylbenzene	ND	0.0042	1	01/13/2015 12:20
4-Isopropyl toluene	ND	0.0042	1	01/13/2015 12:20
Methyl-t-butyl ether (MTBE)	ND	0.0042	1	01/13/2015 12:20
Methylene chloride	ND	0.0042	1	01/13/2015 12:20
4-Methyl-2-pentanone (MIBK)	ND	0.0042	1	01/13/2015 12:20
Naphthalene	ND	0.0042	1	01/13/2015 12:20
n-Propyl benzene	ND	0.0042	1	01/13/2015 12:20
Styrene	ND	0.0042	1	01/13/2015 12:20
1,1,1,2-Tetrachloroethane	ND	0.0042	1	01/13/2015 12:20
1,1,2,2-Tetrachloroethane	ND	0.0042	1	01/13/2015 12:20
Tetrachloroethene	ND	0.0042	1	01/13/2015 12:20
Toluene	ND	0.0042	1	01/13/2015 12:20
1,2,3-Trichlorobenzene	ND	0.0042	1	01/13/2015 12:20
1,2,4-Trichlorobenzene	ND	0.0042	1	01/13/2015 12:20
1,1,1-Trichloroethane	ND	0.0042	1	01/13/2015 12:20
1,1,2-Trichloroethane	ND	0.0042	1	01/13/2015 12:20
Trichloroethene	ND	0.0042	1	01/13/2015 12:20
Trichlorofluoromethane	ND	0.0042	1	01/13/2015 12:20
1,2,3-Trichloropropane	ND	0.0042	1	01/13/2015 12:20
1,2,4-Trimethylbenzene	ND	0.0042	1	01/13/2015 12:20
1,3,5-Trimethylbenzene	ND	0.0042	1	01/13/2015 12:20
Vinyl Chloride	ND	0.0042	1	01/13/2015 12:20
Xylenes, Total	ND	0.0042	1	01/13/2015 12:20

(Cont.)





## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-10-2'	1501274-015A	Soil	01/12/2015 10:20	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	Analytical Comments: a9	
Dibromofluoromethane	86	70-130		01/13/2015 12:20
Toluene-d8	93	70-130		01/13/2015 12:20
4-BFB	97	70-130		01/13/2015 12:20

**Analyst(s):** KF



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-5-5'	1501274-020A	Soil	01/12/2015 11:30	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.079	1	01/13/2015 13:02
tert-Amyl methyl ether (TAME)	ND	0.0040	1	01/13/2015 13:02
Benzene	ND	0.0040	1	01/13/2015 13:02
Bromobenzene	ND	0.0040	1	01/13/2015 13:02
Bromochloromethane	ND	0.0040	1	01/13/2015 13:02
Bromodichloromethane	ND	0.0040	1	01/13/2015 13:02
Bromoform	ND	0.0040	1	01/13/2015 13:02
Bromomethane	ND	0.0040	1	01/13/2015 13:02
2-Butanone (MEK)	ND	0.016	1	01/13/2015 13:02
t-Butyl alcohol (TBA)	ND	0.040	1	01/13/2015 13:02
n-Butyl benzene	ND	0.0040	1	01/13/2015 13:02
sec-Butyl benzene	ND	0.0040	1	01/13/2015 13:02
tert-Butyl benzene	ND	0.0040	1	01/13/2015 13:02
Carbon Disulfide	ND	0.0040	1	01/13/2015 13:02
Carbon Tetrachloride	ND	0.0040	1	01/13/2015 13:02
Chlorobenzene	ND	0.0040	1	01/13/2015 13:02
Chloroethane	ND	0.0040	1	01/13/2015 13:02
Chloroform	ND	0.0040	1	01/13/2015 13:02
Chloromethane	ND	0.0040	1	01/13/2015 13:02
2-Chlorotoluene	ND	0.0040	1	01/13/2015 13:02
4-Chlorotoluene	ND	0.0040	1	01/13/2015 13:02
Dibromochloromethane	ND	0.0040	1	01/13/2015 13:02
1,2-Dibromo-3-chloropropane	ND	0.0032	1	01/13/2015 13:02
1,2-Dibromoethane (EDB)	ND	0.0032	1	01/13/2015 13:02
Dibromomethane	ND	0.0040	1	01/13/2015 13:02
1,2-Dichlorobenzene	ND	0.0040	1	01/13/2015 13:02
1,3-Dichlorobenzene	ND	0.0040	1	01/13/2015 13:02
1,4-Dichlorobenzene	ND	0.0040	1	01/13/2015 13:02
Dichlorodifluoromethane	ND	0.0040	1	01/13/2015 13:02
1,1-Dichloroethane	ND	0.0040	1	01/13/2015 13:02
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/13/2015 13:02
1,1-Dichloroethene	ND	0.0040	1	01/13/2015 13:02
cis-1,2-Dichloroethene	ND	0.0040	1	01/13/2015 13:02
trans-1,2-Dichloroethene	ND	0.0040	1	01/13/2015 13:02
1,2-Dichloropropane	ND	0.0040	1	01/13/2015 13:02
1,3-Dichloropropane	ND	0.0040	1	01/13/2015 13:02
2,2-Dichloropropane	ND	0.0040	1	01/13/2015 13:02
1,1-Dichloropropene	ND	0.0040	1	01/13/2015 13:02

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# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-5-5'	1501274-020A	Soil	01/12/2015 11:30	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0040	1	01/13/2015 13:02
trans-1,3-Dichloropropene	ND	0.0040	1	01/13/2015 13:02
Diisopropyl ether (DIPE)	ND	0.0040	1	01/13/2015 13:02
Ethylbenzene	ND	0.0040	1	01/13/2015 13:02
Ethyl tert-butyl ether (ETBE)	ND	0.0040	1	01/13/2015 13:02
Freon 113	ND	0.040	1	01/13/2015 13:02
Hexachlorobutadiene	ND	0.0040	1	01/13/2015 13:02
Hexachloroethane	ND	0.0040	1	01/13/2015 13:02
2-Hexanone	ND	0.0040	1	01/13/2015 13:02
Isopropylbenzene	ND	0.0040	1	01/13/2015 13:02
4-Isopropyl toluene	ND	0.0040	1	01/13/2015 13:02
Methyl-t-butyl ether (MTBE)	ND	0.0040	1	01/13/2015 13:02
Methylene chloride	ND	0.0040	1	01/13/2015 13:02
4-Methyl-2-pentanone (MIBK)	ND	0.0040	1	01/13/2015 13:02
Naphthalene	ND	0.0040	1	01/13/2015 13:02
n-Propyl benzene	ND	0.0040	1	01/13/2015 13:02
Styrene	ND	0.0040	1	01/13/2015 13:02
1,1,1,2-Tetrachloroethane	ND	0.0040	1	01/13/2015 13:02
1,1,2,2-Tetrachloroethane	ND	0.0040	1	01/13/2015 13:02
Tetrachloroethene	ND	0.0040	1	01/13/2015 13:02
Toluene	ND	0.0040	1	01/13/2015 13:02
1,2,3-Trichlorobenzene	ND	0.0040	1	01/13/2015 13:02
1,2,4-Trichlorobenzene	ND	0.0040	1	01/13/2015 13:02
1,1,1-Trichloroethane	ND	0.0040	1	01/13/2015 13:02
1,1,2-Trichloroethane	ND	0.0040	1	01/13/2015 13:02
Trichloroethene	ND	0.0040	1	01/13/2015 13:02
Trichlorofluoromethane	ND	0.0040	1	01/13/2015 13:02
1,2,3-Trichloropropane	ND	0.0040	1	01/13/2015 13:02
1,2,4-Trimethylbenzene	ND	0.0040	1	01/13/2015 13:02
1,3,5-Trimethylbenzene	ND	0.0040	1	01/13/2015 13:02
Vinyl Chloride	ND	0.0040	1	01/13/2015 13:02
Xylenes, Total	ND	0.0040	1	01/13/2015 13:02

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# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-5-5'	1501274-020A	Soil	01/12/2015 11:30	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits	Analytical Comments: a9	
Dibromofluoromethane	89	70-130		01/13/2015 13:02
Toluene-d8	95	70-130		01/13/2015 13:02
4-BFB	100	70-130		01/13/2015 13:02
Analyst(s): KF				



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-6-2'	1501274-024A	Soil	01/12/2015 12:05	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.086	1	01/13/2015 13:45
tert-Amyl methyl ether (TAME)	ND	0.0043	1	01/13/2015 13:45
Benzene	ND	0.0043	1	01/13/2015 13:45
Bromobenzene	ND	0.0043	1	01/13/2015 13:45
Bromochloromethane	ND	0.0043	1	01/13/2015 13:45
Bromodichloromethane	ND	0.0043	1	01/13/2015 13:45
Bromoform	ND	0.0043	1	01/13/2015 13:45
Bromomethane	ND	0.0043	1	01/13/2015 13:45
2-Butanone (MEK)	ND	0.017	1	01/13/2015 13:45
t-Butyl alcohol (TBA)	ND	0.043	1	01/13/2015 13:45
n-Butyl benzene	ND	0.0043	1	01/13/2015 13:45
sec-Butyl benzene	ND	0.0043	1	01/13/2015 13:45
tert-Butyl benzene	ND	0.0043	1	01/13/2015 13:45
Carbon Disulfide	ND	0.0043	1	01/13/2015 13:45
Carbon Tetrachloride	ND	0.0043	1	01/13/2015 13:45
Chlorobenzene	ND	0.0043	1	01/13/2015 13:45
Chloroethane	ND	0.0043	1	01/13/2015 13:45
Chloroform	ND	0.0043	1	01/13/2015 13:45
Chloromethane	ND	0.0043	1	01/13/2015 13:45
2-Chlorotoluene	ND	0.0043	1	01/13/2015 13:45
4-Chlorotoluene	ND	0.0043	1	01/13/2015 13:45
Dibromochloromethane	ND	0.0043	1	01/13/2015 13:45
1,2-Dibromo-3-chloropropane	ND	0.0034	1	01/13/2015 13:45
1,2-Dibromoethane (EDB)	ND	0.0034	1	01/13/2015 13:45
Dibromomethane	ND	0.0043	1	01/13/2015 13:45
1,2-Dichlorobenzene	ND	0.0043	1	01/13/2015 13:45
1,3-Dichlorobenzene	ND	0.0043	1	01/13/2015 13:45
1,4-Dichlorobenzene	ND	0.0043	1	01/13/2015 13:45
Dichlorodifluoromethane	ND	0.0043	1	01/13/2015 13:45
1,1-Dichloroethane	ND	0.0043	1	01/13/2015 13:45
1,2-Dichloroethane (1,2-DCA)	ND	0.0043	1	01/13/2015 13:45
1,1-Dichloroethene	ND	0.0043	1	01/13/2015 13:45
cis-1,2-Dichloroethene	ND	0.0043	1	01/13/2015 13:45
trans-1,2-Dichloroethene	ND	0.0043	1	01/13/2015 13:45
1,2-Dichloropropane	ND	0.0043	1	01/13/2015 13:45
1,3-Dichloropropane	ND	0.0043	1	01/13/2015 13:45
2,2-Dichloropropane	ND	0.0043	1	01/13/2015 13:45
1,1-Dichloropropene	ND	0.0043	1	01/13/2015 13:45

(Cont.)



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-6-2'	1501274-024A	Soil	01/12/2015 12:05	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0043	1	01/13/2015 13:45
trans-1,3-Dichloropropene	ND	0.0043	1	01/13/2015 13:45
Diisopropyl ether (DIPE)	ND	0.0043	1	01/13/2015 13:45
Ethylbenzene	ND	0.0043	1	01/13/2015 13:45
Ethyl tert-butyl ether (ETBE)	ND	0.0043	1	01/13/2015 13:45
Freon 113	ND	0.043	1	01/13/2015 13:45
Hexachlorobutadiene	ND	0.0043	1	01/13/2015 13:45
Hexachloroethane	ND	0.0043	1	01/13/2015 13:45
2-Hexanone	ND	0.0043	1	01/13/2015 13:45
Isopropylbenzene	ND	0.0043	1	01/13/2015 13:45
4-Isopropyl toluene	ND	0.0043	1	01/13/2015 13:45
Methyl-t-butyl ether (MTBE)	ND	0.0043	1	01/13/2015 13:45
Methylene chloride	ND	0.0043	1	01/13/2015 13:45
4-Methyl-2-pentanone (MIBK)	ND	0.0043	1	01/13/2015 13:45
Naphthalene	ND	0.0043	1	01/13/2015 13:45
n-Propyl benzene	ND	0.0043	1	01/13/2015 13:45
Styrene	ND	0.0043	1	01/13/2015 13:45
1,1,1,2-Tetrachloroethane	ND	0.0043	1	01/13/2015 13:45
1,1,2,2-Tetrachloroethane	ND	0.0043	1	01/13/2015 13:45
Tetrachloroethene	ND	0.0043	1	01/13/2015 13:45
Toluene	ND	0.0043	1	01/13/2015 13:45
1,2,3-Trichlorobenzene	ND	0.0043	1	01/13/2015 13:45
1,2,4-Trichlorobenzene	ND	0.0043	1	01/13/2015 13:45
1,1,1-Trichloroethane	ND	0.0043	1	01/13/2015 13:45
1,1,2-Trichloroethane	ND	0.0043	1	01/13/2015 13:45
Trichloroethene	<b>0.022</b>	0.0043	1	01/13/2015 13:45
Trichlorofluoromethane	ND	0.0043	1	01/13/2015 13:45
1,2,3-Trichloropropane	ND	0.0043	1	01/13/2015 13:45
1,2,4-Trimethylbenzene	ND	0.0043	1	01/13/2015 13:45
1,3,5-Trimethylbenzene	ND	0.0043	1	01/13/2015 13:45
Vinyl Chloride	ND	0.0043	1	01/13/2015 13:45
Xylenes, Total	ND	0.0043	1	01/13/2015 13:45

(Cont.)



# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-6-2'	1501274-024A	Soil	01/12/2015 12:05	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits	Analytical Comments: a9	
Dibromofluoromethane	87	70-130		01/13/2015 13:45
Toluene-d8	90	70-130		01/13/2015 13:45
4-BFB	97	70-130		01/13/2015 13:45

Analyst(s): KF



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-4-5'	1501274-029A	Soil	01/12/2015 13:40	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.080	1	01/13/2015 14:30
tert-Amyl methyl ether (TAME)	ND	0.0040	1	01/13/2015 14:30
Benzene	ND	0.0040	1	01/13/2015 14:30
Bromobenzene	ND	0.0040	1	01/13/2015 14:30
Bromochloromethane	ND	0.0040	1	01/13/2015 14:30
Bromodichloromethane	ND	0.0040	1	01/13/2015 14:30
Bromoform	ND	0.0040	1	01/13/2015 14:30
Bromomethane	ND	0.0040	1	01/13/2015 14:30
2-Butanone (MEK)	ND	0.016	1	01/13/2015 14:30
t-Butyl alcohol (TBA)	ND	0.040	1	01/13/2015 14:30
n-Butyl benzene	ND	0.0040	1	01/13/2015 14:30
sec-Butyl benzene	ND	0.0040	1	01/13/2015 14:30
tert-Butyl benzene	ND	0.0040	1	01/13/2015 14:30
Carbon Disulfide	ND	0.0040	1	01/13/2015 14:30
Carbon Tetrachloride	ND	0.0040	1	01/13/2015 14:30
Chlorobenzene	ND	0.0040	1	01/13/2015 14:30
Chloroethane	ND	0.0040	1	01/13/2015 14:30
Chloroform	ND	0.0040	1	01/13/2015 14:30
Chloromethane	ND	0.0040	1	01/13/2015 14:30
2-Chlorotoluene	ND	0.0040	1	01/13/2015 14:30
4-Chlorotoluene	ND	0.0040	1	01/13/2015 14:30
Dibromochloromethane	ND	0.0040	1	01/13/2015 14:30
1,2-Dibromo-3-chloropropane	ND	0.0032	1	01/13/2015 14:30
1,2-Dibromoethane (EDB)	ND	0.0032	1	01/13/2015 14:30
Dibromomethane	ND	0.0040	1	01/13/2015 14:30
1,2-Dichlorobenzene	ND	0.0040	1	01/13/2015 14:30
1,3-Dichlorobenzene	ND	0.0040	1	01/13/2015 14:30
1,4-Dichlorobenzene	ND	0.0040	1	01/13/2015 14:30
Dichlorodifluoromethane	ND	0.0040	1	01/13/2015 14:30
1,1-Dichloroethane	ND	0.0040	1	01/13/2015 14:30
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/13/2015 14:30
1,1-Dichloroethene	ND	0.0040	1	01/13/2015 14:30
cis-1,2-Dichloroethene	ND	0.0040	1	01/13/2015 14:30
trans-1,2-Dichloroethene	ND	0.0040	1	01/13/2015 14:30
1,2-Dichloropropane	ND	0.0040	1	01/13/2015 14:30
1,3-Dichloropropane	ND	0.0040	1	01/13/2015 14:30
2,2-Dichloropropane	ND	0.0040	1	01/13/2015 14:30
1,1-Dichloropropene	ND	0.0040	1	01/13/2015 14:30

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# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-4-5'	1501274-029A	Soil	01/12/2015 13:40	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0040	1	01/13/2015 14:30
trans-1,3-Dichloropropene	ND	0.0040	1	01/13/2015 14:30
Diisopropyl ether (DIPE)	ND	0.0040	1	01/13/2015 14:30
Ethylbenzene	ND	0.0040	1	01/13/2015 14:30
Ethyl tert-butyl ether (ETBE)	ND	0.0040	1	01/13/2015 14:30
Freon 113	ND	0.040	1	01/13/2015 14:30
Hexachlorobutadiene	ND	0.0040	1	01/13/2015 14:30
Hexachloroethane	ND	0.0040	1	01/13/2015 14:30
2-Hexanone	ND	0.0040	1	01/13/2015 14:30
Isopropylbenzene	ND	0.0040	1	01/13/2015 14:30
4-Isopropyl toluene	ND	0.0040	1	01/13/2015 14:30
Methyl-t-butyl ether (MTBE)	ND	0.0040	1	01/13/2015 14:30
Methylene chloride	ND	0.0040	1	01/13/2015 14:30
4-Methyl-2-pentanone (MIBK)	ND	0.0040	1	01/13/2015 14:30
Naphthalene	ND	0.0040	1	01/13/2015 14:30
n-Propyl benzene	ND	0.0040	1	01/13/2015 14:30
Styrene	ND	0.0040	1	01/13/2015 14:30
1,1,1,2-Tetrachloroethane	ND	0.0040	1	01/13/2015 14:30
1,1,2,2-Tetrachloroethane	ND	0.0040	1	01/13/2015 14:30
Tetrachloroethene	ND	0.0040	1	01/13/2015 14:30
Toluene	ND	0.0040	1	01/13/2015 14:30
1,2,3-Trichlorobenzene	ND	0.0040	1	01/13/2015 14:30
1,2,4-Trichlorobenzene	ND	0.0040	1	01/13/2015 14:30
1,1,1-Trichloroethane	ND	0.0040	1	01/13/2015 14:30
1,1,2-Trichloroethane	ND	0.0040	1	01/13/2015 14:30
Trichloroethene	ND	0.0040	1	01/13/2015 14:30
Trichlorofluoromethane	ND	0.0040	1	01/13/2015 14:30
1,2,3-Trichloropropane	ND	0.0040	1	01/13/2015 14:30
1,2,4-Trimethylbenzene	ND	0.0040	1	01/13/2015 14:30
1,3,5-Trimethylbenzene	ND	0.0040	1	01/13/2015 14:30
Vinyl Chloride	ND	0.0040	1	01/13/2015 14:30
Xylenes, Total	ND	0.0040	1	01/13/2015 14:30

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## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-4-5'	1501274-029A	Soil	01/12/2015 13:40	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	92	70-130		01/13/2015 14:30
Toluene-d8	95	70-130		01/13/2015 14:30
4-BFB	101	70-130		01/13/2015 14:30

Analyst(s): KBO



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-7-2'	1501274-001A	Soil	01/12/2015 08:05	GC10	99892

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	01/13/2015 10:08
tert-Amyl methyl ether (TAME)	ND	0.0050	1	01/13/2015 10:08
Benzene	ND	0.0050	1	01/13/2015 10:08
Bromobenzene	ND	0.0050	1	01/13/2015 10:08
Bromochloromethane	ND	0.0050	1	01/13/2015 10:08
Bromodichloromethane	ND	0.0050	1	01/13/2015 10:08
Bromoform	ND	0.0050	1	01/13/2015 10:08
Bromomethane	ND	0.0050	1	01/13/2015 10:08
2-Butanone (MEK)	ND	0.020	1	01/13/2015 10:08
t-Butyl alcohol (TBA)	ND	0.050	1	01/13/2015 10:08
n-Butyl benzene	ND	0.0050	1	01/13/2015 10:08
sec-Butyl benzene	ND	0.0050	1	01/13/2015 10:08
tert-Butyl benzene	ND	0.0050	1	01/13/2015 10:08
Carbon Disulfide	ND	0.0050	1	01/13/2015 10:08
Carbon Tetrachloride	ND	0.0050	1	01/13/2015 10:08
Chlorobenzene	ND	0.0050	1	01/13/2015 10:08
Chloroethane	ND	0.0050	1	01/13/2015 10:08
Chloroform	ND	0.0050	1	01/13/2015 10:08
Chloromethane	ND	0.0050	1	01/13/2015 10:08
2-Chlorotoluene	ND	0.0050	1	01/13/2015 10:08
4-Chlorotoluene	ND	0.0050	1	01/13/2015 10:08
Dibromochloromethane	ND	0.0050	1	01/13/2015 10:08
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/13/2015 10:08
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/13/2015 10:08
Dibromomethane	ND	0.0050	1	01/13/2015 10:08
1,2-Dichlorobenzene	ND	0.0050	1	01/13/2015 10:08
1,3-Dichlorobenzene	ND	0.0050	1	01/13/2015 10:08
1,4-Dichlorobenzene	ND	0.0050	1	01/13/2015 10:08
Dichlorodifluoromethane	ND	0.0050	1	01/13/2015 10:08
1,1-Dichloroethane	ND	0.0050	1	01/13/2015 10:08
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/13/2015 10:08
1,1-Dichloroethene	ND	0.0050	1	01/13/2015 10:08
cis-1,2-Dichloroethene	ND	0.0050	1	01/13/2015 10:08
trans-1,2-Dichloroethene	ND	0.0050	1	01/13/2015 10:08
1,2-Dichloropropane	ND	0.0050	1	01/13/2015 10:08
1,3-Dichloropropane	ND	0.0050	1	01/13/2015 10:08
2,2-Dichloropropane	ND	0.0050	1	01/13/2015 10:08
1,1-Dichloropropene	ND	0.0050	1	01/13/2015 10:08

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# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-7-2'	1501274-001A	Soil	01/12/2015 08:05	GC10	99892

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0050	1	01/13/2015 10:08
trans-1,3-Dichloropropene	ND	0.0050	1	01/13/2015 10:08
Diisopropyl ether (DIPE)	ND	0.0050	1	01/13/2015 10:08
Ethylbenzene	ND	0.0050	1	01/13/2015 10:08
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	01/13/2015 10:08
Freon 113	0.011	0.0050	1	01/13/2015 10:08
Hexachlorobutadiene	ND	0.0050	1	01/13/2015 10:08
Hexachloroethane	ND	0.0050	1	01/13/2015 10:08
2-Hexanone	ND	0.0050	1	01/13/2015 10:08
Isopropylbenzene	ND	0.0050	1	01/13/2015 10:08
4-Isopropyl toluene	ND	0.0050	1	01/13/2015 10:08
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	01/13/2015 10:08
Methylene chloride	ND	0.0050	1	01/13/2015 10:08
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	01/13/2015 10:08
Naphthalene	ND	0.0050	1	01/13/2015 10:08
n-Propyl benzene	ND	0.0050	1	01/13/2015 10:08
Styrene	ND	0.0050	1	01/13/2015 10:08
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/13/2015 10:08
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/13/2015 10:08
Tetrachloroethene	ND	0.0050	1	01/13/2015 10:08
Toluene	ND	0.0050	1	01/13/2015 10:08
1,2,3-Trichlorobenzene	ND	0.0050	1	01/13/2015 10:08
1,2,4-Trichlorobenzene	ND	0.0050	1	01/13/2015 10:08
1,1,1-Trichloroethane	ND	0.0050	1	01/13/2015 10:08
1,1,2-Trichloroethane	ND	0.0050	1	01/13/2015 10:08
Trichloroethene	ND	0.0050	1	01/13/2015 10:08
Trichlorofluoromethane	ND	0.0050	1	01/13/2015 10:08
1,2,3-Trichloropropane	ND	0.0050	1	01/13/2015 10:08
1,2,4-Trimethylbenzene	ND	0.0050	1	01/13/2015 10:08
1,3,5-Trimethylbenzene	ND	0.0050	1	01/13/2015 10:08
Vinyl Chloride	ND	0.0050	1	01/13/2015 10:08
Xylenes, Total	ND	0.0050	1	01/13/2015 10:08

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# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 16:26  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501274  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-7-2'	1501274-001A	Soil	01/12/2015 08:05	GC10	99892

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	87	70-130		01/13/2015 10:08
Toluene-d8	92	70-130		01/13/2015 10:08
4-BFB	99	70-130		01/13/2015 10:08

Analyst(s): KF



# Quality Control Report

**Client:** AEI Consultants  
**Date Prepared:** 1/12/15  
**Date Analyzed:** 1/13/15  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #338315; Allied Engineering

**WorkOrder:** 1501274  
**BatchID:** 99934  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB-99934

## QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.20	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	-	0.010	-	-	-	-
Benzene	ND	-	0.010	-	-	-	-
Bromobenzene	ND	-	0.010	-	-	-	-
Bromochloromethane	ND	-	0.010	-	-	-	-
Bromodichloromethane	ND	-	0.010	-	-	-	-
Bromoform	ND	-	0.010	-	-	-	-
Bromomethane	ND	-	0.010	-	-	-	-
2-Butanone (MEK)	ND	-	0.040	-	-	-	-
t-Butyl alcohol (TBA)	ND	-	0.10	-	-	-	-
n-Butyl benzene	ND	-	0.010	-	-	-	-
sec-Butyl benzene	ND	-	0.010	-	-	-	-
tert-Butyl benzene	ND	-	0.010	-	-	-	-
Carbon Disulfide	ND	-	0.010	-	-	-	-
Carbon Tetrachloride	ND	-	0.010	-	-	-	-
Chlorobenzene	ND	-	0.010	-	-	-	-
Chloroethane	ND	-	0.010	-	-	-	-
Chloroform	ND	-	0.010	-	-	-	-
Chloromethane	ND	-	0.010	-	-	-	-
2-Chlorotoluene	ND	-	0.010	-	-	-	-
4-Chlorotoluene	ND	-	0.010	-	-	-	-
Dibromochloromethane	ND	-	0.010	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0080	-	-	-	-
1,2-Dibromoethane (EDB)	ND	-	0.0080	-	-	-	-
Dibromomethane	ND	-	0.010	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.010	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.010	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.010	-	-	-	-
Dichlorodifluoromethane	ND	-	0.010	-	-	-	-
1,1-Dichloroethane	ND	-	0.010	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	-	0.010	-	-	-	-
1,1-Dichloroethene	ND	-	0.010	-	-	-	-
cis-1,2-Dichloroethene	ND	-	0.010	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.010	-	-	-	-
1,2-Dichloropropane	ND	-	0.010	-	-	-	-
1,3-Dichloropropane	ND	-	0.010	-	-	-	-
2,2-Dichloropropane	ND	-	0.010	-	-	-	-
1,1-Dichloropropene	ND	-	0.010	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.010	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.010	-	-	-	-

(Cont.)



# Quality Control Report

**Client:** AEI Consultants  
**Date Prepared:** 1/12/15  
**Date Analyzed:** 1/13/15  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #338315; Allied Engineering

**WorkOrder:** 1501274  
**BatchID:** 99934  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB-99934

## QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	-	0.010	-	-	-	-
Ethylbenzene	ND	-	0.010	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	-	0.010	-	-	-	-
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.010	-	-	-	-
Hexachloroethane	ND	-	0.010	-	-	-	-
2-Hexanone	ND	-	0.010	-	-	-	-
Isopropylbenzene	ND	-	0.010	-	-	-	-
4-Isopropyl toluene	ND	-	0.010	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	-	0.010	-	-	-	-
Methylene chloride	ND	-	0.010	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.010	-	-	-	-
Naphthalene	ND	-	0.010	-	-	-	-
n-Propyl benzene	ND	-	0.010	-	-	-	-
Styrene	ND	-	0.010	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.010	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.010	-	-	-	-
Tetrachloroethene	ND	-	0.010	-	-	-	-
Toluene	ND	-	0.010	-	-	-	-
1,2,3-Trichlorobenzene	ND	-	0.010	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.010	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.010	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.010	-	-	-	-
Trichloroethene	ND	-	0.010	-	-	-	-
Trichlorofluoromethane	ND	-	0.010	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.010	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.010	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.010	-	-	-	-
Vinyl Chloride	ND	-	0.010	-	-	-	-
Xylenes, Total	ND	-	0.010	-	-	-	-

### Surrogate Recovery

Dibromofluoromethane	0.210	-	0.25	84	-	-
Toluene-d8	0.231	-	0.25	92	-	-
4-BFB	0.0242	-	0.025	97	-	-



## Quality Control Report

**Client:** AEI Consultants  
**Date Prepared:** 1/12/15  
**Date Analyzed:** 1/13/15 - 1/14/15  
**Instrument:** GC10, GC16  
**Matrix:** Soil  
**Project:** #338315; Allied Engineering

**WorkOrder:** 1501274  
**BatchID:** 99934  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-99934

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.20	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0806	0.010	0.10	-	81	70-130
Benzene	ND	0.0966	0.010	0.10	-	97	70-130
Bromobenzene	ND	-	0.010	-	-	-	-
Bromochloromethane	ND	-	0.010	-	-	-	-
Bromodichloromethane	ND	-	0.010	-	-	-	-
Bromoform	ND	-	0.010	-	-	-	-
Bromomethane	ND	-	0.010	-	-	-	-
2-Butanone (MEK)	ND	-	0.040	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.334	0.10	0.40	-	83	70-130
n-Butyl benzene	ND	-	0.010	-	-	-	-
sec-Butyl benzene	ND	-	0.010	-	-	-	-
tert-Butyl benzene	ND	-	0.010	-	-	-	-
Carbon Disulfide	ND	-	0.010	-	-	-	-
Carbon Tetrachloride	ND	-	0.010	-	-	-	-
Chlorobenzene	ND	0.0916	0.010	0.10	-	92	70-130
Chloroethane	ND	-	0.010	-	-	-	-
Chloroform	ND	-	0.010	-	-	-	-
Chloromethane	ND	-	0.010	-	-	-	-
2-Chlorotoluene	ND	-	0.010	-	-	-	-
4-Chlorotoluene	ND	-	0.010	-	-	-	-
Dibromochloromethane	ND	-	0.010	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0080	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0835	0.0080	0.10	-	83	70-130
Dibromomethane	ND	-	0.010	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.010	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.010	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.010	-	-	-	-
Dichlorodifluoromethane	ND	-	0.010	-	-	-	-
1,1-Dichloroethane	ND	-	0.010	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0936	0.010	0.10	-	94	70-130
1,1-Dichloroethene	ND	0.0855	0.010	0.10	-	86	70-130
cis-1,2-Dichloroethene	ND	-	0.010	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.010	-	-	-	-
1,2-Dichloropropane	ND	-	0.010	-	-	-	-
1,3-Dichloropropane	ND	-	0.010	-	-	-	-
2,2-Dichloropropane	ND	-	0.010	-	-	-	-
1,1-Dichloropropene	ND	-	0.010	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.010	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.010	-	-	-	-

(Cont.)





## Quality Control Report

**Client:** AEI Consultants  
**Date Prepared:** 1/12/15  
**Date Analyzed:** 1/13/15 - 1/14/15  
**Instrument:** GC10, GC16  
**Matrix:** Soil  
**Project:** #338315; Allied Engineering

**WorkOrder:** 1501274  
**BatchID:** 99934  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-99934

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0882	0.010	0.10	-	88	70-130
Ethylbenzene	ND	-	0.010	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0852	0.010	0.10	-	85	70-130
Freon 113	ND	-	0.10	-	-	-	-
Hexachlorobutadiene	ND	-	0.010	-	-	-	-
Hexachloroethane	ND	-	0.010	-	-	-	-
2-Hexanone	ND	-	0.010	-	-	-	-
Isopropylbenzene	ND	-	0.010	-	-	-	-
4-Isopropyl toluene	ND	-	0.010	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0869	0.010	0.10	-	87	70-130
Methylene chloride	ND	-	0.010	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.010	-	-	-	-
Naphthalene	ND	-	0.010	-	-	-	-
n-Propyl benzene	ND	-	0.010	-	-	-	-
Styrene	ND	-	0.010	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.010	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.010	-	-	-	-
Tetrachloroethene	ND	-	0.010	-	-	-	-
Toluene	ND	0.0963	0.010	0.10	-	96	70-130
1,2,3-Trichlorobenzene	ND	-	0.010	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.010	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.010	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.010	-	-	-	-
Trichloroethene	ND	0.0855	0.010	0.10	-	85	70-130
Trichlorofluoromethane	ND	-	0.010	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.010	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.010	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.010	-	-	-	-
Vinyl Chloride	ND	-	0.010	-	-	-	-
Xylenes, Total	ND	-	0.010	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.210	0.235		0.25	84	94	70-130
Toluene-d8	0.231	0.261		0.25	92	104	70-130
4-BFB	0.0242	0.0256		0.025	97	103	70-130



## Quality Control Report

**Client:** AEI Consultants  
**Date Prepared:** 1/12/15  
**Date Analyzed:** 1/13/15  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #338315; Allied Engineering

**WorkOrder:** 1501274  
**BatchID:** 99892  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-99892  
 1501251-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0538	0.0050	0.050	-	108, F2	67-103
Benzene	ND	0.0541	0.0050	0.050	-	108	76-128
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.249	0.050	0.20	-	125, F2	63-116
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0527	0.0050	0.050	-	105	81-115
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0507	0.0040	0.050	-	101	73-108
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0538	0.0040	0.050	-	108	65-121
1,1-Dichloroethene	ND	0.0508	0.0050	0.050	-	102	78-120
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-

(Cont.)



## Quality Control Report

**Client:** AEI Consultants  
**Date Prepared:** 1/12/15  
**Date Analyzed:** 1/13/15  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #338315; Allied Engineering

**WorkOrder:** 1501274  
**BatchID:** 99892  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-99892  
 1501251-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	0.0530	0.0050	0.050	-	106	51-119
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0526	0.0050	0.050	-	105	61-112
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0525	0.0050	0.050	-	105	68-110
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0551	0.0050	0.050	-	110	82-124
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0540	0.0050	0.050	-	108	78-126
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

#### Surrogate Recovery

Dibromofluoromethane	0.112	0.115		0.12	89	92	88-118
Toluene-d8	0.115	0.114		0.12	92	91	91-117
4-BFB	0.0128	0.0122		0.012	102	97	74-132

(Cont.)



## Quality Control Report

**Client:** AEI Consultants  
**Date Prepared:** 1/12/15  
**Date Analyzed:** 1/13/15  
**Instrument:** GC10  
**Matrix:** Soil  
**Project:** #338315; Allied Engineering

**WorkOrder:** 1501274  
**BatchID:** 99892  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-99892  
 1501251-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0484	0.0490	0.050	ND	97	98	70-130	1.30	20
Benzene	0.0485	0.0504	0.050	ND	97	101	70-130	3.82	20
t-Butyl alcohol (TBA)	0.217	0.217	0.20	ND	109	109	70-130	0	20
Chlorobenzene	0.0470	0.0498	0.050	ND	94	100	70-130	5.65	20
1,2-Dibromoethane (EDB)	0.0460	0.0488	0.050	ND	92	98	70-130	5.84	20
1,2-Dichloroethane (1,2-DCA)	0.0484	0.0499	0.050	ND	97	100	70-130	3.09	20
1,1-Dichloroethene	0.0436	0.0452	0.050	ND	87	90	70-130	3.57	20
Diisopropyl ether (DIPE)	0.0477	0.0505	0.050	ND	95	101	70-130	5.65	20
Ethyl tert-butyl ether (ETBE)	0.0484	0.0504	0.050	ND	97	101	70-130	4.08	20
Methyl-t-butyl ether (MTBE)	0.0480	0.0483	0.050	ND	96	97	70-130	0.544	20
Toluene	0.0485	0.0504	0.050	ND	97	101	70-130	3.92	20
Trichloroethene	0.0488	0.0504	0.050	ND	98	101	70-130	3.11	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.113	0.114	0.12		90	91	70-130	0.622	20
Toluene-d8	0.112	0.115	0.12		90	92	70-130	2.20	20
4-BFB	0.0117	0.0121	0.012		94	97	70-130	2.80	20

1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1501274

ClientCode: AEL

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  EQUIS   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

**Report to:**  
 John Mark Pendleton  
 AEI Consultants  
 2500 Camino Diablo, Ste.#200  
 Walnut Creek, CA 94597  
 (925) 283-6000    FAX: (925) 944-2895

Email: jpendleton@aeiconsultants.com  
 cc/3rd Party:  
 PO: #74293  
 ProjectNo: #338315; Allied Engineering

**Bill to:**  
 Sara Guerin  
 AEI Consultants  
 2500 Camino Diablo, Ste. #200  
 Walnut Creek, CA 94597  
 AccountsPayable@AEIConsultants.com

**Requested TAT: 1 day**  
  
**Date Received: 01/12/2015**  
**Date Printed: 01/12/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1501274-001	SB-7-2'	Soil	1/12/2015 8:05	<input type="checkbox"/>		A											
1501274-006	SB-8-2'	Soil	1/12/2015 8:55	<input type="checkbox"/>	A												
1501274-011	SB-9-2'	Soil	1/12/2015 9:40	<input type="checkbox"/>	A												
1501274-015	SB-10-2'	Soil	1/12/2015 10:20	<input type="checkbox"/>	A												
1501274-020	SB-5-5'	Soil	1/12/2015 11:30	<input type="checkbox"/>	A												
1501274-024	SB-6-2'	Soil	1/12/2015 12:05	<input type="checkbox"/>	A												
1501274-029	SB-4-5'	Soil	1/12/2015 13:40	<input type="checkbox"/>	A												

**Test Legend:**

1	8260B_E	2	8260B_S	3		4		5	
6		7		8		9		10	
11		12							

**Prepared by: Agustina Venegas**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



## WORK ORDER SUMMARY

**Client Name:** AEI CONSULTANTS  
**Project:** #338315; Allied Engineering  
**Comments:**

**QC Level:** LEVEL 2  
**Client Contact:** John Mark Pendleton  
**Contact's Email:** jpendleton@aeiconsultants.com

**Work Order:** 1501274  
**Date Received:** 1/12/2015

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1501274-001A	SB-7-2'	Soil	SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	1/12/2015 8:05	1 day		<input type="checkbox"/>	
1501274-002A	SB-7-5'	Soil		1	Acetate Liner	<input type="checkbox"/>	1/12/2015 8:10			<input checked="" type="checkbox"/>	
1501274-003A	SB-7-10'	Soil		1	Acetate Liner	<input type="checkbox"/>	1/12/2015 8:15			<input checked="" type="checkbox"/>	
1501274-004A	SB-7-12.5'	Soil		3	Encore Sampler	<input type="checkbox"/>	1/12/2015 8:25			<input checked="" type="checkbox"/>	
1501274-005A	SB-7-15'	Soil		1	Acetate Liner	<input type="checkbox"/>	1/12/2015 8:20			<input checked="" type="checkbox"/>	
1501274-006A	SB-8-2'	Soil	SW8260B (VOCs) (Encore)	3	Encore Sampler	<input type="checkbox"/>	1/12/2015 8:55	1 day		<input type="checkbox"/>	
1501274-007A	SB-8-5'	Soil		3	Encore Sampler	<input type="checkbox"/>	1/12/2015 9:05			<input checked="" type="checkbox"/>	
1501274-008A	SB-8-10'	Soil		3	Encore Sampler	<input type="checkbox"/>	1/12/2015 9:10			<input checked="" type="checkbox"/>	
1501274-009A	SB-8-12'	Soil		3	Encore Sampler	<input type="checkbox"/>	1/12/2015 9:20			<input checked="" type="checkbox"/>	
1501274-010A	SB-8-15'	Soil		3	Encore Sampler	<input type="checkbox"/>	1/12/2015 9:15			<input checked="" type="checkbox"/>	
1501274-011A	SB-9-2'	Soil	SW8260B (VOCs) (Encore)	2	Encore Sampler	<input type="checkbox"/>	1/12/2015 9:40	1 day		<input type="checkbox"/>	
1501274-012A	SB-9-5'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 9:45			<input checked="" type="checkbox"/>	
1501274-013A	SB-9-10'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 9:50			<input checked="" type="checkbox"/>	
1501274-014A	SB-9-15'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 9:55			<input checked="" type="checkbox"/>	
1501274-015A	SB-10-2'	Soil	SW8260B (VOCs) (Encore)	2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:20	1 day		<input type="checkbox"/>	
1501274-016A	SB-10-5'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:25			<input checked="" type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).  
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



## WORK ORDER SUMMARY

**Client Name:** AEI CONSULTANTS  
**Project:** #338315; Allied Engineering  
**Comments:**

**QC Level:** LEVEL 2  
**Client Contact:** John Mark Pendleton  
**Contact's Email:** jpendleton@aeiconsultants.com

**Work Order:** 1501274  
**Date Received:** 1/12/2015

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1501274-017A	SB-10-10'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:30			<input checked="" type="checkbox"/>	
1501274-018A	SB-10-15'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:35			<input checked="" type="checkbox"/>	
1501274-019A	SB-5-2'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 11:25			<input checked="" type="checkbox"/>	
1501274-020A	SB-5-5'	Soil	SW8260B (VOCs) (Encore)	2	Encore Sampler	<input type="checkbox"/>	1/12/2015 11:30	1 day		<input type="checkbox"/>	
1501274-021A	SB-5-10'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 11:35			<input checked="" type="checkbox"/>	
1501274-022A	SB-5-12'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 11:50			<input checked="" type="checkbox"/>	
1501274-023A	SB-5-15'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 11:40			<input checked="" type="checkbox"/>	
1501274-024A	SB-6-2'	Soil	SW8260B (VOCs) (Encore)	2	Encore Sampler	<input type="checkbox"/>	1/12/2015 12:05	1 day		<input type="checkbox"/>	
1501274-025A	SB-6-5'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 12:10			<input checked="" type="checkbox"/>	
1501274-026A	SB-6-10'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 12:15			<input checked="" type="checkbox"/>	
1501274-027A	SB-6-15'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 12:20			<input checked="" type="checkbox"/>	
1501274-028A	SB-4-2'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 13:30			<input checked="" type="checkbox"/>	
1501274-029A	SB-4-5'	Soil	SW8260B (VOCs) (Encore)	2	Encore Sampler	<input type="checkbox"/>	1/12/2015 13:40	1 day		<input type="checkbox"/>	
1501274-030A	SB-4-10'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 13:50			<input checked="" type="checkbox"/>	
1501274-031A	SB-4-15'	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 14:00			<input checked="" type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).  
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.





# McC Campbell Analytical, Inc.

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701  
www.mcccampbell.com / main@mcccampbell.com  
Telephone: (877) 252-9262 / Fax: (925) 252-9269

1501274

# RUSH CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH  1 DAY  2 DAY  3 DAY  5 DAY  
GeoTracker EDF  PDF  EDD  Write On (DW)  EQulS  10 DAY   
Effluent Sample Requiring "J" flag  UST Clean Up Fund Project ; Claim # \_\_\_\_\_

Report To: John Mark Pendleton Bill To: same  
Company: AEI Consultants  
2500 Camino Diablo  
Walnut Creek, CA 94597 E-Mail: jpendleton@aeiconsultants.com  
Tele: (925) 262-7582 Fax: (925) 746-6099  
Project #: 338315 Project Name: Allied Engineering  
Project Location: 2421 Blanding Ave, Alameda, CA Purchase Order# 74293  
Sampler Signature: \_\_\_\_\_

### Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX										METHOD PRESERVED	VOCs by EPA method 8260	
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO <sub>3</sub>			Other I/G
* SB-7-2'		11/2/15	605	3						X						X	Hold
* SB-7-5'			810	3												X	
* SB-7-10'			815	3												X	
* SB-7-12.5'			825	3												X	
* SB-7-15'			820	3												X	
SB-8-2'			855	3												X	
SB-8-5'			905	3												X	
SB-8-10'			910	3												X	
SB-8-12'			920	3												X	
SB-8-15'			915	3												X	

\*\*MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By: <u>Diego Cortez</u>	Date: <u>11/2/15</u>	Time: <u>1530</u>	Received By: <u>John Pendleton</u>
Relinquished By: <u>John Pendleton</u>	Date: <u>1.12.15</u>	Time: <u>1530</u>	Received By: <u>Agustina V.</u>
Relinquished By:	Date:	Time:	Received By:

ICE/T° 4.6

GOOD CONDITION \_\_\_\_\_  
 HEAD SPACE ABSENT \_\_\_\_\_  
 DECHLORINATED IN LAB \_\_\_\_\_  
 APPROPRIATE CONTAINERS \_\_\_\_\_  
 PRESERVED IN LAB \_\_\_\_\_

COMMENTS:  
 \*Acetate Liner Labeled SB-7-14.5.  
 \*NO ANCHORS WERE RECEIVED.

VOAS O&G METALS OTHER HAZARDOUS:  
 PRESERVATION \_\_\_\_\_ pH<2 \_\_\_\_\_





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## CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH  1 DAY  2 DAY  3 DAY  5 DAY  
 GeoTracker EDF  PDF  EDD  Write On (DW)  EQuIS  10 DAY   
 Effluent Sample Requiring "J" flag  UST Clean Up Fund Project ; Claim # \_\_\_\_\_

Report To: John Mark Pendleton Bill To: same  
 Company: AEI Consultants  
 2500 Camino Diablo  
 Walnut Creek, CA 94597 E-Mail: jpendleton@aeiconsultants.com  
 Tele: (925) 262-7582 Fax: (925) 746-6099  
 Project #: 338315 Project Name: Allied Engineering  
 Project Location: 2421 Blanding Ave, Alameda, CA Purchase Order# 74293  
 Sampler Signature: \_\_\_\_\_

### Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX										METHOD PRESERVED	VOCs by EPA method 8260		
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO <sub>3</sub>	Other ILC			
SB-9-2'		11/2/15	940	2													X	Hold
SB-9-5'			945	2													X	
SB-9-10'			950	2													X	
SB-9-15'			955	2													X	
SB-10-2'			1026	2													X	
SB-10-5'			1025	2													X	
SB-10-10'			1036	2													X	
SB-10-15'			1035	2													X	

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Relinquished By: Diego Gonzalez	Date: 11/2/15	Time: 1500	Received By: John Pendleton	COMMENTS: ICE/IT _____ GOOD CONDITION _____ HEAD SPACE ABSENT _____ DECHLORINATED IN LAB _____ APPROPRIATE CONTAINERS _____ PRESERVED IN LAB _____ VOAS O&G METALS OTHER HAZARDOUS: PRESERVATION _____ pH<2 _____
Relinquished By: John Pendleton	Date: 1-12-15	Time: 1500	Received By: Augustina V.	
Relinquished By:	Date:	Time:	Received By:	



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## CHAIN OF CUSTODY RECORD

**TURN AROUND TIME:** RUSH  1 DAY  2 DAY  3 DAY  5 DAY   
 GeoTracker EDF  PDF  EDD  Write On (DW)  EQulS  10 DAY   
 Effluent Sample Requiring "J" flag  UST Clean Up Fund Project ; Claim # \_\_\_\_\_

**Report To:** John Mark Pendleton **Bill To:** same  
**Company:** AEI Consultants  
 2500 Camino Diablo  
 Walnut Creek, CA 94597 **E-Mail:** jpendleton@aeiconsultants.com  
**Tele:** (925) 262-7582 **Fax:** (925) 746-6099  
**Project #:** 338315 **Project Name:** Allied Engineering  
**Project Location:** 2421 Blanding Ave, Alameda, CA **Purchase Order#** 74293  
**Sampler Signature:** \_\_\_\_\_

### Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX										METHOD PRESERVED	VOCs by EPA method 8260	HSLD	
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO <sub>3</sub>	Other			ICG
SB-5-2'		11/15	1125	2						X							X	X
SB-5-5'			1136	2													X	X
SB-5-10'			1135	2													X	X
SB-5-12'			1156	2													X	X
SB-5-15'			1140	2													X	X
SB-6-2'			1205	2													X	X
SB-6-5'			1210	2													X	X
SB-6-10'			1215	2													X	X
SB-6-15'			1220	2													X	X
SB-26				2														

\*\*MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By: <i>Diego Gonzalez</i>	Date: 1/12/15	Time: 1500	Received By: <i>John Pendleton</i>
Relinquished By: <i>John Pendleton</i>	Date: 1-12-15	Time: 1530	Received By: <i>AGUSTINA V.</i>
Relinquished By:	Date:	Time:	Received By:

ICE/° \_\_\_\_\_ COMMENTS:  
 GOOD CONDITION \_\_\_\_\_  
 HEAD SPACE ABSENT \_\_\_\_\_  
 DECHLORINATED IN LAB \_\_\_\_\_  
 APPROPRIATE CONTAINERS \_\_\_\_\_  
 PRESERVED IN LAB \_\_\_\_\_  
 VOAS O&G METALS OTHER HAZARDOUS:  
 PRESERVATION \_\_\_\_\_ pH<2 \_\_\_\_\_







### Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **1/12/2015 4:26:06 PM**  
 Project Name: **#338315; Allied Engineering** LogIn Reviewed by: **Agustina Venegas**  
 WorkOrder No: **1501274** Matrix: Soil Carrier: Client Drop-In

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No   
 Sample/Temp Blank temperature Temp: 4.6°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  NA   
 Sample labels checked for correct preservation? Yes  No   
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes  No  NA   
 Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

**UCMR3 Samples:**

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes  No  NA   
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes  No  NA

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1501277

**Report Created for:** AEI Consultants  
2500 Camino Diablo, Ste.#200  
Walnut Creek, CA 94597

**Project Contact:** John Mark Pendleton  
**Project P.O.:** #74293  
**Project Name:** #338315; Allied Engineering

**Project Received:** 01/12/2015

Analytical Report reviewed & approved for release on 01/13/2015 by:

Question about  
your data?

[Click here to email  
McC Campbell](#)

Angela Rydelius,  
Laboratory Manager

***The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.***





## Glossary of Terms & Qualifier Definitions

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**WorkOrder:** 1501277

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

### Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD was out of acceptance criteria; LCS validated the prep batch.



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-1-S	1501277-001A	Soil/TOTAL	01/12/2015 08:50	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	200	0.50	1	01/13/2015 11:13
Arsenic	13	0.50	1	01/13/2015 11:13
Barium	250	5.0	1	01/13/2015 11:13
Beryllium	ND	0.50	1	01/13/2015 11:13
Cadmium	9.3	0.25	1	01/13/2015 11:13
Chromium	1200	5.0	10	01/13/2015 12:33
Cobalt	44	0.50	1	01/13/2015 11:13
Copper	290	0.50	1	01/13/2015 11:13
Lead	22,000	50	100	01/13/2015 12:45
Mercury	0.14	0.050	1	01/13/2015 11:13
Molybdenum	23	0.50	1	01/13/2015 11:13
Nickel	870	50	100	01/13/2015 12:45
Selenium	ND	0.50	1	01/13/2015 11:13
Silver	0.96	0.50	1	01/13/2015 11:13
Thallium	ND	0.50	1	01/13/2015 11:13
Vanadium	22	0.50	1	01/13/2015 11:13
Zinc	1900	5.0	1	01/13/2015 11:13

Surrogates	REC (%)	Limits	Date Analyzed
Tb 350.917	124	70-130	01/13/2015 11:13

**Analyst(s):** AG, DVH



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-1-1	1501277-002A	Soil/TOTAL	01/12/2015 09:10	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.76	0.50	1	01/13/2015 11:19
Arsenic	4.7	0.50	1	01/13/2015 11:19
Barium	120	5.0	1	01/13/2015 11:19
Beryllium	ND	0.50	1	01/13/2015 11:19
Cadmium	ND	0.25	1	01/13/2015 11:19
Chromium	35	0.50	1	01/13/2015 11:19
Cobalt	5.9	0.50	1	01/13/2015 11:19
Copper	17	0.50	1	01/13/2015 11:19
Lead	120	0.50	1	01/13/2015 11:19
Mercury	0.21	0.050	1	01/13/2015 11:19
Molybdenum	ND	0.50	1	01/13/2015 11:19
Nickel	22	0.50	1	01/13/2015 11:19
Selenium	ND	0.50	1	01/13/2015 11:19
Silver	ND	0.50	1	01/13/2015 11:19
Thallium	ND	0.50	1	01/13/2015 11:19
Vanadium	25	0.50	1	01/13/2015 11:19
Zinc	44	5.0	1	01/13/2015 11:19
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	105	70-130		01/13/2015 11:19

Analyst(s): AG





## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-2-S	1501277-004A	Soil/TOTAL	01/12/2015 09:40	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	9.4	0.50	1	01/13/2015 11:25
Arsenic	22	0.50	1	01/13/2015 11:25
Barium	240	5.0	1	01/13/2015 11:25
Beryllium	ND	0.50	1	01/13/2015 11:25
Cadmium	7.7	0.25	1	01/13/2015 11:25
Chromium	1300	5.0	10	01/13/2015 12:39
Cobalt	39	0.50	1	01/13/2015 11:25
Copper	330	0.50	1	01/13/2015 11:25
Lead	33,000	50	100	01/13/2015 12:51
Mercury	0.10	0.050	1	01/13/2015 11:25
Molybdenum	23	0.50	1	01/13/2015 11:25
Nickel	350	0.50	1	01/13/2015 11:25
Selenium	ND	0.50	1	01/13/2015 11:25
Silver	ND	0.50	1	01/13/2015 11:25
Thallium	ND	0.50	1	01/13/2015 11:25
Vanadium	23	0.50	1	01/13/2015 11:25
Zinc	2900	5.0	1	01/13/2015 11:25
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	110	70-130		01/13/2015 11:25

**Analyst(s):** AG, DVH



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-2-1	1501277-005A	Soil/TOTAL	01/12/2015 09:45	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	2.0	0.50	1	01/13/2015 11:37
Arsenic	4.4	0.50	1	01/13/2015 11:37
Barium	150	5.0	1	01/13/2015 11:37
Beryllium	ND	0.50	1	01/13/2015 11:37
Cadmium	0.63	0.25	1	01/13/2015 11:37
Chromium	110	0.50	1	01/13/2015 11:37
Cobalt	7.9	0.50	1	01/13/2015 11:37
Copper	45	0.50	1	01/13/2015 11:37
Lead	3700	5.0	10	01/13/2015 12:58
Mercury	0.21	0.050	1	01/13/2015 11:37
Molybdenum	0.84	0.50	1	01/13/2015 11:37
Nickel	37	0.50	1	01/13/2015 11:37
Selenium	ND	0.50	1	01/13/2015 11:37
Silver	ND	0.50	1	01/13/2015 11:37
Thallium	ND	0.50	1	01/13/2015 11:37
Vanadium	35	0.50	1	01/13/2015 11:37
Zinc	250	5.0	1	01/13/2015 11:37
Surrogates	REC (%)	Limits		
Tb 350.917	103	70-130		01/13/2015 11:37

**Analyst(s):** AG, DVH



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-3-S	1501277-007A	Soil/TOTAL	01/12/2015 12:30	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.92	0.50	1	01/13/2015 11:43
Arsenic	3.5	0.50	1	01/13/2015 11:43
Barium	120	5.0	1	01/13/2015 11:43
Beryllium	ND	0.50	1	01/13/2015 11:43
Cadmium	0.40	0.25	1	01/13/2015 11:43
Chromium	43	0.50	1	01/13/2015 11:43
Cobalt	6.8	0.50	1	01/13/2015 11:43
Copper	30	0.50	1	01/13/2015 11:43
Lead	93	0.50	1	01/13/2015 11:43
Mercury	0.064	0.050	1	01/13/2015 11:43
Molybdenum	1.0	0.50	1	01/13/2015 11:43
Nickel	56	0.50	1	01/13/2015 11:43
Selenium	ND	0.50	1	01/13/2015 11:43
Silver	ND	0.50	1	01/13/2015 11:43
Thallium	ND	0.50	1	01/13/2015 11:43
Vanadium	24	0.50	1	01/13/2015 11:43
Zinc	130	5.0	1	01/13/2015 11:43
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	99	70-130		01/13/2015 11:43

Analyst(s): AG



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-3-1	1501277-008A	Soil/TOTAL	01/12/2015 12:35	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	5.7	0.50	1	01/13/2015 12:08
Arsenic	6.9	0.50	1	01/13/2015 12:08
Barium	220	5.0	1	01/13/2015 12:08
Beryllium	ND	0.50	1	01/13/2015 12:08
Cadmium	2.7	0.25	1	01/13/2015 12:08
Chromium	150	0.50	1	01/13/2015 12:08
Cobalt	37	0.50	1	01/13/2015 12:08
Copper	120	0.50	1	01/13/2015 12:08
Lead	770	5.0	10	01/13/2015 16:16
Mercury	0.42	0.050	1	01/13/2015 12:08
Molybdenum	1.1	0.50	1	01/13/2015 12:08
Nickel	34	0.50	1	01/13/2015 12:08
Selenium	ND	0.50	1	01/13/2015 12:08
Silver	ND	0.50	1	01/13/2015 12:08
Thallium	ND	0.50	1	01/13/2015 12:08
Vanadium	36	0.50	1	01/13/2015 12:08
Zinc	590	5.0	1	01/13/2015 12:08
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	117	70-130		01/13/2015 12:08

**Analyst(s):** DVH



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-4-S	1501277-009A	Soil/TOTAL	01/12/2015 10:07	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	0.96	0.50	1	01/13/2015 12:14
Arsenic	5.8	0.50	1	01/13/2015 12:14
Barium	180	5.0	1	01/13/2015 12:14
Beryllium	ND	0.50	1	01/13/2015 12:14
Cadmium	0.53	0.25	1	01/13/2015 12:14
Chromium	39	0.50	1	01/13/2015 12:14
Cobalt	8.2	0.50	1	01/13/2015 12:14
Copper	38	0.50	1	01/13/2015 12:14
Lead	180	0.50	1	01/13/2015 12:14
Mercury	0.19	0.050	1	01/13/2015 12:14
Molybdenum	1.6	0.50	1	01/13/2015 12:14
Nickel	46	0.50	1	01/13/2015 12:14
Selenium	ND	0.50	1	01/13/2015 12:14
Silver	ND	0.50	1	01/13/2015 12:14
Thallium	ND	0.50	1	01/13/2015 12:14
Vanadium	32	0.50	1	01/13/2015 12:14
Zinc	260	5.0	1	01/13/2015 12:14
Surrogates	REC (%)	Limits		
Tb 350.917	103	70-130		01/13/2015 12:14

**Analyst(s):** DVH



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-4-1	1501277-010A	Soil/TOTAL	01/12/2015 10:15	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	26	0.50	1	01/13/2015 12:20
Arsenic	9.0	0.50	1	01/13/2015 12:20
Barium	440	5.0	1	01/13/2015 12:20
Beryllium	ND	0.50	1	01/13/2015 12:20
Cadmium	2.0	0.25	1	01/13/2015 12:20
Chromium	86	0.50	1	01/13/2015 12:20
Cobalt	9.4	0.50	1	01/13/2015 12:20
Copper	530	5.0	10	01/13/2015 16:22
Lead	2100	5.0	10	01/13/2015 16:22
Mercury	0.59	0.050	1	01/13/2015 12:20
Molybdenum	1.1	0.50	1	01/13/2015 12:20
Nickel	51	0.50	1	01/13/2015 12:20
Selenium	ND	0.50	1	01/13/2015 12:20
Silver	0.58	0.50	1	01/13/2015 12:20
Thallium	ND	0.50	1	01/13/2015 12:20
Vanadium	39	0.50	1	01/13/2015 12:20
Zinc	970	5.0	1	01/13/2015 12:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	103	70-130		01/13/2015 12:20

**Analyst(s):** DVH



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-5-S	1501277-012A	Soil/TOTAL	01/12/2015 10:40	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	1.4	0.50	1	01/13/2015 12:26
Arsenic	6.9	0.50	1	01/13/2015 12:26
Barium	100	5.0	1	01/13/2015 12:26
Beryllium	ND	0.50	1	01/13/2015 12:26
Cadmium	8.3	0.25	1	01/13/2015 12:26
Chromium	65	0.50	1	01/13/2015 12:26
Cobalt	9.2	0.50	1	01/13/2015 12:26
Copper	55	0.50	1	01/13/2015 12:26
Lead	93	0.50	1	01/13/2015 12:26
Mercury	0.099	0.050	1	01/13/2015 12:26
Molybdenum	1.0	0.50	1	01/13/2015 12:26
Nickel	60	0.50	1	01/13/2015 12:26
Selenium	ND	0.50	1	01/13/2015 12:26
Silver	ND	0.50	1	01/13/2015 12:26
Thallium	ND	0.50	1	01/13/2015 12:26
Vanadium	41	0.50	1	01/13/2015 12:26
Zinc	100	5.0	1	01/13/2015 12:26
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	113	70-130		01/13/2015 12:26

**Analyst(s):** DVH



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-5-1	1501277-013A	Soil/TOTAL	01/12/2015 10:45	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	2.2	0.50	1	01/13/2015 13:04
Arsenic	5.6	0.50	1	01/13/2015 13:04
Barium	77	5.0	1	01/13/2015 13:04
Beryllium	ND	0.50	1	01/13/2015 13:04
Cadmium	0.78	0.25	1	01/13/2015 13:04
Chromium	780	5.0	10	01/13/2015 14:48
Cobalt	22	0.50	1	01/13/2015 13:04
Copper	100	0.50	1	01/13/2015 13:04
Lead	520	5.0	10	01/13/2015 14:48
Mercury	ND	0.050	1	01/13/2015 13:04
Molybdenum	32	0.50	1	01/13/2015 13:04
Nickel	560	5.0	10	01/13/2015 14:48
Selenium	ND	0.50	1	01/13/2015 13:04
Silver	ND	0.50	1	01/13/2015 13:04
Thallium	ND	0.50	1	01/13/2015 13:04
Vanadium	18	0.50	1	01/13/2015 13:04
Zinc	75	5.0	1	01/13/2015 13:04
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	111	70-130		01/13/2015 13:04

**Analyst(s):** DVH





## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-6-S	1501277-015A	Soil/TOTAL	01/12/2015 11:10	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	1.8	0.50	1	01/13/2015 13:28
Arsenic	5.4	0.50	1	01/13/2015 13:28
Barium	280	5.0	1	01/13/2015 13:28
Beryllium	ND	0.50	1	01/13/2015 13:28
Cadmium	2.2	0.25	1	01/13/2015 13:28
Chromium	58	0.50	1	01/13/2015 13:28
Cobalt	8.7	0.50	1	01/13/2015 13:28
Copper	67	0.50	1	01/13/2015 13:28
Lead	420	5.0	10	01/13/2015 14:54
Mercury	0.36	0.050	1	01/13/2015 13:28
Molybdenum	1.3	0.50	1	01/13/2015 13:28
Nickel	48	0.50	1	01/13/2015 13:28
Selenium	ND	0.50	1	01/13/2015 13:28
Silver	1.2	0.50	1	01/13/2015 13:28
Thallium	ND	0.50	1	01/13/2015 13:28
Vanadium	36	0.50	1	01/13/2015 13:28
Zinc	580	5.0	1	01/13/2015 13:28
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	122	70-130		01/13/2015 13:28

**Analyst(s):** DVH



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-7-S	1501277-016A	Soil/TOTAL	01/12/2015 11:40	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	3.3	0.50	1	01/13/2015 13:34
Arsenic	3.2	0.50	1	01/13/2015 13:34
Barium	94	5.0	1	01/13/2015 13:34
Beryllium	ND	0.50	1	01/13/2015 13:34
Cadmium	2.2	0.25	1	01/13/2015 13:34
Chromium	1100	10	20	01/13/2015 16:29
Cobalt	30	0.50	1	01/13/2015 13:34
Copper	46	0.50	1	01/13/2015 13:34
Lead	5500	10	20	01/13/2015 16:29
Mercury	0.082	0.050	1	01/13/2015 13:34
Molybdenum	5.0	0.50	1	01/13/2015 13:34
Nickel	670	10	20	01/13/2015 16:29
Selenium	ND	0.50	1	01/13/2015 13:34
Silver	ND	0.50	1	01/13/2015 13:34
Thallium	ND	0.50	1	01/13/2015 13:34
Vanadium	16	0.50	1	01/13/2015 13:34
Zinc	390	5.0	1	01/13/2015 13:34
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	114	70-130		01/13/2015 13:34

**Analyst(s):** DVH



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 18:19  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501277  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### CAM / CCR 17 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SS-7-1	1501277-017A	Soil/TOTAL	01/12/2015 11:50	ICP-MS2	99933

Analytes	Result	RL	DF	Date Analyzed
Antimony	6.3	0.50	1	01/13/2015 13:40
Arsenic	9.6	0.50	1	01/13/2015 13:40
Barium	160	5.0	1	01/13/2015 13:40
Beryllium	ND	0.50	1	01/13/2015 13:40
Cadmium	22	0.25	1	01/13/2015 13:40
Chromium	820	5.0	10	01/13/2015 16:35
Cobalt	37	0.50	1	01/13/2015 13:40
Copper	130	0.50	1	01/13/2015 13:40
Lead	3700	5.0	10	01/13/2015 16:35
Mercury	0.065	0.050	1	01/13/2015 13:40
Molybdenum	25	0.50	1	01/13/2015 13:40
Nickel	410	0.50	1	01/13/2015 13:40
Selenium	ND	0.50	1	01/13/2015 13:40
Silver	1.2	0.50	1	01/13/2015 13:40
Thallium	ND	0.50	1	01/13/2015 13:40
Vanadium	36	0.50	1	01/13/2015 13:40
Zinc	660	5.0	1	01/13/2015 13:40
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Tb 350.917	110	70-130		01/13/2015 13:40

**Analyst(s):** DVH



## Quality Control Report

**Client:** AEI Consultants  
**Date Prepared:** 1/12/15  
**Date Analyzed:** 1/13/15  
**Instrument:** ICP-MS1, ICP-MS2  
**Matrix:** Soil  
**Project:** #338315; Allied Engineering

**WorkOrder:** 1501277  
**BatchID:** 99933  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-99933  
 1501276-026AMS/MSD

### QC Summary Report for SW6020

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	52.3	0.50	50	-	105	75-125
Arsenic	ND	54.6	0.50	50	-	109	75-125
Barium	ND	521	5.0	500	-	104	75-125
Beryllium	ND	52.6	0.50	50	-	105	75-125
Cadmium	ND	53.5	0.25	50	-	107	75-125
Chromium	ND	52.7	0.50	50	-	105	75-125
Cobalt	ND	55.9	0.50	50	-	112	75-125
Copper	ND	56.2	0.50	50	-	112	75-125
Lead	ND	55.5	0.50	50	-	111	75-125
Mercury	ND	1.15	0.050	1.25	-	92	75-125
Molybdenum	ND	52.0	0.50	50	-	104	75-125
Nickel	ND	56.6	0.50	50	-	113	75-125
Selenium	ND	56.7	0.50	50	-	113	75-125
Silver	ND	53.6	0.50	50	-	107	75-125
Thallium	ND	54.7	0.50	50	-	109	75-125
Vanadium	ND	50.2	0.50	50	-	100	75-125
Zinc	ND	557	5.0	500	-	111	75-125
<b>Surrogate Recovery</b>							
Tb 350.917	529	529		500	106	106	70-130



## Quality Control Report

**Client:** AEI Consultants  
**Date Prepared:** 1/12/15  
**Date Analyzed:** 1/13/15  
**Instrument:** ICP-MS1, ICP-MS2  
**Matrix:** Soil  
**Project:** #338315; Allied Engineering

**WorkOrder:** 1501277  
**BatchID:** 99933  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-99933  
 1501276-026AMS/MSD

### QC Summary Report for SW6020

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	62.8	61.5	50	ND	125	122	75-125	2.01	20
Arsenic	67.8	67.7	50	7.058	121	121	75-125	0	20
Barium	833	777	500	128.3	141,F1	130,F1	75-125	6.96	20
Beryllium	59.0	58.4	50	ND	117	116	75-125	0.937	20
Cadmium	63.9	61.8	50	ND	128,F1	123	75-125	3.40	20
Chromium	NR	NR	50	67.15	NR	NR	75-125	NR	20
Cobalt	78.2	74.7	50	18	121	114	75-125	4.59	20
Copper	104	97.2	50	38	132,F1	118	75-125	7.18	20
Lead	73.8	69.4	50	8.382	131,F1	122	75-125	6.16	20
Mercury	1.37	1.36	1.25	ND	107	106	75-125	0.585	20
Molybdenum	61.5	59.9	50	0.78	121	118	75-125	2.62	20
Nickel	NR	NR	50	84	NR	NR	75-125	NR	20
Selenium	62.5	63.3	50	ND	125	126,F1	75-125	1.30	20
Silver	62.7	60.8	50	ND	125	122	75-125	3.04	20
Thallium	63.0	60.7	50	ND	126,F1	121	75-125	3.69	20
Vanadium	NR	NR	50	67	NR	NR	75-125	NR	20
Zinc	701	684	500	76	125	122	75-125	2.44	20
<b>Surrogate Recovery</b>									
Tb 350.917	648	632	500		130	126	70-130	2.52	20



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1501277

ClientCode: AEL

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  EQUIS   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

**Report to:**  
 John Mark Pendleton  
 AEI Consultants  
 2500 Camino Diablo, Ste.#200  
 Walnut Creek, CA 94597  
 (925) 283-6000    FAX: (925) 944-2895

Email: jpendleton@aeiconsultants.com  
 cc/3rd Party:  
 PO: #74293  
 ProjectNo: #338315; Allied Engineering

**Bill to:**  
 Sara Guerin  
 AEI Consultants  
 2500 Camino Diablo, Ste. #200  
 Walnut Creek, CA 94597  
 AccountsPayable@AEIConsultants.com

**Requested TAT: 1 day**  
  
**Date Received: 01/12/2015**  
**Date Printed: 01/13/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1501277-001	SS-1-S	Soil	1/12/2015 8:50	<input type="checkbox"/>	A												
1501277-002	SS-1-1	Soil	1/12/2015 9:10	<input type="checkbox"/>	A												
1501277-004	SS-2-S	Soil	1/12/2015 9:40	<input type="checkbox"/>	A												
1501277-005	SS-2-1	Soil	1/12/2015 9:45	<input type="checkbox"/>	A												
1501277-007	SS-3-S	Soil	1/12/2015 12:30	<input type="checkbox"/>	A												
1501277-008	SS-3-1	Soil	1/12/2015 12:35	<input type="checkbox"/>	A												
1501277-009	SS-4-S	Soil	1/12/2015 10:07	<input type="checkbox"/>	A												
1501277-010	SS-4-1	Soil	1/12/2015 10:15	<input type="checkbox"/>	A												
1501277-012	SS-5-S	Soil	1/12/2015 10:40	<input type="checkbox"/>	A												
1501277-013	SS-5-1	Soil	1/12/2015 10:45	<input type="checkbox"/>	A												
1501277-015	SS-6-S	Soil	1/12/2015 11:10	<input type="checkbox"/>	A												
1501277-016	SS-7-S	Soil	1/12/2015 11:40	<input type="checkbox"/>	A												
1501277-017	SS-7-1	Soil	1/12/2015 11:50	<input type="checkbox"/>	A												

**Test Legend:**

1	CAM17MS_S	2		3		4		5	
6		7		8		9		10	
11		12							

**Prepared by: Agustina Venegas**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



## WORK ORDER SUMMARY

**Client Name:** AEI CONSULTANTS  
**Project:** #338315; Allied Engineering  
**Comments:**

**QC Level:** LEVEL 2  
**Client Contact:** John Mark Pendleton  
**Contact's Email:** jpendleton@aeiconsultants.com

**Work Order:** 1501277  
**Date Received:** 1/12/2015

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1501277-001A	SS-1-S	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 8:50	1 day		<input type="checkbox"/>	
1501277-002A	SS-1-1	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 9:10	1 day		<input type="checkbox"/>	
1501277-003A	SS-1-2	Soil		1	Stainless Tube	<input type="checkbox"/>	1/12/2015 9:20			<input checked="" type="checkbox"/>	
1501277-004A	SS-2-S	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 9:40	1 day		<input type="checkbox"/>	
1501277-005A	SS-2-1	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 9:45	1 day		<input type="checkbox"/>	
1501277-006A	SS-2-2	Soil		1	Stainless Tube	<input type="checkbox"/>	1/12/2015 9:50			<input checked="" type="checkbox"/>	
1501277-007A	SS-3-S	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 12:30	1 day		<input type="checkbox"/>	
1501277-008A	SS-3-1	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 12:35	1 day		<input type="checkbox"/>	
1501277-009A	SS-4-S	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 10:07	1 day		<input type="checkbox"/>	
1501277-010A	SS-4-1	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 10:15	1 day		<input type="checkbox"/>	
1501277-011A	SS-4-2	Soil		1	Stainless Tube	<input type="checkbox"/>	1/12/2015 10:20			<input checked="" type="checkbox"/>	
1501277-012A	SS-5-S	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 10:40	1 day		<input type="checkbox"/>	
1501277-013A	SS-5-1	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 10:45	1 day		<input type="checkbox"/>	
1501277-014A	SS-5-2	Soil		1	Stainless Tube	<input type="checkbox"/>	1/12/2015 10:50			<input checked="" type="checkbox"/>	
1501277-015A	SS-6-S	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 11:10	1 day		<input type="checkbox"/>	
1501277-016A	SS-7-S	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 11:40	1 day		<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



## WORK ORDER SUMMARY

**Client Name:** AEI CONSULTANTS  
**Project:** #338315; Allied Engineering  
**Comments:**

**QC Level:** LEVEL 2  
**Client Contact:** John Mark Pendleton  
**Contact's Email:** jpendleton@aeiconsultants.com

**Work Order:** 1501277  
**Date Received:** 1/12/2015

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1501277-017A	SS-7-1	Soil	SW6020 (CAM 17)	1	Stainless Tube	<input type="checkbox"/>	1/12/2015 11:50	1 day		<input type="checkbox"/>	
1501277-018A	SS-7-2	Soil		1	Stainless Tube	<input type="checkbox"/>	1/12/2015 12:00			<input checked="" type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).  
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.











### Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **1/12/2015 6:19:42 PM**  
 Project Name: **#338315; Allied Engineering** Login Reviewed by: **Agustina Venegas**  
 WorkOrder No: **1501277** Matrix: Soil Carrier: Client Drop-In

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No   
 Sample/Temp Blank temperature Temp: 9.4°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  NA   
 Sample labels checked for correct preservation? Yes  No   
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes  No  NA   
 Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

**UCMR3 Samples:**

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes  No  NA   
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes  No  NA

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



## Glossary of Terms & Qualifier Definitions

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**WorkOrder:** 1501281

### Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence



# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 19:07  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501281  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-1-3.5	1501281-001A	Soil	01/12/2015 10:00	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.16	1	01/13/2015 15:18
tert-Amyl methyl ether (TAME)	ND	0.0081	1	01/13/2015 15:18
Benzene	ND	0.0081	1	01/13/2015 15:18
Bromobenzene	ND	0.0081	1	01/13/2015 15:18
Bromochloromethane	ND	0.0081	1	01/13/2015 15:18
Bromodichloromethane	ND	0.0081	1	01/13/2015 15:18
Bromoform	ND	0.0081	1	01/13/2015 15:18
Bromomethane	ND	0.0081	1	01/13/2015 15:18
2-Butanone (MEK)	ND	0.033	1	01/13/2015 15:18
t-Butyl alcohol (TBA)	ND	0.081	1	01/13/2015 15:18
n-Butyl benzene	ND	0.0081	1	01/13/2015 15:18
sec-Butyl benzene	ND	0.0081	1	01/13/2015 15:18
tert-Butyl benzene	ND	0.0081	1	01/13/2015 15:18
Carbon Disulfide	ND	0.0081	1	01/13/2015 15:18
Carbon Tetrachloride	ND	0.0081	1	01/13/2015 15:18
Chlorobenzene	ND	0.0081	1	01/13/2015 15:18
Chloroethane	ND	0.0081	1	01/13/2015 15:18
Chloroform	ND	0.0081	1	01/13/2015 15:18
Chloromethane	ND	0.0081	1	01/13/2015 15:18
2-Chlorotoluene	ND	0.0081	1	01/13/2015 15:18
4-Chlorotoluene	ND	0.0081	1	01/13/2015 15:18
Dibromochloromethane	ND	0.0081	1	01/13/2015 15:18
1,2-Dibromo-3-chloropropane	ND	0.0065	1	01/13/2015 15:18
1,2-Dibromoethane (EDB)	ND	0.0065	1	01/13/2015 15:18
Dibromomethane	ND	0.0081	1	01/13/2015 15:18
1,2-Dichlorobenzene	ND	0.0081	1	01/13/2015 15:18
1,3-Dichlorobenzene	ND	0.0081	1	01/13/2015 15:18
1,4-Dichlorobenzene	ND	0.0081	1	01/13/2015 15:18
Dichlorodifluoromethane	ND	0.0081	1	01/13/2015 15:18
1,1-Dichloroethane	ND	0.0081	1	01/13/2015 15:18
1,2-Dichloroethane (1,2-DCA)	ND	0.0081	1	01/13/2015 15:18
1,1-Dichloroethene	ND	0.0081	1	01/13/2015 15:18
cis-1,2-Dichloroethene	ND	0.0081	1	01/13/2015 15:18
trans-1,2-Dichloroethene	ND	0.0081	1	01/13/2015 15:18
1,2-Dichloropropane	ND	0.0081	1	01/13/2015 15:18
1,3-Dichloropropane	ND	0.0081	1	01/13/2015 15:18
2,2-Dichloropropane	ND	0.0081	1	01/13/2015 15:18
1,1-Dichloropropene	ND	0.0081	1	01/13/2015 15:18

(Cont.)



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 19:07  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501281  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-1-3.5	1501281-001A	Soil	01/12/2015 10:00	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.0081	1	01/13/2015 15:18
trans-1,3-Dichloropropene	ND	0.0081	1	01/13/2015 15:18
Diisopropyl ether (DIPE)	ND	0.0081	1	01/13/2015 15:18
Ethylbenzene	ND	0.0081	1	01/13/2015 15:18
Ethyl tert-butyl ether (ETBE)	ND	0.0081	1	01/13/2015 15:18
Freon 113	ND	0.081	1	01/13/2015 15:18
Hexachlorobutadiene	ND	0.0081	1	01/13/2015 15:18
Hexachloroethane	ND	0.0081	1	01/13/2015 15:18
2-Hexanone	ND	0.0081	1	01/13/2015 15:18
Isopropylbenzene	ND	0.0081	1	01/13/2015 15:18
4-Isopropyl toluene	ND	0.0081	1	01/13/2015 15:18
Methyl-t-butyl ether (MTBE)	ND	0.0081	1	01/13/2015 15:18
Methylene chloride	ND	0.0081	1	01/13/2015 15:18
4-Methyl-2-pentanone (MIBK)	ND	0.0081	1	01/13/2015 15:18
Naphthalene	ND	0.0081	1	01/13/2015 15:18
n-Propyl benzene	ND	0.0081	1	01/13/2015 15:18
Styrene	ND	0.0081	1	01/13/2015 15:18
1,1,1,2-Tetrachloroethane	ND	0.0081	1	01/13/2015 15:18
1,1,2,2-Tetrachloroethane	ND	0.0081	1	01/13/2015 15:18
Tetrachloroethene	ND	0.0081	1	01/13/2015 15:18
Toluene	ND	0.0081	1	01/13/2015 15:18
1,2,3-Trichlorobenzene	ND	0.0081	1	01/13/2015 15:18
1,2,4-Trichlorobenzene	ND	0.0081	1	01/13/2015 15:18
1,1,1-Trichloroethane	ND	0.0081	1	01/13/2015 15:18
1,1,2-Trichloroethane	ND	0.0081	1	01/13/2015 15:18
Trichloroethene	ND	0.0081	1	01/13/2015 15:18
Trichlorofluoromethane	ND	0.0081	1	01/13/2015 15:18
1,2,3-Trichloropropane	ND	0.0081	1	01/13/2015 15:18
1,2,4-Trimethylbenzene	ND	0.0081	1	01/13/2015 15:18
1,3,5-Trimethylbenzene	ND	0.0081	1	01/13/2015 15:18
Vinyl Chloride	ND	0.0081	1	01/13/2015 15:18
Xylenes, Total	ND	0.0081	1	01/13/2015 15:18

(Cont.)



**McC Campbell Analytical, Inc.**

*"When Quality Counts"*

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
http://www.mccampbell.com / E-mail: main@mccampbell.com

## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 19:07  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501281  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-1-3.5	1501281-001A	Soil	01/12/2015 10:00	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	86	70-130		01/13/2015 15:18
Toluene-d8	91	70-130		01/13/2015 15:18
4-BFB	101	70-130		01/13/2015 15:18

Analyst(s): KBO

(Cont.)





## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 19:07  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501281  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-2-3.5	1501281-005A	Soil	01/12/2015 10:30	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.57	1	01/13/2015 16:00
tert-Amyl methyl ether (TAME)	ND	0.029	1	01/13/2015 16:00
Benzene	ND	0.029	1	01/13/2015 16:00
Bromobenzene	ND	0.029	1	01/13/2015 16:00
Bromochloromethane	ND	0.029	1	01/13/2015 16:00
Bromodichloromethane	ND	0.029	1	01/13/2015 16:00
Bromoform	ND	0.029	1	01/13/2015 16:00
Bromomethane	ND	0.029	1	01/13/2015 16:00
2-Butanone (MEK)	ND	0.11	1	01/13/2015 16:00
t-Butyl alcohol (TBA)	ND	0.29	1	01/13/2015 16:00
n-Butyl benzene	ND	0.029	1	01/13/2015 16:00
sec-Butyl benzene	ND	0.029	1	01/13/2015 16:00
tert-Butyl benzene	ND	0.029	1	01/13/2015 16:00
Carbon Disulfide	ND	0.029	1	01/13/2015 16:00
Carbon Tetrachloride	ND	0.029	1	01/13/2015 16:00
Chlorobenzene	ND	0.029	1	01/13/2015 16:00
Chloroethane	ND	0.029	1	01/13/2015 16:00
Chloroform	ND	0.029	1	01/13/2015 16:00
Chloromethane	ND	0.029	1	01/13/2015 16:00
2-Chlorotoluene	ND	0.029	1	01/13/2015 16:00
4-Chlorotoluene	ND	0.029	1	01/13/2015 16:00
Dibromochloromethane	ND	0.029	1	01/13/2015 16:00
1,2-Dibromo-3-chloropropane	ND	0.023	1	01/13/2015 16:00
1,2-Dibromoethane (EDB)	ND	0.023	1	01/13/2015 16:00
Dibromomethane	ND	0.029	1	01/13/2015 16:00
1,2-Dichlorobenzene	ND	0.029	1	01/13/2015 16:00
1,3-Dichlorobenzene	ND	0.029	1	01/13/2015 16:00
1,4-Dichlorobenzene	ND	0.029	1	01/13/2015 16:00
Dichlorodifluoromethane	ND	0.029	1	01/13/2015 16:00
1,1-Dichloroethane	ND	0.029	1	01/13/2015 16:00
1,2-Dichloroethane (1,2-DCA)	ND	0.029	1	01/13/2015 16:00
1,1-Dichloroethene	ND	0.029	1	01/13/2015 16:00
cis-1,2-Dichloroethene	ND	0.029	1	01/13/2015 16:00
trans-1,2-Dichloroethene	ND	0.029	1	01/13/2015 16:00
1,2-Dichloropropane	ND	0.029	1	01/13/2015 16:00
1,3-Dichloropropane	ND	0.029	1	01/13/2015 16:00
2,2-Dichloropropane	ND	0.029	1	01/13/2015 16:00
1,1-Dichloropropene	ND	0.029	1	01/13/2015 16:00

(Cont.)





## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
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**Date Prepared:** 1/12/15

**WorkOrder:** 1501281  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-2-3.5	1501281-005A	Soil	01/12/2015 10:30	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.029	1	01/13/2015 16:00
trans-1,3-Dichloropropene	ND	0.029	1	01/13/2015 16:00
Diisopropyl ether (DIPE)	ND	0.029	1	01/13/2015 16:00
Ethylbenzene	ND	0.029	1	01/13/2015 16:00
Ethyl tert-butyl ether (ETBE)	ND	0.029	1	01/13/2015 16:00
Freon 113	ND	0.29	1	01/13/2015 16:00
Hexachlorobutadiene	ND	0.029	1	01/13/2015 16:00
Hexachloroethane	ND	0.029	1	01/13/2015 16:00
2-Hexanone	ND	0.029	1	01/13/2015 16:00
Isopropylbenzene	ND	0.029	1	01/13/2015 16:00
4-Isopropyl toluene	ND	0.029	1	01/13/2015 16:00
Methyl-t-butyl ether (MTBE)	ND	0.029	1	01/13/2015 16:00
Methylene chloride	ND	0.029	1	01/13/2015 16:00
4-Methyl-2-pentanone (MIBK)	ND	0.029	1	01/13/2015 16:00
Naphthalene	ND	0.029	1	01/13/2015 16:00
n-Propyl benzene	ND	0.029	1	01/13/2015 16:00
Styrene	ND	0.029	1	01/13/2015 16:00
1,1,1,2-Tetrachloroethane	ND	0.029	1	01/13/2015 16:00
1,1,2,2-Tetrachloroethane	ND	0.029	1	01/13/2015 16:00
Tetrachloroethene	ND	0.029	1	01/13/2015 16:00
Toluene	ND	0.029	1	01/13/2015 16:00
1,2,3-Trichlorobenzene	ND	0.029	1	01/13/2015 16:00
1,2,4-Trichlorobenzene	ND	0.029	1	01/13/2015 16:00
1,1,1-Trichloroethane	ND	0.029	1	01/13/2015 16:00
1,1,2-Trichloroethane	ND	0.029	1	01/13/2015 16:00
Trichloroethene	ND	0.029	1	01/13/2015 16:00
Trichlorofluoromethane	ND	0.029	1	01/13/2015 16:00
1,2,3-Trichloropropane	ND	0.029	1	01/13/2015 16:00
1,2,4-Trimethylbenzene	ND	0.029	1	01/13/2015 16:00
1,3,5-Trimethylbenzene	ND	0.029	1	01/13/2015 16:00
Vinyl Chloride	ND	0.029	1	01/13/2015 16:00
Xylenes, Total	ND	0.029	1	01/13/2015 16:00

(Cont.)



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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
http://www.mccampbell.com / E-mail: main@mccampbell.com

# Analytical Report

**Client:** AEI Consultants  
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**Date Prepared:** 1/12/15

**WorkOrder:** 1501281  
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**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-2-3.5	1501281-005A	Soil	01/12/2015 10:30	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	89	70-130		01/13/2015 16:00
Toluene-d8	93	70-130		01/13/2015 16:00
4-BFB	99	70-130		01/13/2015 16:00

Analyst(s): KBO

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 19:07  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501281  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

### Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-3-2	1501281-009A	Soil	01/12/2015 11:15	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.23	1	01/13/2015 16:41
tert-Amyl methyl ether (TAME)	ND	0.012	1	01/13/2015 16:41
Benzene	ND	0.012	1	01/13/2015 16:41
Bromobenzene	ND	0.012	1	01/13/2015 16:41
Bromochloromethane	ND	0.012	1	01/13/2015 16:41
Bromodichloromethane	ND	0.012	1	01/13/2015 16:41
Bromoform	ND	0.012	1	01/13/2015 16:41
Bromomethane	ND	0.012	1	01/13/2015 16:41
2-Butanone (MEK)	ND	0.046	1	01/13/2015 16:41
t-Butyl alcohol (TBA)	ND	0.12	1	01/13/2015 16:41
n-Butyl benzene	ND	0.012	1	01/13/2015 16:41
sec-Butyl benzene	ND	0.012	1	01/13/2015 16:41
tert-Butyl benzene	ND	0.012	1	01/13/2015 16:41
Carbon Disulfide	ND	0.012	1	01/13/2015 16:41
Carbon Tetrachloride	ND	0.012	1	01/13/2015 16:41
Chlorobenzene	ND	0.012	1	01/13/2015 16:41
Chloroethane	ND	0.012	1	01/13/2015 16:41
Chloroform	ND	0.012	1	01/13/2015 16:41
Chloromethane	ND	0.012	1	01/13/2015 16:41
2-Chlorotoluene	ND	0.012	1	01/13/2015 16:41
4-Chlorotoluene	ND	0.012	1	01/13/2015 16:41
Dibromochloromethane	ND	0.012	1	01/13/2015 16:41
1,2-Dibromo-3-chloropropane	ND	0.0092	1	01/13/2015 16:41
1,2-Dibromoethane (EDB)	ND	0.0092	1	01/13/2015 16:41
Dibromomethane	ND	0.012	1	01/13/2015 16:41
1,2-Dichlorobenzene	ND	0.012	1	01/13/2015 16:41
1,3-Dichlorobenzene	ND	0.012	1	01/13/2015 16:41
1,4-Dichlorobenzene	ND	0.012	1	01/13/2015 16:41
Dichlorodifluoromethane	ND	0.012	1	01/13/2015 16:41
1,1-Dichloroethane	ND	0.012	1	01/13/2015 16:41
1,2-Dichloroethane (1,2-DCA)	ND	0.012	1	01/13/2015 16:41
1,1-Dichloroethene	ND	0.012	1	01/13/2015 16:41
cis-1,2-Dichloroethene	ND	0.012	1	01/13/2015 16:41
trans-1,2-Dichloroethene	ND	0.012	1	01/13/2015 16:41
1,2-Dichloropropane	ND	0.012	1	01/13/2015 16:41
1,3-Dichloropropane	ND	0.012	1	01/13/2015 16:41
2,2-Dichloropropane	ND	0.012	1	01/13/2015 16:41
1,1-Dichloropropene	ND	0.012	1	01/13/2015 16:41

(Cont.)



# Analytical Report

**Client:** AEI Consultants  
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**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-3-2	1501281-009A	Soil	01/12/2015 11:15	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	0.012	1	01/13/2015 16:41
trans-1,3-Dichloropropene	ND	0.012	1	01/13/2015 16:41
Diisopropyl ether (DIPE)	ND	0.012	1	01/13/2015 16:41
Ethylbenzene	ND	0.012	1	01/13/2015 16:41
Ethyl tert-butyl ether (ETBE)	ND	0.012	1	01/13/2015 16:41
Freon 113	ND	0.12	1	01/13/2015 16:41
Hexachlorobutadiene	ND	0.012	1	01/13/2015 16:41
Hexachloroethane	ND	0.012	1	01/13/2015 16:41
2-Hexanone	ND	0.012	1	01/13/2015 16:41
Isopropylbenzene	ND	0.012	1	01/13/2015 16:41
4-Isopropyl toluene	ND	0.012	1	01/13/2015 16:41
Methyl-t-butyl ether (MTBE)	ND	0.012	1	01/13/2015 16:41
Methylene chloride	ND	0.012	1	01/13/2015 16:41
4-Methyl-2-pentanone (MIBK)	ND	0.012	1	01/13/2015 16:41
Naphthalene	ND	0.012	1	01/13/2015 16:41
n-Propyl benzene	ND	0.012	1	01/13/2015 16:41
Styrene	ND	0.012	1	01/13/2015 16:41
1,1,1,2-Tetrachloroethane	ND	0.012	1	01/13/2015 16:41
1,1,2,2-Tetrachloroethane	ND	0.012	1	01/13/2015 16:41
Tetrachloroethene	ND	0.012	1	01/13/2015 16:41
Toluene	ND	0.012	1	01/13/2015 16:41
1,2,3-Trichlorobenzene	ND	0.012	1	01/13/2015 16:41
1,2,4-Trichlorobenzene	ND	0.012	1	01/13/2015 16:41
1,1,1-Trichloroethane	ND	0.012	1	01/13/2015 16:41
1,1,2-Trichloroethane	ND	0.012	1	01/13/2015 16:41
Trichloroethene	ND	0.012	1	01/13/2015 16:41
Trichlorofluoromethane	ND	0.012	1	01/13/2015 16:41
1,2,3-Trichloropropane	ND	0.012	1	01/13/2015 16:41
1,2,4-Trimethylbenzene	ND	0.012	1	01/13/2015 16:41
1,3,5-Trimethylbenzene	ND	0.012	1	01/13/2015 16:41
Vinyl Chloride	ND	0.012	1	01/13/2015 16:41
Xylenes, Total	ND	0.012	1	01/13/2015 16:41

(Cont.)



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# Analytical Report

**Client:** AEI Consultants  
**Project:** #338315; Allied Engineering  
**Date Received:** 1/12/15 19:07  
**Date Prepared:** 1/12/15

**WorkOrder:** 1501281  
**Extraction Method:** SW5035  
**Analytical Method:** SW8260B  
**Unit:** mg/Kg

## Volatile Organics by P&T and GC/MS (Basic Target List) [Encore Sampling]

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
SB-3-2	1501281-009A	Soil	01/12/2015 11:15	GC10	99934

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	91	70-130		01/13/2015 16:41
Toluene-d8	92	70-130		01/13/2015 16:41
4-BFB	101	70-130		01/13/2015 16:41

Analyst(s): KBO



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1501281

ClientCode: AEL

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  EQuIS   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

**Report to:**

John Mark Pendleton  
AEI Consultants  
2500 Camino Diablo, Ste.#200  
Walnut Creek, CA 94597  
(925) 283-6000    FAX: (925) 944-2895

Email: jpendleton@aeiconsultants.com  
cc/3rd Party:  
PO: #74293  
ProjectNo: #338315; Allied Engineering

**Bill to:**

Sara Guerin  
AEI Consultants  
2500 Camino Diablo, Ste. #200  
Walnut Creek, CA 94597  
AccountsPayable@AEIConsultants.com

**Requested TAT:**

**1 day**

**Date Received: 01/12/2015**

**Date Printed: 01/12/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1501281-001	SB-1-3.5	Soil	1/12/2015 10:00	<input type="checkbox"/>	A												
1501281-005	SB-2-3.5	Soil	1/12/2015 10:30	<input type="checkbox"/>	A												
1501281-009	SB-3-2	Soil	1/12/2015 11:15	<input type="checkbox"/>	A												

**Test Legend:**

1	8260B_E	2		3		4		5	
6		7		8		9		10	
11		12							

**Prepared by: Agustina Venegas**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



## WORK ORDER SUMMARY

**Client Name:** AEI CONSULTANTS  
**Project:** #338315; Allied Engineering  
**Comments:**

**QC Level:** LEVEL 2  
**Client Contact:** John Mark Pendleton  
**Contact's Email:** jpendleton@aeiconsultants.com

**Work Order:** 1501281  
**Date Received:** 1/12/2015

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1501281-001A	SB-1-3.5	Soil	SW8260B (VOCs) (Encore)	1	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:00	1 day		<input type="checkbox"/>	
1501281-002A	SB-1-5	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:05			<input checked="" type="checkbox"/>	
1501281-003A	SB-1-10	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:10			<input checked="" type="checkbox"/>	
1501281-004A	SB-1-15	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:15			<input checked="" type="checkbox"/>	
1501281-005A	SB-2-3.5	Soil	SW8260B (VOCs) (Encore)	1	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:30	1 day		<input type="checkbox"/>	
1501281-006A	SB-2-5	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:35			<input checked="" type="checkbox"/>	
1501281-007A	SB-2-10	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:40			<input checked="" type="checkbox"/>	
1501281-008A	SB-2-15	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 10:45			<input checked="" type="checkbox"/>	
1501281-009A	SB-3-2	Soil	SW8260B (VOCs) (Encore)	2	Encore Sampler	<input type="checkbox"/>	1/12/2015 11:15	1 day		<input type="checkbox"/>	
1501281-010A	SB-3-5	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 11:20			<input checked="" type="checkbox"/>	
1501281-011A	SB-3-10	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 11:25			<input checked="" type="checkbox"/>	
1501281-012A	SB-3-15	Soil		2	Encore Sampler	<input type="checkbox"/>	1/12/2015 11:30			<input checked="" type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.





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www.mccampbell.com / main@mccampbell.com  
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1501281

# RUSH

## CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH  1 DAY  2 DAY  3 DAY  5 DAY

GeoTracker EDF  PDF  EDD  Write On (DW)  EQUIS  10 DAY

Effluent Sample Requiring "J" flag  UST Clean Up Fund Project ; Claim # \_\_\_\_\_

Report To: John Mark Pendleton Bill To: same  
 Company: AEI Consultants  
 2500 Camino Diablo  
 Walnut Creek, CA 94597 E-Mail: jpendleton@aeiconsultants.com  
 Tele: (925) 262-7582 Fax: (925) 746-6099  
 Project #: 338315 Project Name: Allied Engineering  
 Project Location: 2421 Blanding Ave. Alameda, CA Purchase Order# 74293  
 Sampler Signature: *[Signature]*

### Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX										METHOD PRESERVED		VOCs by EPA method 8260	Hold	
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO <sub>3</sub>	Other				
SB-1-3.5		*	1000	1						X							X		
SB-1-5		*	1005	2														X	
SB-1-10		*	1010	2														X	
SB-1-15		*	1015	2														X	
SB-2-3.5		*	1030	1													X		
SB-2-5		*	1035	2														X	
SB-2-10		*	1040	2														X	
SB-2-15		*	1045	2														X	
SB-3-2		*	1115	2														X	
SB-3-5		*	1120	2														X	
SB-3-10		*	1125	2														X	

\*\*MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By: *John Pendleton* Date: 1-12-15 Time: 1530 Received By: *AGUSTINA V.*

Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

ICE/° *10.5*

GOOD CONDITION \_\_\_\_\_  
 HEAD SPACE ABSENT \_\_\_\_\_  
 DECHLORINATED IN LAB \_\_\_\_\_  
 APPROPRIATE CONTAINERS \_\_\_\_\_  
 PRESERVED IN LAB \_\_\_\_\_

COMMENTS: *\*DATE TAKEN FROM SECOND PAGE.*

VOAS O&G METALS OTHER HAZARDOUS:  
 PRESERVATION \_\_\_\_\_ pH<2 \_\_\_\_\_







### Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **1/12/2015 7:07:10 PM**  
 Project Name: **#338315; Allied Engineering** LogIn Reviewed by: **Agustina Venegas**  
 WorkOrder No: **1501281** Matrix: Soil Carrier: Client Drop-In

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No   
 Sample/Temp Blank temperature Temp: 10.5°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  NA   
 Sample labels checked for correct preservation? Yes  No   
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes  No  NA   
 Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

**UCMR3 Samples:**

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes  No  NA   
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes  No  NA

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



20 January 2015

Mr. Trent Weise  
AEI Consultants  
3880 South Bascom Ave., Suite 109  
San Jose, CA 95124

**SUBJECT: DATA REPORT - AEI Consultants Project # 338315  
2421 Blanding Avenue, Alameda, California**

**TEG Project # 50112F**

Mr. Weise:

Please find enclosed a data report for the samples analyzed from the above referenced project for AEI Consultants. The samples were analyzed on site in TEG's mobile laboratory. TEG conducted a total of 10 analyses on 10 water samples.

-- 10 analyses on waters for volatile organic hydrocarbons by EPA method 8260B.

The results of the analyses are summarized in the enclosed tables. Applicable detection limits and QA/QC data are included in the tables.

TEG appreciates the opportunity to have provided analytical services to AEI Consultants on this project. If you have any further questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Mark Jerpbak  
Director, TEG-Northern California



EPA Method 8260B Analyses of WATER in ug/L

SAMPLE NUMBER:	Blank	SB-1	SB-2	SB-3	SB-4	SB-5	
COLLECTION DATE:		1/12/15	1/12/15	1/12/15	1/12/15	1/12/15	
ANALYSIS DATE:	1/12/15	1/12/15	1/12/15	1/12/15	1/12/15	1/12/15	
DILUTION FACTOR:	1	1	1	1	1	1	
	RL						
Dichlorodifluoromethane	1.0	nd	nd	nd	nd	nd	
Chloromethane	1.0	nd	nd	nd	nd	nd	
<b>Vinyl Chloride</b>	1.0	nd	14	nd	nd	nd	
Bromomethane	1.0	nd	nd	nd	nd	nd	
Chloroethane	1.0	nd	nd	nd	nd	nd	
Trichlorofluoromethane	1.0	nd	nd	nd	nd	nd	
1,1-Dichloroethene	1.0	nd	nd	nd	nd	nd	
Methylene Chloride	1.0	nd	nd	nd	nd	nd	
<b>trans-1,2-Dichloroethene</b>	1.0	nd	4.1	nd	1.8	nd	
1,1-Dichloroethane	1.0	nd	nd	nd	nd	nd	
2,2-Dichloropropane	1.0	nd	nd	nd	nd	nd	
<b>cis-1,2-Dichloroethene</b>	1.0	nd	54	nd	67	3.9	
Chloroform	1.0	nd	nd	nd	nd	nd	
Bromochloromethane	1.0	nd	nd	nd	nd	nd	
1,1,1-Trichloroethane	1.0	nd	nd	nd	nd	nd	
1,1-Dichloropropene	1.0	nd	nd	nd	nd	nd	
Carbon Tetrachloride	1.0	nd	nd	nd	nd	nd	
1,2-Dichloroethane	1.0	nd	nd	nd	nd	nd	
Benzene	1.0	nd	nd	nd	nd	nd	
<b>Trichloroethene</b>	1.0	nd	110	1.5	310	5.0	
1,2-Dichloropropane	1.0	nd	nd	nd	nd	nd	
Bromodichloromethane	1.0	nd	nd	nd	nd	nd	
Dibromomethane	1.0	nd	nd	nd	nd	nd	
cis-1,3-Dichloropropene	1.0	nd	nd	nd	nd	nd	
Toluene	1.0	nd	nd	nd	nd	nd	
trans-1,3-Dichloropropene	1.0	nd	nd	nd	nd	nd	
1,1,2-Trichloroethane	1.0	nd	nd	nd	nd	nd	
1,2-Dibromoethane	1.0	nd	nd	nd	nd	nd	
1,3-Dichloropropane	1.0	nd	nd	nd	nd	nd	
<b>Tetrachloroethene</b>	1.0	nd	3.0	nd	1000	nd	
Dibromochloromethane	1.0	nd	nd	nd	nd	nd	
Chlorobenzene	1.0	nd	nd	nd	nd	nd	
Ethylbenzene	1.0	nd	nd	nd	nd	nd	
1,1,1,2-Tetrachloroethane	1.0	nd	nd	nd	nd	nd	
m,p-Xylene	1.0	nd	nd	nd	nd	nd	
o-Xylene	1.0	nd	nd	nd	nd	nd	
Styrene	1.0	nd	nd	nd	nd	nd	
Bromoform	1.0	nd	nd	nd	nd	nd	
Isopropylbenzene	1.0	nd	nd	nd	nd	nd	
1,1,2,2-Tetrachloroethane	1.0	nd	nd	nd	nd	nd	
1,2,3-Trichloropropane	1.0	nd	nd	nd	nd	nd	
n-propylbenzene	1.0	nd	nd	nd	nd	nd	
Bromobenzene	1.0	nd	nd	nd	nd	nd	
1,3,5-Trimethylbenzene	1.0	nd	nd	nd	nd	nd	
2-Chlorotoluene	1.0	nd	nd	nd	nd	nd	
4-Chlorotoluene	1.0	nd	nd	nd	nd	nd	
tert-Butylbenzene	1.0	nd	nd	nd	nd	nd	
1,2,4-Trimethylbenzene	1.0	nd	nd	nd	nd	nd	
sec-Butylbenzene	1.0	nd	nd	nd	nd	nd	
p-Isopropyltoluene	1.0	nd	nd	nd	nd	nd	
1,3-Dichlorobenzene	1.0	nd	nd	nd	nd	nd	
1,4-Dichlorobenzene	1.0	nd	nd	nd	nd	nd	
n-Butylbenzene	1.0	nd	nd	nd	nd	nd	
1,2-Dichlorobenzene	1.0	nd	nd	nd	nd	nd	
1,2-Dibromo-3-chloropropane	1.0	nd	nd	nd	nd	nd	
1,2,4-Trichlorobenzene	1.0	nd	nd	nd	nd	nd	
Hexachlorobutadiene	1.0	nd	nd	nd	nd	nd	
Naphthalene	1.0	nd	nd	nd	nd	nd	
1,2,3-Trichlorobenzene	1.0	nd	nd	nd	nd	nd	
Surrogate Recovery (DBFM)		96%	93%	96%	94%	91%	94%
Surrogate Recovery (Toluene-d8)		93%	90%	93%	93%	91%	91%
Surrogate Recovery (1,4-BFB)		87%	87%	88%	87%	90%	87%

'RL' Indicates reporting limit at a dilution factor of 1

'nd' Indicates not detected at listed reporting limits

Analyses performed by: Mr. Leif Jonsson

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EPA Method 8260B Analyses of WATER in ug/L

SAMPLE NUMBER:	SB-6	SB-7	SB-8	SB-9	SB-10
COLLECTION DATE:	1/12/15	1/12/15	1/12/15	1/12/15	1/12/15
ANALYSIS DATE:	1/12/15	1/12/15	1/12/15	1/12/15	1/12/15
DILUTION FACTOR:	1	1	1	1	1
	RL				
Dichlorodifluoromethane	1.0	nd	nd	nd	nd
Chloromethane	1.0	nd	nd	nd	nd
<b>Vinyl Chloride</b>	1.0	nd	nd	nd	nd
Bromomethane	1.0	nd	nd	nd	nd
Chloroethane	1.0	nd	nd	nd	nd
Trichlorofluoromethane	1.0	nd	nd	nd	nd
1,1-Dichloroethene	1.0	nd	nd	nd	nd
Methylene Chloride	1.0	nd	nd	nd	nd
<b>trans-1,2-Dichloroethene</b>	1.0	nd	nd	nd	nd
1,1-Dichloroethane	1.0	nd	nd	nd	nd
2,2-Dichloropropane	1.0	nd	nd	nd	nd
<b>cis-1,2-Dichloroethene</b>	1.0	nd	nd	nd	nd
Chloroform	1.0	nd	nd	nd	nd
Bromochloromethane	1.0	nd	nd	nd	nd
1,1,1-Trichloroethane	1.0	nd	nd	nd	nd
1,1-Dichloropropene	1.0	nd	nd	nd	nd
Carbon Tetrachloride	1.0	nd	nd	nd	nd
1,2-Dichloroethane	1.0	nd	nd	nd	nd
Benzene	1.0	nd	nd	nd	nd
<b>Trichloroethene</b>	1.0	nd	nd	nd	nd
1,2-Dichloropropane	1.0	nd	nd	nd	nd
Bromodichloromethane	1.0	nd	nd	nd	nd
Dibromomethane	1.0	nd	nd	nd	nd
cis-1,3-Dichloropropene	1.0	nd	nd	nd	nd
Toluene	1.0	nd	nd	nd	nd
trans-1,3-Dichloropropene	1.0	nd	nd	nd	nd
1,1,2-Trichloroethane	1.0	nd	nd	nd	nd
1,2-Dibromoethane	1.0	nd	nd	nd	nd
1,3-Dichloropropane	1.0	nd	nd	nd	nd
<b>Tetrachloroethene</b>	1.0	nd	nd	nd	nd
Dibromochloromethane	1.0	nd	nd	nd	nd
Chlorobenzene	1.0	nd	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1.0	nd	nd	nd	nd
m,p-Xylene	1.0	nd	nd	nd	nd
o-Xylene	1.0	nd	nd	nd	nd
Styrene	1.0	nd	nd	nd	nd
Bromoform	1.0	nd	nd	nd	nd
Isopropylbenzene	1.0	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1.0	nd	nd	nd	nd
1,2,3-Trichloropropane	1.0	nd	nd	nd	nd
n-propylbenzene	1.0	nd	nd	nd	nd
Bromobenzene	1.0	nd	nd	nd	nd
1,3,5-Trimethylbenzene	1.0	nd	nd	nd	nd
2-Chlorotoluene	1.0	nd	nd	nd	nd
4-Chlorotoluene	1.0	nd	nd	nd	nd
tert-Butylbenzene	1.0	nd	nd	nd	nd
1,2,4-Trimethylbenzene	1.0	nd	nd	nd	nd
sec-Butylbenzene	1.0	nd	nd	nd	nd
p-Isopropyltoluene	1.0	nd	nd	nd	nd
1,3-Dichlorobenzene	1.0	nd	nd	nd	nd
1,4-Dichlorobenzene	1.0	nd	nd	nd	nd
n-Butylbenzene	1.0	nd	nd	nd	nd
1,2-Dichlorobenzene	1.0	nd	nd	nd	nd
1,2-Dibromo-3-chloropropane	1.0	nd	nd	nd	nd
1,2,4-Trichlorobenzene	1.0	nd	nd	nd	nd
Hexachlorobutadiene	1.0	nd	nd	nd	nd
Naphthalene	1.0	nd	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd	nd	nd	nd
Surrogate Recovery (DBFM)	93%	92%	93%	92%	84%
Surrogate Recovery (Toluene-d8)	93%	91%	91%	92%	86%
Surrogate Recovery (1,4-BFB)	86%	83%	84%	90%	78%

'RL' Indicates reporting limit at a dilution factor of 1

'nd' Indicates not detected at listed reporting limits

Analyses performed by: Mr. Leif Jonsson

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TEG Project #50112F

QA/QC Data - Matrix Spike Analyses / LCS - WATER

SAMPLE NUMBER	DATE ANALYZED	1,1 DCE ug/L	Benzene ug/L	Trichloroethene ug/L	Toluene ug/L	Chlorobenzene ug/L
SB-7						
Spiked Conc.	1/12/15	25.0	25.0	25.0	25.0	25.0
Measured Conc.		22.2	22.2	23.4	21.6	25.7
% Recovery		89%	89%	94%	86%	103%
Spiked Conc.	1/12/15	25.0	25.0	25.0	25.0	25.0
Measured Conc.		21.7	22.5	22.6	21.8	25.8
% Recovery		87%	90%	90%	87%	103%
RPD		2.3%	1.3%	3.5%	0.9%	0.4%
LCS						
Spiked Conc.	1/12/15	25.0	25.0	25.0	25.0	25.0
Measured Conc.		21.7	23.3	22.4	22.4	25.9
% Recovery		87%	93%	90%	90%	104%

Acceptable RPD Limit = 25%

**TEG Northern California Inc.**

11350 Monier Park Place  
 Rancho Cordova, CA 95742  
 Ph: 916.853.8010  
 Fax: 916.853.8020

Client: AEI Consultants

Address: 3880 Buscom Ave. Suite 109

SAN JOSE, CA 95124

Phone: 408.581.7600 Fax: 408.559.7601

**Chain of Custody Record**

Page: 1 of 1

Project Manager: Trent Wise

E-Mail: twise@aeiconsultants.com

TEG Project #: 50112F

Client Project #: 388315

Location: 2421 Blanding Ave. Alameda CA

Collector: John Pendleton Date of Collection: 1-12-15

Sample Designation	Depth	Time	Sample Matrix	Container Type	Analytes										Field Notes	# of containers	
					EPA 8260B (Full List)	EPA 8260B (DTSC List)	5 Oxygenates, BTEX (8260B)	TPH gasoline (8260)	EPA 8021 (BTEX)	TPH 8015mnd (gas)	TPH 8015mnd (diesel)	TPH 8015mnd (motor oil)	TPH 8015mnd (gas)	TPH 8015mnd (diesel)			TPH 8015mnd (motor oil)
SB-7		840	Water	VDA	X	X	X										
SB-8		925			X	X	X										
SB-9		1005			X	X	X										
SB-1		1025			X	X	X										
SB-10		1025			X	X	X										
SB-3		1149			X	X	X										
SB-5		1155			X	X	X										
SB-6		1207			X	X	X										
SB-2		1300			X	X	X										
SB-4		1350			X	X	X										
END																	

Relinquished by: [Signature] Date / Time: 1-12-15/1410 Received by: [Signature] Date / Time: 1-12-15 1410

Remarks: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date / Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date / Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date / Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date / Time: \_\_\_\_\_

Sample Receipt:

Good Condition? yes

Cold? NA

Seals Intact? NA

Total Number of Containers 30