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Ms. Karel Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Perjury Statement and Report Transmittal

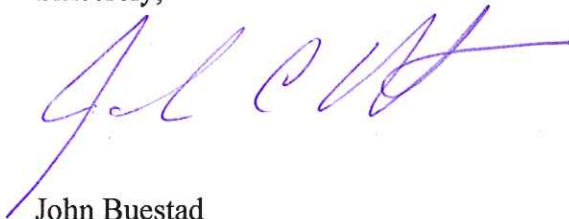
1600 Park Street (Parcel A)
Alameda, California 94501
AEI Project No. 298931
ACEH RO#0000008

Dear Ms. Detterman:

I declare under penalty of perjury, that the information and/or recommendations contained in the attached report for the above-referenced site are true and correct to the best of my knowledge.

If you have any questions or need additional information, please do not hesitate to call me or Mr. Peter McIntyre at AEI Consultants, (925) 746-6004.

Sincerely,



John Buestad

~~President~~

PARTNER OF F.S.I.

JB/pm

Attachment: AEI Consultants, *Conceptual Site Model Update & Request for Case Closure – May 2013*

cc: Mr. Peter McIntyre, AEI Consultants, 2500 Camino Diablo, Walnut Creek, CA 94597



AEI Consultants

Environmental & Engineering Services

May 17, 2013

GROUNDWATER MONITORING AND SOIL VAPOR SAMPLING REPORT 1st Quarter 2013

Property Identification:

1630 Park Street, Parcel B
Alameda, California

ACEH RO#0000008
AEI Project No. 298931

Prepared for:

Mr. John Buestad
Foley Street Investments, LLC
1980 Mountain Boulevard, Suite 208
Oakland, CA 94611

Prepared by:

AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597
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AEI Consultants

Environmental & Engineering Services

May 17, 2013

Mr. John Buestad
Foley Street Investments, LLC
1980 Mountain Boulevard, Suite 208
Oakland, California 94611

**Subject: Groundwater Monitoring and Soil Vapor Sampling Report
1st Quarter 2013**
1630 Park Street, Parcel B
Alameda, California
ACEH RO#0000008
AEI Project No. 298931

Dear Mr. Buestad:

AEI Consultants (AEI) has prepared this report on behalf of Foley Street Investments, LLC, for the property referenced above. AEI has been retained by Foley Street Investments, LLC to provide environmental consulting and engineering services. The ongoing investigation and remediation of the release is being performed under the direction of the Alameda County Environmental Health (ACEH) local oversight program. This report has been prepared to document the field activities and the results of recent groundwater monitoring and soil vapor sampling event.

SITE DESCRIPTION AND HISTORY

The subject property (hereafter referred to as the "site" or "property") is located in a commercial area on the southeast side of Park Street in Alameda, California (Figure 1 and Figure 2). The property is currently a vacant lot which formerly contained an automobile dealership, repair facility, and parking lot.

According to a Phase I Environmental Site Assessment dated July 5, 2011 by AEI, the former building was constructed in 1945 for use as an automobile garage and showroom. A review of historical city directories indicates that the subject property was occupied by various auto dealerships and repair facilities including Good Chevrolet/Good Leasing from at least 1971 to 2006, Fairway Leasing from 1986 to 2006, and Enterprise Rent-A-Car in 1991.

- In 1986, a 300-gallon waste oil underground storage tank (UST) and a 500-gallon UST were reportedly removed from the north end of the building property by Petroleum Engineering, Inc. Soil samples collected from the adjacent tank pits indicated hydrocarbon impacts in the soils. An environmental case was subsequently opened with the ACEH.

- In January 1987, three groundwater monitoring wells (MW-1 through MW-3) were installed at the site to evaluate the groundwater conditions. Two additional borings (SB-4 and SB-5) were advanced at the same time and soil samples were collected from one of the borings (SB-5).
- In October 1993, a supplemental investigation was performed by Geo Plexus which included advancing seven (7) soil borings (EB1 through EB7) across the parking area of the property. The investigation identified concentrations of hydrocarbons and volatile aromatic compounds in the vicinity of the former USTs at depths between 5 to 12 feet below ground surface (bgs).
- In April 1994, two additional groundwater monitoring wells (MW-4 and MW-5) were installed by Geo Plexus to further characterize the downgradient groundwater conditions.
- In January 1997, a remedial investigation was performed by Geo Plexus which included advancing eight (8) soil borings (EB8 through EB12 and P1 through P3) at locations which were immediately upgradient, downgradient, and cross gradient from the former USTs. Soil samples were collected from EB8 through EB12). The investigation indicated that gasoline impacted soil remained at depths ranging from 7 to 11 feet bgs.
- In November 1998, an investigation for a risk assessment was performed by Geo Plexus. The investigation involved the collection of soil gas samples from three (3) soil gas probes. Soil gas samples were collected at a depth of 3 feet bgs and collected in summa canisters. Using a commercial health risk of 1×10^{-4} , a risk-based corrective action analysis indicated that soil gas concentrations do not represent a significant health risk.
- In April 2008, Blymer Engineers collected soil and groundwater samples from 24 soil borings (GP1 to GP24) on and offsite to characterize the extent of soil and groundwater impacts. It should be noted that AEI was not able to review a formal report of these activities, only tables of soil and groundwater data and figures have been located.
- In June 2011, a Phase I ESA was conducted for the subject property as detailed in a report dated July 5, 2011 (AEI 2011a).
- In July 2011, a subsurface investigation was conducted at the property relating to potential environmental issues aside from the Good Chevrolet LUST case. The areas of concern investigated include five former and five existing underground hydraulic lifts, several floor drains, three existing USTs (1 550-gallon waste-oil UST, 1 10,000 gallon and 1 4,000 gallon gasoline UST), and a former gasoline station identified on the southern end of the development site at the intersection of Park Street and Tilden Way. A total of 19 soil borings (AEI-1 to AEI-19) were drilled for soil and groundwater sampling. Results of the investigation are summarized in the August 16, 2011 *Phase II Subsurface Investigation Report* (AEI 2011b) prepared by AEI.
- An *Interim Corrective Action Plan* (ICAP) dated September 28, 2011 (AEI 2011c) was submitted and followed by an *ICAP Comment Letter Response and Pilot Test Workplan Details* dated November 14, 2011 (AEI 2011d). Both documents proposed the performance a High Vacuum Dual Phase Extraction (HVDPE) Pilot Test at the site. A

review of multiple remedial options was discussed in these documents and HVDPE was considered the most feasible option given the site conditions.

- In November 2011, three (3) dual phase extraction wells (DPE-1, DPE-2 and DPE-3) and one (1) air sparge well (AS-1) were installed. In early December, three vacuum monitoring points (VP-1, VP-2 and VP-3) were installed and pilot testing began. Results of the HVDPE pilot test were preliminarily provided in the *Investigation and Remedial Action Workplan* dated January 12, 2012 (AEI 2012a). The work plan also proposed the advancement of additional borings and the installation of additional HVPDE wells. In January 2012, borings AEI-20 through AEI-28 were advanced and wells DPE-4 through DPE-6, and DPE-8 through DPE-11 were installed. DPE-7 was advanced as a boring instead of being completed as a well. Soil sample analytical results for samples collected during the drilling were used to help define the extent of impacted soil and groundwater and to identify target areas for additional remedial action.
- A *Corrective Action Plan (CAP)* dated February 3, 2012, (AEI 2012b) was submitted to the ACEH. The CAP documented the December 2011 to January 2012 HVDPE event and based on the results, recommended HVDPE as the remedial option for the site.
- On January 25, 2012, based on the results of the pilot testing, the HVDPE system resumed operation. The system was operated for 94 days and was turned off on April 25, 2012.
- At the request of the ACEH, a *Data Gap and Interim Source Removal Workplan*, was prepared and submitted on May 4, 2012 (AEI 2012c). The work plan outlined the scope of work to define the lateral extent of impacted groundwater and proposed excavation of known sources of impacts to groundwater. An addendum to the workplan to address ACEH comments was submitted on September 7, 2012 and conditionally approved on October 5, 2012.
- On October 22 to 29, 2012 interim source removal activities were conducted at the site. Approximately 450 tons of hydrocarbon impacted soil were removed from the three excavation areas. The results of the activities were detailed in the *Interim Source Removal Report and Well Abandonment and Replacement Workplan Addendum*, dated December 7, 2012 (AEI 2012d). Observations made during the excavations and confirmation soil sampling of the excavation bottoms and sidewalls indicate the following:
 - Former UST-hold (Excavation E1): Hydrocarbon impacts in soil at this location are substantially remediated. One sidewall soil sample was found to slightly exceed the ESLs for THP-g and xylenes and two sidewall samples exceeded the ESLs for benzene. The objectives of this excavation were met since the bottoms samples were below the agreed upon target concentrations.
 - Three former hydraulic lifts (Excavation E2): Hydrocarbon impacts in soil at this location are substantially remediated. One sidewall sample collected from the west wall (closest to the former UST pit) contained concentrations of TPH-g, TPH-mo, ethylbenzene and xylenes at concentrations that exceeded the ESLs. The objectives of this excavation were met since the bottoms samples were below the agreed upon target concentrations.

- Former hydraulic lift near DPE-5 (Excavation E3): Hydrocarbon impacts in soil at this location remain in the sidewalls at depths between approximately 7 to 11.5 feet bgs. Concentrations of TPHg, TPH-mo and BTEX exceeded the ESLs in all sidewall samples. The objectives of this excavation were met since the bottom samples were below the agreed upon target concentrations.
- Groundwater monitoring and sampling has been ongoing at the site since 1992. It was conducted approximately quarterly from 1992 through 1995, then sporadically through 2003, once in 2008, and twice in 2011. Groundwater has been monitored on a quarterly basis since December 2011. Soil vapor monitoring from the three vapor monitoring points installed during the HVPDE pilot test was added to the quarterly monitoring schedule in May 2012.

SUMMARY OF GROUNDWATER MONITORING ACTIVITIES

On February 27, 2013, fourteen (14) groundwater monitoring wells (MW-1 to MW-5, DPE-1, DPE-2, DPE-4, DPE-5, DPE-6, DPE-8, DPE-9, DPE-10 and DPE-11) were gauged and sampled in accordance with the groundwater monitoring schedule presented in the May 2012, Data Gap Investigation and Interim Source Removal Workplan (AEI, 2012c) . Well DPE-3 was abandoned in August 2012. Groundwater well field sampling forms are included in Appendix A.

GAUGING

Prior to gauging, the wells caps were opened and allowed to equilibrate with atmospheric pressure. The depths to water from the top of the well casings were then measured with an electric water level indicator accurate to 0.01 feet prior to sampling.

SAMPLING

Groundwater sampling was accomplished using a peristaltic pump and low-flow purge techniques. New disposable ¼-inch polyethylene tubing was set to the approximate depth of the middle of the screened interval and the pump was operated at a flow rate of approximately 250 milliliters per minute or less. The discharge tubing was connected to a flow-through cell fitted with water quality sensors and readings of temperature, pH, conductivity, dissolved oxygen (DO) and oxygen reduction potential (ORP) were recorded. A visual estimate and description of turbidity was also noted for each well. Once the field parameters stabilized, groundwater samples were collected directly from the discharge side of peristaltic pump.

The groundwater samples were collected into laboratory supplied unpreserved 1-liter amber glass bottles and 40-milliliter (mL) volatile organic analysis (VOA) vials preserved with hydrochloric acid capped such that no head space or air bubbles were visible. Samples were labeled with a unique sample name and the date and time of collection, then entered onto a chain of custody record and placed in a pre-chilled cooler on wet ice pending transportation to the laboratory. The samples were delivered on the day of collection, under proper chain of custody protocol and within hold time, to McCampbell Analytical, Inc. of Pittsburg, California (Department of Health Services Certification #1644) for analysis.

The groundwater samples were analyzed for:

- Total Petroleum Hydrocarbons as gasoline (TPH-g) by EPA Method SW8015B Modified, TPH as diesel (TPH-d) and TPH as motor oil (TPH-mo) by EPA Method SW8015B with silica gel clean-up.
- Benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method SW8260B.

GROUNDWATER MONITORING RESULTS

GROUNDWATER ELEVATIONS AND HYDRAULIC GRADIENT

The measured depth to water was subtracted from the surveyed top-of-casing elevation for each well to obtain the groundwater elevation at each well. The groundwater elevations, groundwater flow direction and hydraulic gradient are summarized below:

- The groundwater elevations during this event ranged from 16.43 (MW-4) to 19.12 (DPE-6) feet above mean sea level (amsl). Depth to water ranged from 6.55 (MW-1) to 9.15 (MW-4) below ground surface. The average groundwater elevation for this event was 1.30 feet higher than the previous event.
- Based on these data, the groundwater flow direction was to the northwest under a hydraulic gradient of approximately 0.02 ft/ft which is consistent with previous events.

Current and historical groundwater elevations are summarized in Table 2. The groundwater elevation data, flow direction and hydraulic gradient are presented on Figure 3.

GROUNDWATER SAMPLE LABORATORY ANALYTICAL DATA

The groundwater sample analytical data, with a comparison to the previous monitoring event, are summarized below:

- Concentrations of TPH-g increased in wells DPE-5, DPE-9 and DPE-10 compared to the prior event; however, the recent concentrations across the site are well below historical levels. TPH-g decreased in all other wells compared to prior events. The highest concentration of TPH-g was reported in the sample collected from well DPE-5 at 3,900 micrograms per liter ($\mu\text{g/L}$). TPH-d was detected in 6 of the wells sampled. The highest concentration of TPH-d was reported in the sample collected from DPE-9 at 2,200 $\mu\text{g/L}$; however, qualitative laboratory notations indicate that this detection of TPH-d is associated with gasoline.
- TPH-mo was detected only in DPE-5 well at a concentration of 2,600 $\mu\text{g/L}$.
- MTBE was detected in DPE-9 at 16 $\mu\text{g/L}$ and DPE-10 at 4.4 $\mu\text{g/L}$ during the event.
- Concentrations of benzene in groundwater samples increased slightly in wells DPE-4, DPE-5, DPE-9, and DPE-10 and decreased in all other wells compared to prior events. The highest

concentration increased of benzene was reported in the sample collected from well DPE-5 at 440 µg/L.

- Groundwater samples from six wells (MW-1, MW-3, MW-4, MW-5, DPE-8 and DPE-11) were non-detect for all analytes for this event.

The groundwater analytical data are summarized in Table 3 and are presented graphically on Figure 4. Laboratory analytical reports with chain of custody and quality assurance/quality control documentation are included in Appendix B.

SUMMARY OF SOIL VAPOR SAMPLING ACTIVITIES

On February 27, 2013, the three onsite (3) soil vapor probes (VP-1, VP-2, and VP-3) were sampled. The probes are located in the source area near the former tank hold which had recently been excavated and previously undergone HVDPE. The purpose of the sampling was to establish a baseline concentrations post interim remediation and as part of an evaluation of vapor intrusion potential.

Soil vapor samples were collected in one-liter summa canisters fitted with 150 ml/hr flow controllers. Each canister and flow controller was individually checked, tested and certified by the laboratory for air tightness and proper vacuum prior to shipping. A vacuum gauge was used to measure and record the initial and final summa canister vacuum pressure. Prior to collecting each vapor sample, a shut-in test was performed to verify that the sampling train was free of leaks, and approximately three tubing volumes were purged using a spare summa-canister. During sampling a leak check compound (isopropyl alcohol) was used to check for leaks. Upon completion of sampling the valves were removed, the inlet fittings tightly capped, and the canisters were labeled with sample name, date and time of collection, and then entered onto a chain of custody record.

After sample collection, field readings of oxygen (O₂), methane (CH₄), carbon dioxide (CO₂) and total volatile hydrocarbons (TVHC) were collected using a multi-gas detector. The instrument uses a photoionization detector (PID) calibrated to 100 ppm isobutylene to read TVHC and contains dedicated O₂, CH₄ and CO₂ sensors. The field data were recorded on field sampling sheets which are included in Appendix A.

The soil vapor samples were delivered on the day of collection, under proper chain of custody protocol and within hold time, to McCampbell Analytical, Inc. of Pittsburg, California (Department of Health Services Certification #1644) for analysis. Soil vapor samples were analyzed: by EPA Method TO-15 for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX), fuel oxygenates and isopropyl alcohol; and by ASTM Method D 1946-90 for atmospheric gasses (CO₂, CH₄, nitrogen, and O₂).

SOIL VAPOR SAMPLING ANALYTICAL RESULTS

- All soil vapor samples collected during the event were non-detect for TPH-g and BTEX.
- 30 µg/m³ and 28 µg/m³ of tetrachloroethene was detected at VP-1 & VP-2 samples respectively.
- PID and methane field readings from the vapor probes were non-detect (zero).

- Oxygen concentrations in soil vapor ranged from 180,000 $\mu\text{L/L}$ to 190,000 $\mu\text{L/L}$ (18% to 19%).
- Carbon dioxide concentrations in soil vapor ranged from 3,700 $\mu\text{L/L}$ to 15,000 $\mu\text{L/L}$ (0.37% to 1.5%).

Laboratory analytical results are summarized in Table 4. Copies of the laboratory analytical reports with chain of custody and quality assurance/quality control documentation are included in Appendix C.

SUMMARY

AEI completed a groundwater monitoring and sampling event on February 27, 2013. Fourteen wells were monitored as per the proposed groundwater monitoring schedule. The results of the groundwater monitoring are summarized below:

Groundwater flow is toward northwest under a hydraulic gradient of 0.02 ft/ft, consistent with historic data.

- TPH-g, TPH-d, benzene, toluene, ethylbenzene, and total xylenes were detected in groundwater around the release area. In general the concentrations appear to be decreasing as a result of recent remedial efforts.
- MTBE was detected in two groundwater samples.

AEI also completed a soil vapor sampling event on February 27, 2013. Three soil vapor probes were sampled to determine base line concentrations post-interim remediation. The results of the soil vapor sampling are summarized below:

- All soil vapor samples collected during the event were non-detect for TPH-g and BTEX. Field monitoring data indicated sufficient oxygen for aerobic degradation of hydrocarbons.

Based on the results of recent groundwater monitoring, groundwater quality has significantly improved since HVDPE implementation and source area excavation. Natural attenuation is expected to continue to reduce impact to groundwater. Groundwater monitoring data will be evaluated following each event to determine the need for further monitoring and to evaluate the site for case closure eligibility.

The next groundwater monitoring and soil gas sampling event is scheduled for May 2013, after which it is anticipated that the onsite groundwater monitoring wells and the three soil gas probes will be decommissioned.


REPORT LIMITATIONS AND SIGNATURES

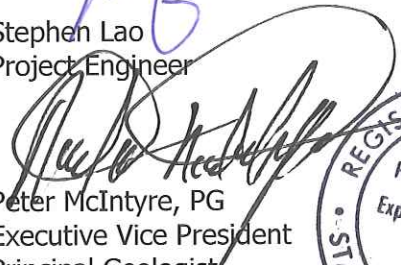
This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the requested information, but it cannot be assumed that they are representative of areas not sampled. All conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document. These services were performed in accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work and were performed under the direction of appropriate California-licensed professionals.

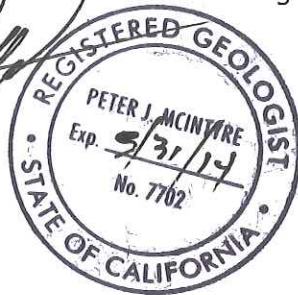
Should you have any questions, or need any additional information regarding this report, please do not hesitate to contact us at (925) 746-6000.

Sincerely,
AEI Consultants


Stephen Lao
Project Engineer


Robert Robitaille
Program Manager


Peter McIntyre, PG
Executive Vice President
Principal Geologist



ATTACHMENTS

Figures

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Elevation Data
Figure 4	Groundwater Analytical Data

Tables

Table 1	Well Construction Details
Table 2	Groundwater Elevation Data
Table 3	Groundwater Analytical Data
Table 4	Soil Vapor Analytical Data

Appendices

- Appendix A Field Sampling Forms
- Appendix B Groundwater Sample Laboratory Analytical Reports
- Appendix C Soil Vapor Sample Laboratory Analytical Reports

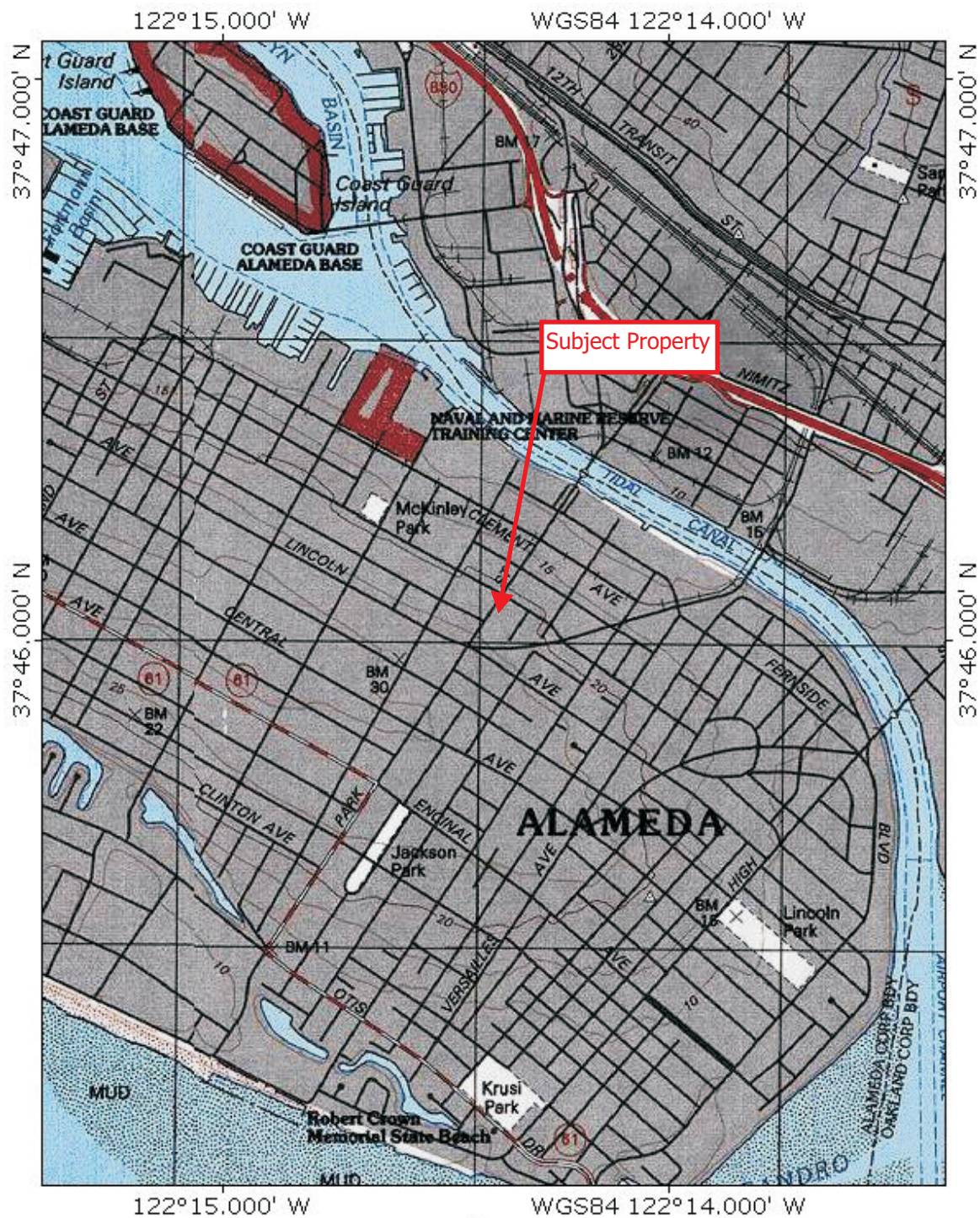
REFERENCES

- AEI Consultants (AEI) 2011a. Phase I Environmental Site Assessment, 1600 – 1650 Park Street, 1600 – 1606 Foley Street, 2329 Pacific Avenue, Alameda, California, July 5, 2011.
- AEI Consultants (AEI) 2011b. Phase II Subsurface Investigation, 1600 to 1630 Park Street, Alameda, California, August 16, 2011.
- AEI Consultants (AEI) 2011c. Interim Corrective Action Plan, 1630 Park Street, Alameda, California, September 2011.
- AEI Consultants (AEI) 2011d. ICAP Comment Letter Response and Pilot Test Workplan Details, 1630 Park Street, Alameda, California, November 14, 2011.
- AEI Consultants (AEI) 2012a. Investigation and Remedial Action Workplan, 1630 Park Street, Alameda, California, January 12, 2012.
- AEI Consultants (AEI) 2012b. Corrective Action Plan, 1630 Park Street, Alameda, California, February 3, 2012.
- AEI Consultants (AEI) 2012c. Data Gap and Interim Source Removal Workplan, 1630 Park Street, Alameda, California, May 4, 2012.
- AEI Consultants (AEI) 2012d. Interim Source Removal Report and Well Abandonment and Replacement Workplan Addendum, 1630 Park Street, Alameda, California, December 7, 2012
- RWQCB 2013. Environmental Screening Levels, Table F-1a & E-2, San Francisco Regional Water Quality Control Board

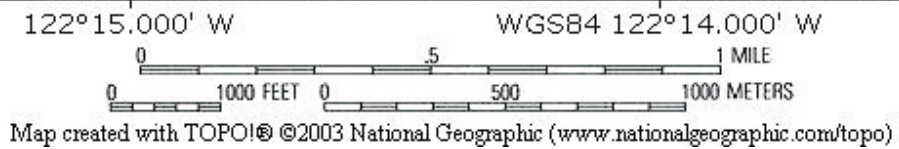
DISTRIBUTION

- John Buestad, Foley Street Investments
- Karel Detterman, Alameda County Environmental Health Department (FTP Upload)
- GeoTracker (Upload)

FIGURES



TN
MN
15°



WELL



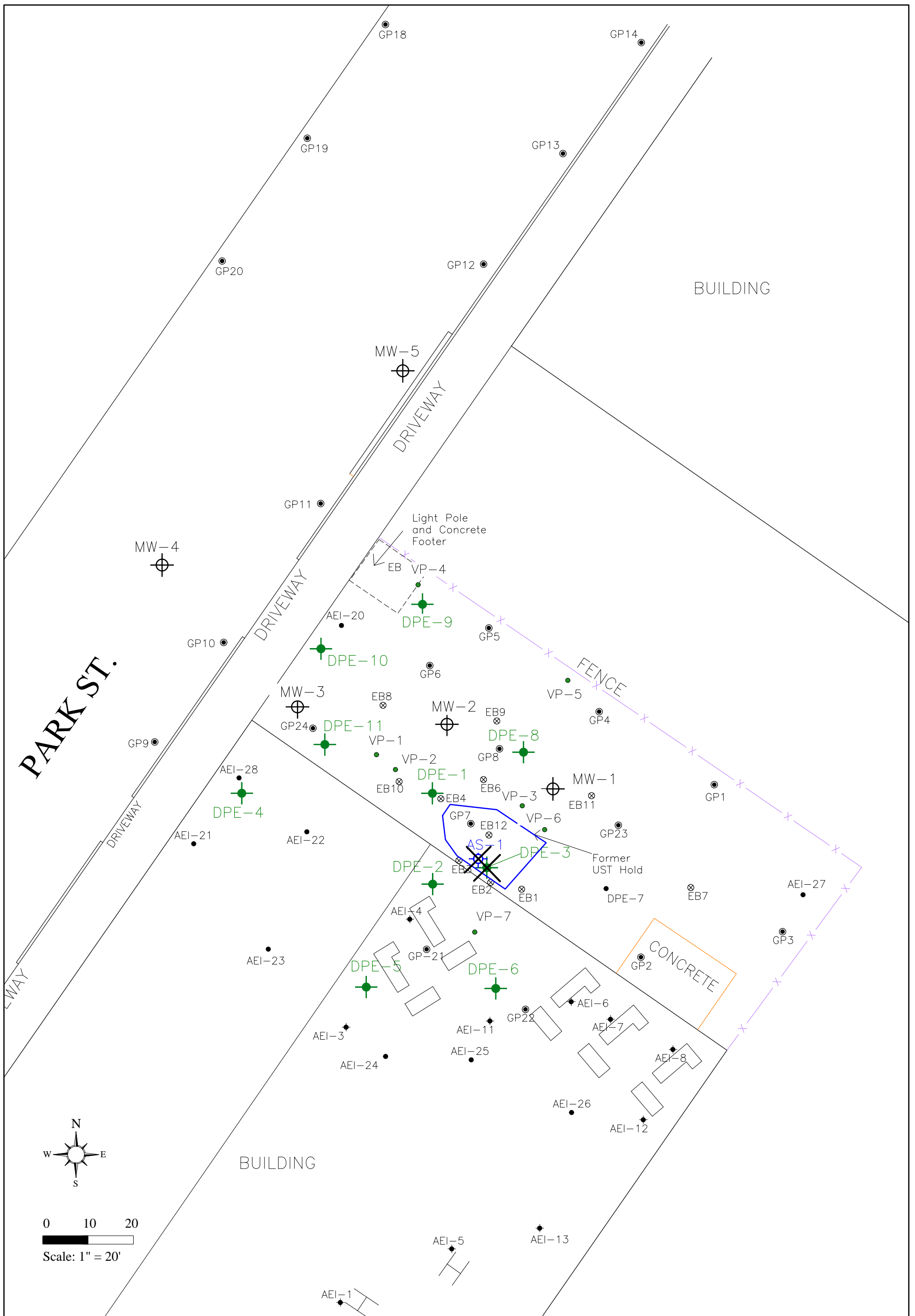
SITE LOCATION MAP

1630 Park Street, Alameda, California

FIGURE 1

Project Number: 298931





LEGEND

	Remediation Well (12/11 and 1/12)		Groundwater Monitoring Well		Existing Hydraulic Lift
	AEI Soil Boring (1/12)		Air Sparge Well		Former Hydraulic Lift
	Vapor Probe (12/11)		Abandoned Monitoring Well		
	AEI Soil Boring (7/11)		Abandoned Air Sparge Well		
	Soil Boring (4/08)				
	Soil Boring (1/97)				

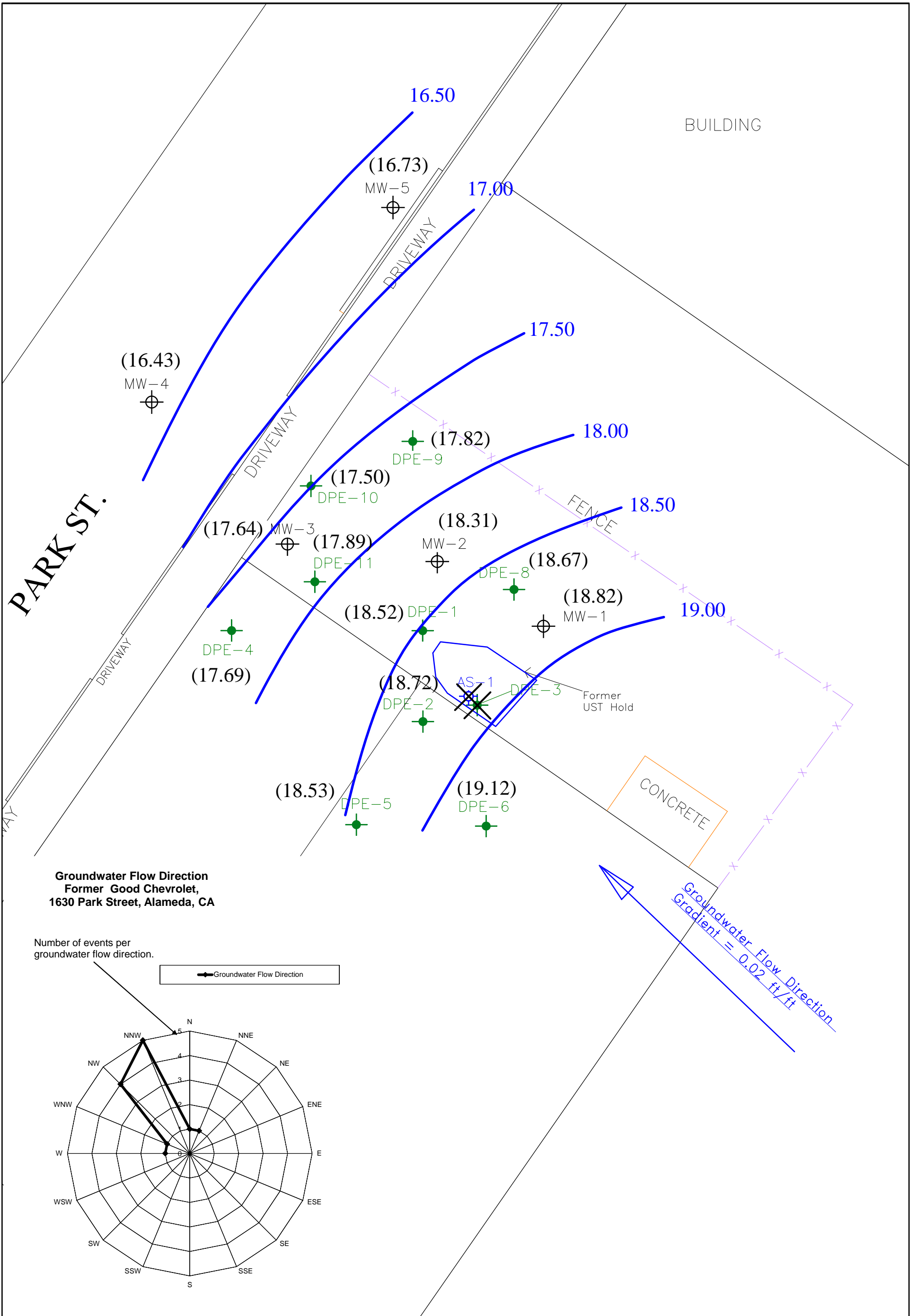
DRAFTED BY JAS 3-2-12
 REVISED BY STL 12-10-12

AEI CONSULTANTS
 2500 CAMINO DIABLO, WALNUT CREEK

SITE PLAN

1630 PARK STREET
 ALAMEDA, CALIFORNIA

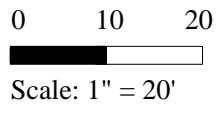
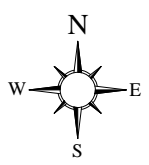
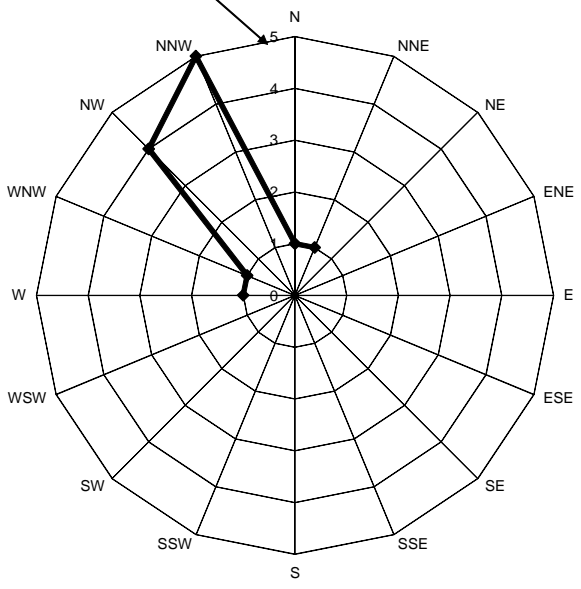
FIGURE 2
 PROJECT NO. 298931



Groundwater Flow Direction
Former Good Chevrolet,
1630 Park Street, Alameda, CA

Number of events per groundwater flow direction.

Groundwater Flow Direction



LEGEND

- Remediation Well
- Abandoned Well
- Groundwater Monitoring Well
- (306.70) Groundwater Elevation (ft, msl)

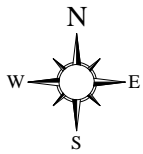
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 REVISED BY STL 05-11-13

AEI CONSULTANTS
 2500 CAMINO DIABLO, WALNUT CREEK

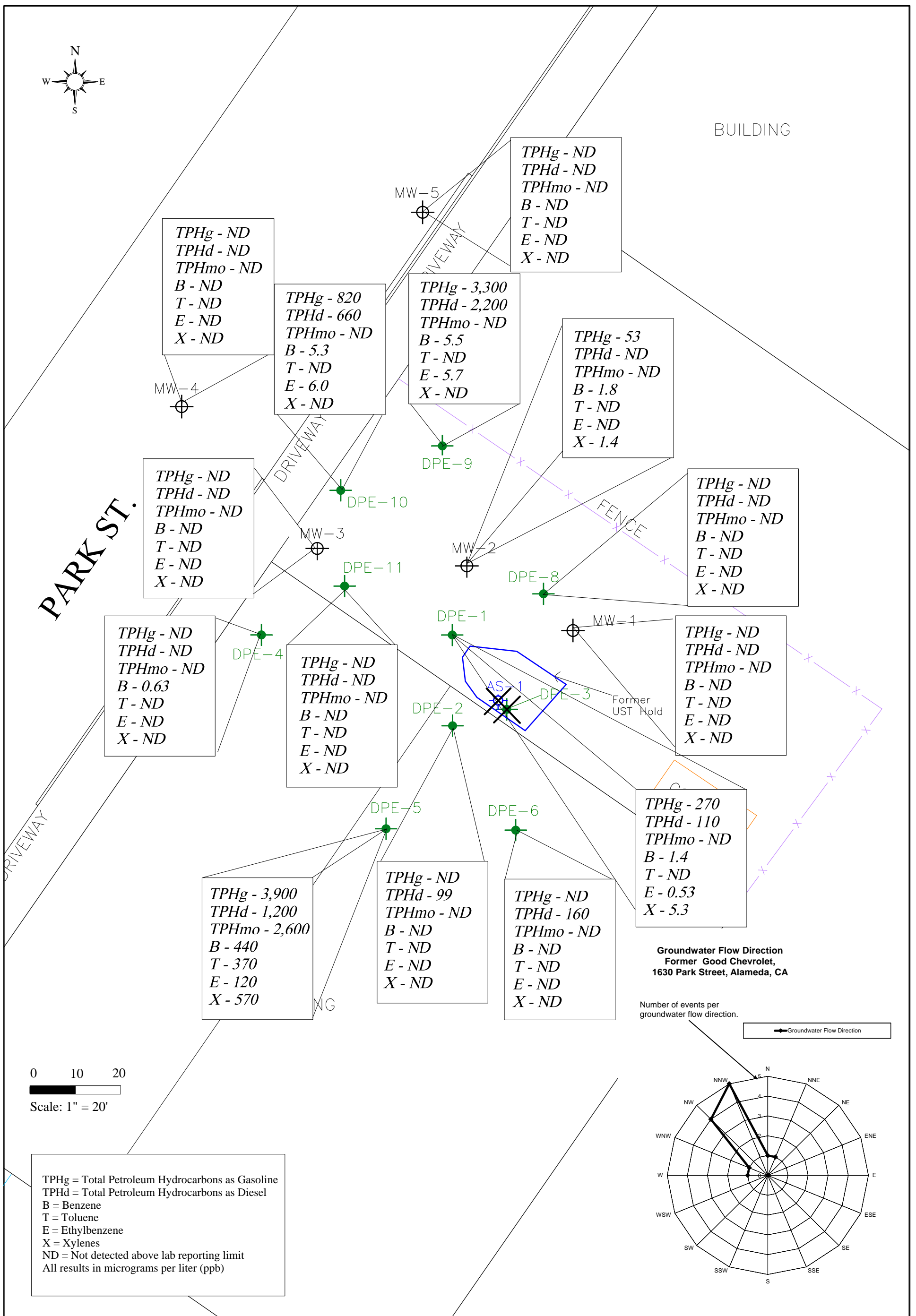
GROUNDWATER
ELEVATION DATA - FEB. 2013

1630 PARK STREET
 ALAMEDA, CALIFORNIA

FIGURE 3
 PROJECT NO. 298931



BUILDING



LEGEND

- Remediation (DPE) Well
- Abandoned Well
- Groundwater Monitoring Well

DRAFTED BY JAS 3-9-12
 REVISED BY JAS 03-25-13

AEI CONSULTANTS
 2500 CAMINO DIABLO, WALNUT CREEK

GROUNDWATER ANALYTICAL DATA - FEB. 2013

1630 PARK STREET
 ALAMEDA, CALIFORNIA

FIGURE 4
 PROJECT NO. 298931

TABLES

Table 1**Well Construction Details**

AEI Project No. 298931, 1630 Park Street, Alameda, California

Well ID Number	Well Installation Date	Elevation TOC (feet)	Casing Material	Total Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material
AS-1	11/14/2011	-	PVC	25	25	8	2	20 - 25	0.020	20 - 25	#3 Sand
DPE-1	11/15/2011	-	PVC	16	15	10	4	7 - 15	0.010	6.5 - 16	#2/12 Sand
DPE-2	11/15/2011	-	PVC	16	15	10	4	7 - 15	0.010	6.5 - 16	#2/12 Sand
DPE-3	11/14/2011	-	PVC	16	14	10	4	7 - 14	0.010	6.5 - 16	#2/12 Sand
DPE-4	1/19/2012	-	PVC	17	17	10	4	8 - 17	0.010	7.5 - 17	#2/12 Sand
DPE-5	1/20/2012	-	PVC	18	18	10	4	8 - 18	0.010	7.5 - 18	#2/12 Sand
DPE-6	1/20/2012	-	PVC	18	18	10	4	8 - 18	0.010	7.5 - 18	#2/12 Sand
DPE-8	1/20/2012	-	PVC	18	18	10	4	8 - 18	0.010	7.5 - 18	#2/12 Sand
DPE-9	1/20/2012	-	PVC	18	18	10	4	8 - 18	0.010	7.5 - 18	#2/12 Sand
DPE-10	1/20/2012	-	PVC	17	17	10	4	8 - 17	0.010	7.5 - 17	#2/12 Sand
DPE-11	1/20/2012	-	PVC	18	18	10	4	8 - 18	0.010	7.5 - 18	#2/12 Sand
MW-1	1/15/1987	-	PVC	-	20	8	2	5 - 20	-	-	-
MW-2	1/15/1987	-	PVC	-	20	8	2	5 - 20	-	-	-
MW-3	1/15/1987	-	PVC	-	20	8	2	5 - 20	-	-	-
MW-4	4/20/1994	-	PVC	-	23	8	2	8 - 23	-	-	-
MW-5	4/20/1994	-	PVC	-	22	8	2	7 - 22	-	-	-
VP-1	12/6/2011	-	Stainless Steel	6	6	1.25	1/4	5.1 - 5.6	Mesh	4.7 - 6	#30 Mesh Sanc
VP-2	12/6/2011	-	Stainless Steel	5.9	5.9	1.25	1/4	5.1-5.6	Mesh	4.7-5.9	#30 Mesh Sanc
VP-3	12/6/2011	-	Stainless Steel	5.75	5.75	1.25	1/4	5.1-5.6	Mesh	4.7-5.75	#30 Mesh Sanc

PVC = polyvinyl chloride
TOC = top of casing
"-" = not available

Table 2

Groundwater Elevation Data

AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Well ID (Screen Interval)	Date Collected	Well Elevation (ft amsl*)	Depth to Water (ft)	Groundwater Elevation (ft amsl*)	
MW-1 (5 - 20 feet bgs)	Jul-89	104.76	8.93	95.83	
	Apr-91		7.59	97.17	
	Jul-92		8.72	96.04	
	Aug-92		9.09	95.67	
	Sep-92		9.25	95.51	
	Oct-92		9.34	95.42	
	Nov-92		9.21	95.55	
	Dec-92		9.26	95.50	
	Jan-93		7.81	96.95	
	Feb-93		7.32	97.44	
	Mar-93		7.20	97.56	
	Apr-93		7.31	97.45	
	May-93		8.29	96.47	
	Jul-93		8.30	96.46	
	Oct-93		9.38	95.38	
	Jan-94		8.80	95.96	
	Apr-94		8.15	96.61	
	Jul-94		8.70	96.06	
	Oct-94		9.37	95.39	
	Jan-94		7.18	97.58	
	Apr-95		6.76	98.00	
	Jan-97		7.03	97.73	
	Nov-98		8.10	96.66	
	Jan-01		7.70	97.06	
	Jun-02		7.30	97.46	
	Nov-02		8.14	96.62	
	Feb-03		6.87	97.89	
	Jun-03		7.05	97.71	
	Apr-08	25.42	7.13	18.29	
	Jun-11	25.42	7.54	17.88	
	Dec-11	25.37	8.02	17.35	
	Jan-12	25.37	8.08	17.29	
	May-12	25.37	6.87	18.50	
	Jul-12	25.37	7.34	18.03	
	Nov-12	25.37	8.23	17.14	
	Feb-13	25.37	6.55	18.82	
	MW-2 (5 - 20 feet bgs)	Jul-89	104.86	9.24	95.62
		Apr-91		8.01	96.85
		Jul-92		9.03	95.83
		Aug-92		9.34	95.52
		Sep-92		9.46	95.40
		Oct-92		9.52	95.34
		Nov-92		9.42	95.44
		Dec-92		9.47	95.39
		Jan-93		8.25	96.61
		Feb-93		7.85	97.01
		Mar-93		7.77	97.09
Apr-93			7.86	97.00	
May-93			8.20	96.66	
Jul-93			8.72	96.14	
Oct-93			9.64	95.22	
Jan-94			9.12	95.74	
Apr-94			8.56	96.30	
Jul-94			9.02	95.84	
Oct-94			9.59	95.27	
Jan-94			7.71	97.15	
Apr-95			7.40	97.46	
Jan-97			7.55	97.31	
Nov-98			8.49	96.37	
Jan-01			8.08	96.78	
Jun-02			7.77	97.09	
Nov-02			8.50	96.36	
Feb-03			7.38	97.48	
Jun-03			7.57	97.29	
Apr-08		25.52	7.67	17.85	
Jun-11		25.52	7.35	18.17	
Dec-11		25.48	8.41	17.07	
Jan-12		25.48	8.43	17.05	
May-12		25.48	7.41	18.07	
Jul-12		25.48	7.83	17.65	
Nov-12		25.48	8.51	16.97	
Feb-13		25.48	7.17	18.31	

Table 2

Groundwater Elevation Data

AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Well ID (Screen Interval)	Date Collected	Well Elevation (ft amsl*)	Depth to Water (ft)	Groundwater Elevation (ft amsl*)
MW-3 (5 - 20 feet bgs)	Jul-89	104.52	9.00	95.52
	Apr-91		8.06	96.46
	Jul-92		8.82	95.70
	Aug-92		9.05	95.47
	Sep-92		9.09	95.43
	Oct-92		9.15	95.37
	Nov-92		9.05	95.47
	Dec-92		9.12	95.40
	Jan-93		8.18	96.34
	Feb-93		7.98	96.54
	Mar-93		7.94	96.58
	Apr-93		8.02	96.50
	May-93		7.69	96.83
	Jul-93		8.65	95.87
	Oct-93		9.32	NC
	Jan-94		8.93	NC
	Apr-94		8.52	96.00
	Jul-94		8.86	95.66
	Oct-94		9.25	95.27
	Jan-94		7.85	96.67
	Apr-95		7.64	96.88
	Jan-97		7.75	96.77
	Nov-98		8.38	96.14
	Jan-01		8.00	96.52
	Jun-02		7.81	96.71
	Nov-02		8.37	96.15
	Feb-03		7.48	97.04
	Jun-03		7.67	96.85
	Apr-08	25.17	7.74	17.43
	Jun-11	25.17	7.50	17.67
	Dec-11	25.13	8.25	16.88
	Jan-12	25.13	8.25	16.88
	May-12	25.13	7.64	17.49
Jul-12	25.13	7.97	17.16	
Nov-12	25.13	8.40	16.73	
Feb-13	25.13	7.49	17.64	
MW-4 (8 - 23 feet bgs)	Apr-94	104.86	9.29	95.57
	Jul-94		9.55	95.31
	Oct-94		9.83	95.03
	Jan-94		8.88	95.98
	Apr-95		8.80	96.06
	Jan-97		-	-
	Nov-98		-	-
	Jan-01		-	-
	Jun-02		-	-
	Nov-02		-	-
	Feb-03		-	-
	Jun-03		-	-
	Apr-08	25.53	8.73	16.80
	Jun-11	25.53	8.52	17.01
	Dec-11	25.58	-	-
	Jan-12	25.58	-	-
	May-12	25.58	8.96	16.62
	Jul-12	25.58	9.26	16.32
Nov-12	25.58	10.04	15.54	
Feb-13	25.58	9.15	16.43	
MW-5 (7 - 22 feet bgs)	Apr-94	103.62	8.27	95.35
	Jul-94		8.50	95.12
	Oct-94		8.92	94.70
	Jan-94		7.61	96.01
	Apr-95		8.48	95.14
	Jan-97		6.79	96.83
	Nov-98		8.12	95.50
	Jan-01		7.67	95.95
	Jun-02		7.61	96.01
	Nov-02		8.01	95.61
	Feb-03		7.22	96.40
	Jun-03		7.43	96.19
	Apr-08	24.31	7.36	16.95
	Jun-11	24.31	7.43	16.88
	Dec-11	24.32	-	-
	Jan-12	24.32	-	-
	May-12	24.32	7.46	16.86
	Jul-12	24.32	7.76	16.56
Nov-12	24.32	8.47	15.85	
Feb-13	24.32	7.59	16.73	

Table 2

Groundwater Elevation Data

AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Well ID (Screen Interval)	Date Collected	Well Elevation (ft amsl*)	Depth to Water (ft)	Groundwater Elevation (ft amsl*)
DPE-1 (7 - 15 feet bgs)	Dec-11	25.88	8.81	17.07
	Jan-12	25.88	8.78	17.10
	May-12	25.88	7.72	18.16
	Jul-12	25.88	8.13	17.75
	Nov-12	25.88	8.84	17.04
	Feb-13	25.88	7.36	18.52
DPE-2 (7 - 15 feet bgs)	Dec-11	26.22	9.29	16.93
	Jan-12	26.22	7.97	18.25
	May-12	26.22	7.89	18.33
	Jul-12	26.22	8.26	17.96
	Nov-12	26.22	9.02	17.20
	Feb-13	26.22	7.50	18.72
DPE-3 (7 - 15 feet bgs)	Dec-11	25.27	7.92	17.35
	Jan-12	25.27	8.98	16.29
	May-12	25.27	6.75	18.52
	Jul-12	25.27	7.20	18.07
	Nov-12	Abandoned	-	-
DPE-4 (8-17 feet bgs)	Jan-12	26.06	9.11	16.95
	May-12	26.06	8.59	17.47
	Jul-12	26.06	8.84	17.22
	Nov-12	26.06	9.23	16.83
	Feb-13	26.06	8.37	17.69
DPE-5 (8-18 feet bgs)	Jan-12	26.25	-	-
	Nov-12	26.25	9.94	16.31
	Feb-13	26.25	7.72	18.53
DPE-6 (8-18 feet bgs)	Jan-12	26.13	8.58	17.55
	May-12	26.13	7.43	18.70
	Jul-12	26.13	7.83	18.30
	Nov-12	26.13	8.71	17.42
	Feb-13	26.13	7.01	19.12
DPE-8 (8-18 feet bgs)	Jan-12	25.36	-	-
	Nov-12	25.36	8.31	17.05
	Feb-13	25.36	6.69	18.67
DPE-9 (8-18 feet bgs)	Jan-12	25.09	8.12	16.97
	Jul-12	25.09	7.81	17.28
	Nov-12	25.09	8.38	16.71
	Feb-13	25.09	7.27	17.82
DPE-10 (8-17 feet bgs)	Jan-12	25.14	-	-
	May-12	25.14	7.73	17.41
	Jul-12	25.14	8.09	17.05
	Nov-12	25.14	8.51	16.63
	Feb-13	25.14	7.64	17.50
DPE-11 (8-18 feet bgs)	Jan-12	25.57	-	-
	May-12	25.57	7.90	17.67
	Jul-12	25.57	-	-
	Nov-12	25.57	8.74	16.83
	Feb-13	25.57	7.68	17.89
Average	Dec-11		8.45	17.11
	Jan-12		8.48	17.15
	May-12		7.70	17.82
	Jul-12		8.03	17.45
	Nov-12		8.81	16.73
	Feb-13		7.51	18.03

ft amsl * = feet above mean sea level. Note: Data before 2008 are based on a fictitious 100 ft datum.

All water level depths are measured from the top of casing

"-" = not measured

bgs = below ground surface

Table 3
Groundwater Analytical Data- Monitoring Wells
 AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Sample ID	Date	Notes	TPH-d	TPH-mo	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	ETBE	Methanol	Lead
			(µg/L)	(µg/L)	(µg/L)	EPA Methods 8020, 8021B (µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-1	1/21/1987		-	-	21,020	1,148	8,627	1,792	6,012	-	-	-	-	-	-	-	-	-	-	-
	1/11/1989		-	-	1,400	74	10	13	5.0	-	-	-	-	-	-	-	-	-	-	-
	7/12/1989		-	-	1,200	470	49	45	33	-	-	-	-	-	-	-	-	-	-	-
	4/9/1991		-	-	850	260	10	15	12	-	-	-	-	-	-	-	-	-	-	-
	7/14/1992		-	-	13,000	2,300	1,200	1,200	1,200	-	-	-	-	-	-	-	-	-	-	-
	10/7/1992		-	-	3,600	1,600	80	120	120	-	-	-	-	-	-	-	-	-	-	-
	1/11/1993		-	-	1,200	410	16	23	19	-	-	-	-	-	-	-	-	-	-	-
	4/23/1993	a	-	-	2,200	720	180	82	150	-	-	-	-	-	-	-	-	-	-	-
	7/8/1993	a	-	-	3,200	1,200	110	97	100	-	-	-	-	-	-	-	-	-	-	-
	10/15/1993	a	-	-	3,700	1,400	43	94	36	-	-	-	-	-	-	-	-	-	-	-
	1/25/1994	a	-	-	1,600	680	16	41	35	-	-	-	-	-	-	-	-	-	-	-
	4/28/1994	a	-	-	6,100	1,900	380	250	340	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	a	-	-	6,000	1,800	510	220	450	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	a	-	-	3,000	1,100	79	82	87	-	-	-	-	-	-	-	-	-	-	-
	1/26/1995	a	-	-	1,600	660	100	82	87	-	-	-	-	-	-	-	-	-	-	-
	4/13/1995	a	-	-	3,800	1,200	270	120	260	-	-	-	-	-	-	-	-	-	-	-
	7/21/1995	a	-	-	5,200	1,500	450	190	400	-	-	-	-	-	-	-	-	-	-	-
	10/25/1995	a	-	-	5,900	1,800	450	210	400	-	-	-	-	-	-	-	-	-	-	-
	1/21/1997	a	-	-	3,100	1,100	87	160	180	<7.3	-	-	-	-	-	-	-	-	-	-
	11/12/1998	a	-	-	1,000	280	3	3.3	7.9	<30	-	-	-	-	-	-	-	-	-	-
	1/16/2001	a	-	-	4,700	1,20	18	150	49	-	<5	<5.0	<25	<5.0	<5.0	<5.0	-	<5.0	-	-
	6/27/2002	a	-	-	5,900	230	7.7	<5	1,500	-	<5	<5.0	<50	<5.0	<5.0	<5.0	-	<5.0	-	-
	11/18/2002	a	-	-	3,100	890	12	310	28	-	<2.5	-	-	<2.5	<2.5	-	-	-	-	-
	2/20/2003	d	-	-	260	100	0.72	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	-
	6/11/2003	a	-	-	3,100	480	6.7	220	420	-	<2.5	-	-	<2.5	<2.5	-	-	-	-	-
	4/3/2008	a	-	-	2,700	280	21	130	230	<25	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<100	<1.0	<1,000	<0.5
	6/23/2011	a	-	-	610	100	6.2	46	77	-	<2.5	<2.5	<10	-	-	<2.5	-	<2.5	-	-
	12/6/2011	a	-	-	900	160	<5.0	68	76	-	<5.0	<5.0	<20	-	-	<5.0	-	<5.0	-	-
	1/24/2012	a	-	-	190	25	<1.0	1.4	4.6	<1.0	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	210	<250	2,600	200	51	93	610	<5.0	-	-	51	-	-	-	-	-	-	-
	7/11/2012	a	700	<250	2,700	190	8.1	100	230	<5.0	-	-	-	-	-	-	-	-	-	-
	11/16/2012	c	140	<250	370	71	<1.7	<1.7	<1.7	<1.7	-	-	-	-	-	-	-	-	-	-
	2/27/2013		<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-

Table 3
Groundwater Analytical Data- Monitoring Wells
 AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Sample ID	Date	Notes	TPH-d	TPH-mo	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	ETBE	Methanol	Lead
			(µg/L)	(µg/L)	(µg/L)	EPA Methods 8020, 8021B (µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-2	1/21/1987		-	-	5,018	386	1,981	285	1,432	-	-	-	-	-	-	-	-	-	-	-
	1/11/1989		-	-	10,000	3,000	410	240	190	-	-	-	-	-	-	-	-	-	-	-
	7/12/1989		-	-	7,600	2,700	540	250	320	-	-	-	-	-	-	-	-	-	-	-
	4/9/1991		-	-	4,900	910	210	130	200	-	-	-	-	-	-	-	-	-	-	-
	7/14/1992		-	-	13,000	4,400	1,500	610	1,100	-	-	-	-	-	-	-	-	-	-	-
	10/7/1992		-	-	11,000	5,200	1,500	500	1,200	-	-	-	-	-	-	-	-	-	-	-
	1/11/1993		-	-	17,000	940	1,100	480	930	-	-	-	-	-	-	-	-	-	-	-
	4/23/1993	a	-	-	52,000	13,000	8,400	1,700	5,300	-	-	-	-	-	-	-	-	-	-	-
	7/8/1993	a	-	-	6,400	2,500	470	280	530	-	-	-	-	-	-	-	-	-	-	-
	10/15/1993	a	-	-	17,000	3,900	870	500	940	-	-	-	-	-	-	-	-	-	-	-
	1/25/1994	a	-	-	16,000	5,400	1,140	640	1,500	-	-	-	-	-	-	-	-	-	-	-
	4/28/1994	a	-	-	15,000	4,000	910	480	1,200	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	a	-	-	18,000	6,000	760	630	1,600	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	a	-	-	9,500	2,700	230	320	640	-	-	-	-	-	-	-	-	-	-	-
	1/26/1995	a	-	-	5,900	1,900	290	230	500	-	-	-	-	-	-	-	-	-	-	-
	4/13/1995	a	-	-	10,000	3,300	620	360	930	-	-	-	-	-	-	-	-	-	-	-
	7/21/1995	a	-	-	9,900	3,300	320	390	830	-	-	-	-	-	-	-	-	-	-	-
	10/25/1995	a	-	-	13,000	4,900	400	580	990	-	-	-	-	-	-	-	-	-	-	-
	1/21/1997	a	-	-	7,600	2,600	310	330	660	<20	-	-	-	-	-	-	-	-	-	-
	11/12/1998	a	-	-	31,000	11,000	750	1,500	2,300	<900	-	-	-	-	-	-	-	-	-	-
	1/16/2001	a	-	-	23,000	8,200	260	1,000	820	<30	-	<30	<150	<30	<30	<30	-	<30	-	-
	6/27/2002	a	-	-	39,000	7,000	1,800	690	4,000	-	<5	<5.0	<5.0	<5.0	6.1	<5.0	-	<5.0	-	-
	11/18/2002	a	-	-	15,000	5,700	76	1,000	150	-	<12	-	-	<12	<12	-	-	-	-	-
	2/20/2003	a	-	-	26,000	6,300	1,100	1,300	1,900	-	<5.0	-	-	<5.0	<5.0	-	-	-	-	-
	6/11/2003	a	-	-	37,000	7,100	2,300	2,000	3,600	-	<25	-	-	<25	<25	-	-	-	-	-
	4/3/2008	a	-	-	4,100	760	96	250	130	<50	<2.5	<2.5	<10	<2.5	<2.5	<2.5	<250	<2.5	<2,500	<0.5
	6/23/2011	a	-	-	6,500	2,100	210.0	560	310	-	<50	<50	<200	-	<50	-	<50	-	<50	-
	12/6/2011	a	-	-	4,800	1,600	<50	260	<50	-	<50	<50	<200	-	<50	-	<50	-	<50	-
	1/24/2012	a	-	-	2,500	100	22.0	<5.0	410	<5.0	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	68	<250	140	14	2.8	2.9	12	<0.5	-	-	-	-	-	-	-	-	-	-
	7/11/2012	a	270	<250	930	170	<5.0	24	9.3	<5.0	-	-	-	-	-	-	-	-	-	-
	11/16/2012	c	200	<250	340	15	1.4	5.4	2.1	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013	a	<50	<250	53	1.8	<0.5	<0.5	1.4	<0.5	-	-	-	-	-	-	-	-	-	-

Table 3
Groundwater Analytical Data- Monitoring Wells
 AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Sample ID	Date	Notes	TPH-d	TPH-mo	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	ETBE	Methanol	Lead
			(µg/L)	(µg/L)	(µg/L)	EPA Methods 8020, 8021B (µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-3	1/21/1987		-	-	10,287	1,428	3,281	610	2,761	-	-	-	-	-	-	-	-	-	-	-
	1/11/1989		-	-	5,300	1,800	340	150	160	-	-	-	-	-	-	-	-	-	-	-
	7/12/1989		-	-	7,800	3,100	900	300	480	-	-	-	-	-	-	-	-	-	-	-
	4/9/1991		-	-	9,400	1,400	730	200	510	-	-	-	-	-	-	-	-	-	-	-
	7/14/1992		-	-	17,000	3,500	390	390	260	-	-	-	-	-	-	-	-	-	-	-
	10/7/1992		-	-	9,200	4,300	470	390	610	-	-	-	-	-	-	-	-	-	-	-
	1/11/1993		-	-	2,000	740	29	58	28	-	-	-	-	-	-	-	-	-	-	-
	4/23/1993	a	-	-	6,500	2,600	280	260	190	-	-	-	-	-	-	-	-	-	-	-
	7/8/1993	a	-	-	5,200	2,100	260	250	180	-	-	-	-	-	-	-	-	-	-	-
	10/15/1993	a	-	-	11,000	3,500	580	430	370	-	-	-	-	-	-	-	-	-	-	-
	1/25/1994	a	-	-	6,200	2,500	270	160	28	-	-	-	-	-	-	-	-	-	-	-
	4/28/1994	a	-	-	5,300	1,700	190	210	180	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	a	-	-	5,900	2,000	360	260	330	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	a	-	-	8,000	2,200	580	260	170	-	-	-	-	-	-	-	-	-	-	-
	1/26/1995	a	-	-	3,700	1,200	150	150	190	-	-	-	-	-	-	-	-	-	-	-
	4/13/1995	a	-	-	4,000	1,400	200	180	210	-	-	-	-	-	-	-	-	-	-	-
	7/21/1995	a	-	-	5,700	2,000	280	270	280	-	-	-	-	-	-	-	-	-	-	-
	10/25/1995	a	-	-	11,000	3,500	1,100	460	680	-	-	-	-	-	-	-	-	-	-	-
	1/21/1997	a	-	-	2,200	860	63	71	80	<5	-	-	-	-	-	-	-	-	-	-
	11/12/1998	d	-	-	180	44	0.51	<0.5	0.92	<20	-	-	-	-	-	-	-	-	-	-
	1/16/2001	a	-	-	64	11	0.77	<0.5	<0.5	-	<5	<1.0	<5.0	<1.0	1.4	<1.0	-	<1.0	-	-
	6/27/2002		-	-	<50	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	-	<0.5	-	-
	11/18/2002	a	-	-	110	21	1	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	-
	2/20/2003		-	-	<50	2.5	<0.5	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	-
	6/11/2003		-	-	<50	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	-
	4/3/2008	a	-	-	7,600	2,400	58	250	170	<100	<5.0	<5.0	<20	<5.0	<5.0	<500	<5.0	<5,000	<0.5	<0.5
	6/23/2011	a	-	-	1,300	560	21	86	150	-	<12	<12	<50	-	<12	-	<12	<12	-	-
	12/6/2011	a	-	-	1,800	620	28	22	46	-	<17	<17	<67	-	<17	-	<17	<17	-	-
	1/24/2012	a	-	-	3,700	1,200	68	34	130	<25	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	<50	<250	75	5.3	<0.5	<0.5	1.6	<0.5	-	-	-	-	-	-	-	-	-	-
	7/11/2012	a	<50	<250	78	1.4	0.66	<0.5	5.5	<0.5	-	-	-	-	-	-	-	-	-	-
	11/16/2012		<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013	g	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-

Table 3
Groundwater Analytical Data- Monitoring Wells
 AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Sample ID	Date	Notes	TPH-d	TPH-mo	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	ETBE	Methanol	Lead
			(µg/L)	(µg/L)	(µg/L)	EPA Methods 8020, 8021B			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-4	4/28/1994	b,c	-	-	190	3.8	2.9	2.1	3.1	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	a	-	-	180	15	9.2	7.6	28	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	a	-	-	130	8.6	6.6	4.5	17	-	-	-	-	-	-	-	-	-	-	-
	1/26/1995	-	-	-	110	6.5	1.2	1.8	11	-	-	-	-	-	-	-	-	-	-	-
	4/13/1995	-	-	-	82	3.9	<0.5	<0.5	2.5	-	-	-	-	-	-	-	-	-	-	-
	7/21/1995	-	-	-	130	8.8	1.3	4.5	7.6	-	-	-	-	-	-	-	-	-	-	-
	10/25/1995	-	-	-	95	6.6	1.7	4.3	7	-	-	-	-	-	-	-	-	-	-	-
	4/3/2008	-	-	-	130	1.6	<0.5	0.89	0.85	<5.0	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<0.5	<500	<0.5
	6/23/2011	a	-	-	53	2.7	<0.5	1.0	1.7	-	<0.5	<0.5	<2.0	-	-	<0.5	-	<0.5	-	-
	5/23/2012	f	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	7/11/2012	g	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	11/16/2012	c	360	<250	440	3.4	<0.5	1.2	2.1	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013	-	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
MW-5	4/28/1994	a	-	-	30,000	4,000	3,000	810	3,500	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	a	-	-	9,300	2,000	800	290	940	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	a	-	-	15,000	2,700	1,300	420	1,100	-	-	-	-	-	-	-	-	-	-	-
	1/26/1995	a	-	-	7,900	2,100	680	240	860	-	-	-	-	-	-	-	-	-	-	-
	4/13/1995	a	-	-	7,900	2,400	580	340	630	-	-	-	-	-	-	-	-	-	-	-
	7/21/1995	a	-	-	11,000	3,400	760	610	1,200	-	-	-	-	-	-	-	-	-	-	-
	10/25/1995	a	-	-	13,000	2,900	830	570	1,100	-	-	-	-	-	-	-	-	-	-	-
	1/21/1997	a	-	-	2,600	750	65	1,860	280	<5	-	-	-	-	-	-	-	-	-	-
	11/12/1998	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5	-	-	-	-	-	-	-	-	-	-
	1/16/2001	-	-	-	<50	11	<0.5	<0.5	0.82	-	<5	<1.0	<5.0	<1.0	<1.0	<1.0	-	<1.0	-	-
	6/27/2002	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	-	<0.5	-	-
	11/18/2002	a	-	-	130	17	3.8	2.1	16	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	
	2/20/2003	-	-	-	<50	5.6	0.51	<0.5	0.68	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	
	6/11/2003	a	-	-	170	48	<0.5	<0.5	1.4	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	
	4/3/2008	a	-	-	31,000	490	3,400	1,600	5,300	<250	<10	<10	<40	<10	<10	<10	<1,000	<10	<10,000	<0.5
	6/23/2011	a	-	-	82	5.1	<0.5	12.0	8.4	-	<0.5	<0.5	<2.0	-	-	<0.5	-	<0.5	-	
	5/18/2012	f	<50	<250	120	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	
	7/11/2012	g	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	
	11/16/2012	c	450	<250	580	27	1.7	6.7	7.1	<0.5	-	-	-	-	-	-	-	-	-	
2/27/2013	-	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-		

Table 3
Groundwater Analytical Data- Monitoring Wells
 AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Sample ID	Date	Notes	TPH-d	TPH-mo	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	ETBE	Methanol	Lead
			(µg/L)	(µg/L)	(µg/L)	EPA Methods 8020, 8021B (µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	EPA Method 8260B (µg/L)	(µg/L)	(µg/L)	(µg/L)
DPE-1	12/6/2011	a	-	-	9,200	1,800	570	460	1,100	-	<50	<50	<200	-	-	<50	-	<50	-	-
	1/24/2012	a	-	-	3,200	170	58	<5.0	620	<5.0	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	280	<250	540	49	<1.0	<1.0	17	<1.0	-	-	-	-	-	-	-	-	-	-
	7/11/2012	a	860	<250	2,300	240	15	98	88	<5.0	-	-	-	-	-	-	-	-	-	-
	11/16/2012	c	360	<250	580	3.3	<0.5	2.2	2.8	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013	a,c	110	<250	270	1.4	<0.5	0.53	5.3	<0.5	-	-	-	-	-	-	-	-	-	-
DPE-2	12/6/2011	a	-	-	22,000	2,100	3,300	650	3,300	-	<100	<100	<400	-	-	<100	-	<100	-	-
	1/24/2012	a	-	-	1,100	44	26	11	150	<2.5	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	<50	<250	220	33	3.2	<0.5	30	<0.5	-	-	-	-	-	-	-	-	-	-
	7/11/2012	a	400	<250	2,600	300	12	45	390	<10	-	-	-	-	-	-	-	-	-	-
	11/16/2012		<50	<250	<50	3.4	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013	h	99	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
DPE-3	12/6/2011	a	-	-	6,400	550	560	180	1,000	-	<17	<17	<67	-	-	<17	-	<17	-	-
	1/24/2012	a	-	-	5,500	290	240	44	1,000	<5.0	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	260	<250	1,100	78	37	11	89	<1.7	-	-	-	-	-	-	-	-	-	-
	7/11/2012	a	720	<250	2,400	330	19	10	130	<10	-	-	-	-	-	-	-	-	-	-
DPE-4	1/24/2012	a	-	-	730	66	6.0	7.1	83	2.5	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	7/11/2012		<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	11/16/2012		<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013		<50	<250	<50	0.63	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
DPE-5	11/16/2012	h	560	1,400	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013	a,c,h	1,200	2,600	3,900	440	370	120	570	<10	-	-	-	-	-	-	-	-	-	-
DPE-6	1/24/2012	a	-	-	64*	<0.5	<0.5	<0.5	3.2	<0.5	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	7/11/2012	g	<50	<250	<50	0.93	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	11/16/2012		<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013	h	160	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
DPE-8	11/16/2012	c	460	<250	630	13	<0.5	1.1	19	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013		<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
DPE-9	1/24/2012	a	<50	<250	4,400	160	390	93	1,100	<5.0	-	-	-	-	-	-	-	-	-	-
	7/11/2012	a	680	<250	1,300	47	3.1	4.0	100	<1.7	-	-	-	-	-	-	-	-	-	-
	11/16/2012	c	470	<250	530	4.7	<0.5	0.78	2.3	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013	b	2200	<250	3,300	5.5	<0.5	5.7	<0.5	16	-	-	-	-	-	-	-	-	-	-

Table 3
Groundwater Analytical Data- Monitoring Wells
 AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Sample ID	Date	Notes	TPH-d	TPH-mo	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	ETBE	Methanol	Lead
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
DPE-10	5/18/2012	f	420	<250	1,700	150	<5.0	<5.0	<5.0	160	-	-	-	-	-	-	-	-	-	-
	7/11/2012	a	160	<250	360	40	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-
	11/16/2012		<50	<250	79	4.9	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013	a	660	<250	820	5.3	<0.5	6.0	<0.5	4.4	-	-	-	-	-	-	-	-	-	-
DPE-11	5/18/2012	f	260	<250	930	6.4	4.6	4.6	160	<1.2	-	-	-	-	-	-	-	-	-	-
	7/11/2012	a	1,600	<250	2,400	16	<1.0	14	57	<1.0	-	-	-	-	-	-	-	-	-	-
	11/16/2012	c	540	<250	860	5.3	<0.5	0.81	1.2	<0.5	-	-	-	-	-	-	-	-	-	-
	2/27/2013		<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
ESL			100	100	100	1.0	40	30	20	5.0	5.0	NA	12	0.05	0.5	NA	NA	NA	NA	2.5

TPH-g= total petroleum hydrocarbons as gasoline
 TPH-d= total petroleum hydrocarbons as diesel
 TPH-mo= total petroleum hydrocarbons as motor oil
 MTBE = Methyl tertiary butyl ether
 TAME = Tertiary amyl methyl ether
 TBA = Tertiary butyl alcohol
 EDB = 1,2-Dibromoethane
 1,2-DCA = 1,2-Dichloroethane
 DIPE = Diisopropyl ether
 ETBE = Ethyl tertiary butyl ether
 "-" = Not analyzed or data not available
 µg/L = micrograms per liter (ppb)
 ESL = Environmental Screening Levels, Table F-1a, Groundwater, Potential Drinking Water, San Francisco Regional Water Quality Control Board, Revised February 2013
 NA = Not applicable

a = Laboratory note indicates the unmodified or weakly modified gasoline is significant.
 b = Laboratory note indicates heavier gasoline range compounds are significant (aged gas?).
 c = Laboratory note indicates gasoline range compounds are significant with no recognizable pattern.
 d = Laboratory note indicates that lighter gasoline range compounds (the most mobile fraction) are significant.
 e = Laboratory note indicates that one to a few isolated non-targeted peaks are present.
 f = Laboratory note indicates that low surrogate due to matrix interference.
 g = Surrogate recovery exceeds the control limits due to dilution / matrix interference / coelution / presence of surrogate compound in the sample
 h = Laboratory note indicates that diesel & oil range compounds are significant

* Total petroleum hydrocarbons as diesel = <50; Total petroleum hydrocarbons as motor oil = <250

Table 4
Soil Vapor Analytical Data
 AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Sample ID	Date	TPH-g & TVH (µg/m3)	Benzene (µg/m3)	Toluene (µg/m3)	Ethyl-benzene (µg/m3)	Xylenes (µg/m3)	TBA (µg/m3)	Isopropyl Alcohol (µg/m3)	MTBE (µg/m3)	TAME (µg/m3)	DIPE (µg/m3)	ETBE (µg/m3)	Naphthalene (µg/m3)	Other VOCs (µg/m3)	CO2 (µL/L)	Methane (µL/L)	Nitrogen (µL/L)	Oxygen (µL/L)
VP-1	5/17/2012	<1,800	<6.5	<7.7	<8.8	<27	<62	<50										
	7/12/2012	<1,800	<6.5	<7.7	<8.8	<27	<62	<50	<7.3	<8.5	<8.5	<8.5	<11	-	17,000	<1.0	-	270,000
	11/16/2012	<2,700	<9.7	<11	<13	<40	<93	<50	<11	<13	<13	<13	<16	500 ^a ,63 ^b	25,000	<1.5	750,000	180,000
	2/27/2013	<1,800	<6.5	<7.7	<8.8	<27	<62	<50	<7.3	<8.5	<8.5	<8.5	<11	30 ^b	15,000	<1.0	710,000	180,000
VP-2	5/17/2012	<1,800	<6.5	<7.7	<8.8	<27	<62	<50										
	7/12/2012	<1,800	<6.5	<7.7	<8.8	<27	230	<50	<7.3	<8.5	<8.5	<8.5	<11	-	13,000	<1.0	-	280,000
	11/16/2012	<1,800	<6.5	<7.7	<8.8	<27	95	<50	<7.3	<8.5	<8.5	<8.5	<11	95 ^d ,110 ^c , 230 ^a ,72 ^b	23,000	<1.0	610,000	180,000
	2/27/2013	<2,700	<9.7	<11	<13	<40	<93	<50	<11	<13	<13	<13	<16	28 ^b	13,000	<1.5	710,000	190,000
VP-3	5/17/2012	<1,800	<6.5	<7.7	<8.8	<27	<62	<50										
	7/12/2012	<1,800	<6.5	<7.7	<8.8	<27	<62	290*	<7.3	<8.5	<8.5	<8.5	<11	-	24,000	1.1	-	280,000
	11/16/2012	<1,900	<6.9	<8.2	<9.3	<29	<66	<50	<7.7	<9.0	<9.0	<9.0	<12	260 ^a	8,500	1.5	630,000	210,000
	2/27/2013	<2,700	<9.7	<11	<13	<40	<93	<50	<11	<13	<13	<13	<16	ND	3,700	1.1	710,000	190,000
ESL		3,100,000	420	1,300,000	4,900	440,000	NA	NA	47,000	NA	NA	NA	360		NA	NA	NA	NA

TPH-g= total petroleum hydrocarbons as gasoline
 TVH= Total volatile hydrocarbons -aliphatics
 TBA = tert-Butyl-alcohol
 µg/m3 = micrograms per cubic meter (ppbv)
 290* = Isopropyl alcohol used as leak check compound.
 ND = Not detected above the reporting limit.
 NA = Not applicable

ESL = Environmental Screening Levels, Table E-2, San Francisco Regional Water Quality Control Board (Shallow Soil Gas- Lowest Commercial), Revised February 2013

MTBE= Methyl-tert-butyl ether
 TAME= Tert-amyl methyl ether
 DIPE= Di-isopropyl ether
 ETBE= Ethyl tert-butyl ether
 a = Hexane
 b = Tetrachloroethene
 c = Ethanol
 d = Tert-butyl alcohol

APPENDIX A
FIELD SAMPLING FORMS

AEI CONSULTANTS

GROUNDWATER MONITORING WORK ORDER (LOW-FLOW PURGING & SAMPLING)

Project Name:	Foley Street Investments	
Project Number:	298931	
	Hours	
Activity	Budget	Actual

Client Contact:	John Buestad
Project Manager:	Bob Robitaille
Gate / System Combo:	
PO Number:	
Scheduled Work Date:	2.27-13
Flexible:	YES NO
Site Contact:	N/A
Site Phone:	N/A
Site Address:	1630 Park St. Alameda, CA 94501

Summary of Work Requested	<p style="text-align: center;">Groundwater and Soil Vapor Monitoring Event</p> <p>1) Measure DTW and sample All Groundwater wells using low-flow purging and sampling method.</p> <p>2) Run the peristaltic pump at 150 rpms x 1.67 ml/rev = 250 ml/min, or less.</p> <p>3) Stabilization criteria: pH ±0.1; conductivity ±3%; DO ±10%; ORP ±10 mV.</p> <p>4) Collect at least three (3) 40-mL VOAs and one (1) amber liter from each well.</p> <p>5) Collect Soil Vapor samples from VP-1, 2 and 3.</p> <p>6) Use 1-Liter summa cannisters equipped with 150 ml/min regulators.</p> <p>7) Stop pulling sample when ~5 in.Hg vacuum remaining in canister.</p> <p>8) Inventory Drums at Site. Make sure all of ours are labeled.</p>
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Completed **Not Completed**

- 1. Removed standing water from well boxes; removed well caps; allowed water levels to stabilize.
- 2. Checked the depth to water in each well sampled before and after purging and sampling.
- 3. Continuously purged up to 10 liters of groundwater using peristaltic pump and flow-thru cell.
- 4. Recorded temp, pH, sc, DO, and ORP readings until stabilization criteria was achieved (see above).
- 5. Noted appearance of purge water (clear, dark, milky, etc.) and if an immiscible sheen was present.
- 6. Collected three (3) 40-ml VOA vials per well, capped with zero head space (no bubbles in the VOAs).
- 7. Noted condition of well boxes, well casing, and well plug; recorded wellhead info on the field sheets.
- 8. Recorded the amount of consumables (bailers, drums, well plugs, tubing, etc.) used.
- 9. Labeled purge water drums; recorded the total number of drums used and left onsite below.
- 10. Transported samples on water ice to McCampbell Analytical, Inc. of Pittsburg, CA for analyses.

Lab Analyses: See Chain-of-Custody

Turnaround Time: Rush 24 hours 48 hours 72 hours Standard

Consumables: # of Bailers: 1 # of Drums: 0 # of Well Plugs:

AEI CONSULTANTS

GROUNDWATER MONITORING WORK ORDER (LOW-FLOW PURGING & SAMPLING)

Drums Onsite: # of Water: 2 # of Soil: 1 # of Other: 1

Requested by PM: _____ Completed by Tech: [Signature]

Groundwater Notes:

Need traffic control to access MW-4. Coordinate with Robitaille and/or Campbell.

During each monitoring event, water levels will be measured, and for new wells, light non-aqueous phase liquid (LNAPL) will be checked with an oil-water interface probe. Wells not containing measurable LNAPL will be purged using low flow sampling techniques until field readings have stabilized. During purging the following water quality measurements will be collected: temperature, pH, specific conductivity, and dissolved oxygen (DO). Groundwater samples will be collected into appropriate laboratory-supplied containers using the purge tubing which will consist of new, unused disposable tubing for each well. Samples will then be logged onto the Chain of Custody and placed in a cooler with water ice. All samples will be delivered to a state certified laboratory under Chain of Custody documentation.

One groundwater sample will be analyzed from each well for TPHmo and TPHd by EPA method 8015 Modified with silica gel cleanup, TPHg by EPA method 8015 Modified, and BTEX & MTBE by EPA method 8260B.

Soil Vapor Notes:

To begin, a 1 liter summa canister connected to a flow controller, will be connected to the probe sampling lines. Prior to collecting the sample, soil vapor will be withdrawn from the inert tubing using a calibrated syringe connected via an on-off valve. A total of three purge volumes will be removed from each probe. Following purging, soil gas will be monitoring with an Eagle ® field meter for oxygen (O₂), carbon dioxide (CO₂), and total hydrocarbons. The sample canister will then be connected, opened, and the initial vacuum recorded. Vapor samples will be collected through the regulator at approximately 150 mL/minute. Upon reaching approximately 5 in Hg vacuum in the canister, the canister will be closed and removed from the sampling line. Samples will be appropriately labeled and entered onto the chain of custody prior to shipping to the laboratory. During sampling, a leak check gas will be used to confirm that the sample train was tight and leak free.

All vapor samples will be sealed and labeled immediately upon collection. Chain of custody documentation will be initiated prior to leaving the site. All samples will be shipped to a state certified laboratory on the day of collection. Soil vapor samples will be analyzed by EPA Method TO-3 for total petroleum hydrocarbons as gasoline (TPHg) and by EPA Method TO-15 for benzene, toluene, ethylbenzene, and xylenes (BTEX) & Naphthalene, N₂, CH₄, O₂, CO₂.

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Well & Wellhead Condition	good		
Elevation of Top of Casing (feet above msl)			
Depth of Well	20.00		
Depth to Water (from top of casing)	Before: 6.55	After: 6.57	
Water Elevation (feet above msl)	Before:	After:	
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling		
Well Volumes Purged	MICROPURGED		
Pump Speed (Default = 300 rpms)	300 RPM		
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5 L / MIN		
Actual Volume Purged (liters)	5L		
Appearance of Purge Water/Turbidity/Color	Clear		
Free Product Present?	No	Thickness (ft):	

Purging Equipment/Pump: Peristaltic bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0520	1	18.06	866	2.21	7.82	-118.2	Clear
	2	18.08	860	2.08	7.80	-113.4	"
	3	18.10	855	1.65	7.78	-107.2	"
	4	18.10	849	1.21	7.76	-100.8	"
0530	5	18.12	844	1.08	7.75	-98.3	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	No	COMMENTS
Recharge time %	> 90%	
Duplicate sample	No	
Pump intake depth	17 FT	
Sample method	PUMP	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	good		
Elevation of Top of Casing (feet above msl)			
Depth of Well	20.00		
Depth to Water (from top of casing)	Before: 7.17	After: 7.19	
Water Elevation (feet above msl)	Before:	After:	
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling		
Well Volumes Purged	Micropurged		
Pump Speed (Default = 300 rpms)	300 RPM		
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5L/min		
Actual Volume Purged (liters)	5		
Appearance of Purge Water/Turbidity/Color	Clear		
Free Product Present?	No	Thickness (ft):	

Purging Equipment/Pump: Peristaltic bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0550	1	18.10	1160	6.23	7.60	-138.4	Clear
	2	18.10	1152	6.07	7.53	-134.2	"
	3	18.13	1147	5.13	7.50	-130.1	"
	4	18.15	1143	3.82	7.47	-125.7	"
0600	5	18.15	1140	2.08	7.43	-122.4	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	No	COMMENTS
Recharge time %	>90%	
Duplicate sample	No	
Pump intake depth	17 FT	
Sample method	Pump	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2
Wellhead Condition	good
Elevation of Top of Casing (feet above msl)	
Depth of Well	20.00
Depth to Water (from top of casing)	Before: 7.49 After: 7.50
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	Micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5L / min
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clear
Free Product Present?	NO
Thickness (ft):	

Purging Equipment/Pump: Peristaltic bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0620	1	18.13	808	3.95	7.74	-130.8	Clear
	2	18.13	792	3.02	7.70	-127.1	"
	3	18.15	790	2.62	7.68	-125.4	"
	4	18.16	787	2.17	7.66	-122.3	"
0630	5	18.17	782	1.90	7.66	-120.1	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	~90%	
Duplicate sample	No	
Pump intake depth	17 FT	
Sample method	PUMP	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	good		
Elevation of Top of Casing (feet above msl)			
Depth of Well	23.00		
Depth to Water (from top of casing)	Before: 9.15	After: 9.17	
Water Elevation (feet above msl)	Before:	After:	
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling		
Well Volumes Purged	Micropurged		
Pump Speed (Default = 300 rpms)	300 RPM		
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5L/min		
Actual Volume Purged (liters)	5		
Appearance of Purge Water/Turbidity/Color	Clear		
Free Product Present?	NO	Thickness (ft):	

Purging Equipment/Pump: Peristaltic bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0420	1	18.10	417	4.90	7.63	-144.8	Clear
	2	18.12	398	4.62	7.60	-140.2	"
	3	18.13	395	4.17	7.58	-138.7	"
	4	18.15	390	3.90	7.55	-136.2	"
0430	5	18.15	388	3.82	7.53	-133.5	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	>90%	
Duplicate sample	NO	
Pump intake depth	17 FT	
Sample method	PUMP	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2
Wellhead Condition	good
Elevation of Top of Casing (feet above msl)	
Depth of Well	22.00
Depth to Water (from top of casing)	Before: 7.59 After: 7.60
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	Micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	5L/min
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clean
Free Product Present?	NO
Thickness (ft):	

Purging Equipment/Pump: Peristaltic/ bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0450	1	18.08	817	3.65	7.61	-103.2	Clean
	2	18.10	801	3.21	7.58	-97.8	"
	3	18.10	797	2.79	7.56	-95.4	"
	4	18.11	790	2.53	7.56	-93.1	"
0500	5	18.12	782	2.18	7.55	-91.5	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	>90%	
Duplicate sample	NO	
Pump intake depth	17 FT	
Sample method	Pump	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-1

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4
Wellhead Condition	damaged
Elevation of Top of Casing (feet above msl)	
Depth of Well	15.00
Depth to Water (from top of casing)	Before: 7.36 After: 7.38
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5L/min
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clean
Free Product Present?	NO
Thickness (ft):	

Purging Equipment/Pump: Peristaltic/ bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0650	1	18.02	907	3.27	7.70	-153.8	Clean
	2	18.05	895	2.89	7.68	-150.2	"
	3	18.08	890	2.17	7.62	-147.6	"
	4	18.08	882	1.72	7.58	-142.3	"
0700	5	18.10	878	1.26	7.57	-140.4	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	~90%	
Duplicate sample	NO	
Pump intake depth	13 FT	
Sample method	PUMP	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-2

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	Damaged		
Elevation of Top of Casing (feet above msl)			
Depth of Well	15.00		
Depth to Water (from top of casing)	Before: 7.50	After: 7.52	
Water Elevation (feet above msl)	Before:	After:	
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling		
Well Volumes Purged	Micropurged		
Pump Speed (Default = 300 rpms)	300 RPM		
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5L/min		
Actual Volume Purged (liters)	5		
Appearance of Purge Water/Turbidity/Color	Clean		
Free Product Present?	No	Thickness (ft):	
Purging Equipment/Pump	Peristaltic/ bladder/ centrifugal/ submersible		

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0950	1	18.10	1059	2.84	7.60	-142.7	Clear
	2	18.12	1050	2.59	7.58	-140.2	"
	3	18.12	1046	2.18	7.56	-136.4	"
	4	18.14	1043	2.01	7.56	-133.2	"
1000	5	18.15	1040	1.87	7.55	-136.1	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	~90%	
Duplicate sample	No	
Pump intake depth	13 FT	
Sample method	PUMP	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-3

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition			
Elevation of Top of Casing (feet above msl)			
Depth of Well	14.00		
Depth to Water (from top of casing)	Before:	After:	
Water Elevation (feet above msl)	Before:	After:	
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling		
Well Volumes Purged			
Pump Speed (Default = 300 rpms)			
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)			
Actual Volume Purged (liters)			
Appearance of Purge Water/Turbidity/Color			
Free Product Present?		Thickness (ft):	

Purging Equipment/Pump: Peristaltic/ bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments

Destroyed

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

	COMMENTS
Odor	
Recharge time %	
Duplicate sample	
Pump intake depth	
Sample method bailer/from pump/system	

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-4

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4
Wellhead Condition	Damaged
Elevation of Top of Casing (feet above msl)	
Depth of Well	17.00
Depth to Water (from top of casing)	Before: 8.37 After: 8.38
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	Micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	1.5L/min
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clear
Free Product Present?	NO
Thickness (ft):	
Purging Equipment/Pump: <u>Peristaltic</u> / bladder / centrifugal / submersible	

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0920	1	18.06	798	3.60	7.70	-101.4	Clear
	2	18.08	796	3.05	7.68	-97.2	"
	3	18.08	790	2.79	7.62	-95.0	"
	4	18.10	787	2.32	7.60	-94.3	"
0930	5	18.11	785	2.01	7.60	-92.9	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	>90%	
Duplicate sample	NO	
Pump intake depth	15 FT	
Sample method	PUMP	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-5

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4
Wellhead Condition	Damaged
Elevation of Top of Casing (feet above msl)	
Depth of Well	18.00
Depth to Water (from top of casing)	Before: 7.72 After: 7.74
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	Micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5L/min
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clear w/ sheen & black particles
Free Product Present?	yes
Thickness (ft):	.75 in

Purging Equipment/Pump: Peristaltic bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
1050	1	18.02	770	3.07	7.95	-88.4	Sheen w/ particles
	2	18.04	766	2.13	7.90	-80.2	"
	3	18.06	764	1.52	7.88	-77.6	"
	4	18.06	763	.90	7.87	-74.3	"
1100	5	18.07	760	.65	7.87	-72.1	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	yes	COMMENTS
Recharge time %	90%	
Duplicate sample	NO	
Pump intake depth	16ft	
Sample method	Pump	
bailer/from pump/system		

NOTE .75 in Free product
Sample had sheen & small black pcs.
petro odor

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-6

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4
Wellhead Condition	Damaged
Elevation of Top of Casing (feet above msl)	
Depth of Well	18.00
Depth to Water (from top of casing)	Before: 7.01 After: 7.03
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	Micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5L/min
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clear
Free Product Present?	NO
Thickness (ft):	

Purging Equipment/Pump: Peristaltic bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
1020	1	18.03	782	3.60	7.73	-121.4	Clear
	2	18.05	782	3.32	7.70	-118.3	"
	3	18.06	777	2.90	7.68	-113.2	"
	4	18.08	773	2.21	7.66	-108.4	"
1030	5	18.09	770	1.97	7.64	-106.1	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	→ 90%	
Duplicate sample	NO	
Pump intake depth	16FT	
Sample method	PUMP	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-8

Project Name:	Buestad	Date of Sampling:	2.27-13
Job Number:	298931	Name of Sampler:	J. Siqq
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4
Wellhead Condition	good
Elevation of Top of Casing (feet above msl)	
Depth of Well	18.00
Depth to Water (from top of casing)	Before: 6.69 After: 6.71
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	Micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	5L/min
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clean
Free Product Present?	NO
Thickness (ft):	

Purging Equipment/Pump: Peristaltic bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0720	1	18.06	1021	2.98	7.70	-152.7	Clean
	2	18.08	998	2.53	7.62	-150.1	"
	3	18.10	990	2.21	7.60	-144.2	"
	4	18.10	986	1.97	7.58	-140.1	"
0730	5	18.12	980	1.84	7.58	-138.4	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	> 90%	
Duplicate sample	NO	
Pump intake depth	16 FT	
Sample method	Pump	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-9

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4
Wellhead Condition	good
Elevation of Top of Casing (feet above msl)	
Depth of Well	18.00
Depth to Water (from top of casing)	Before: 7.27 After: 7.29
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	Micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	5L/min
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clean
Free Product Present?	No
Thickness (ft):	

Purging Equipment/Pump: Peristaltic bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0750	1	18.03	772	2.85	7.62	-121.4	Clean
	2	18.05	770	2.22	7.62	-118.4	"
	3	18.05	768	1.92	7.58	-112.1	"
	4	18.08	762	1.65	7.56	-109.7	"
0800	5	18.08	758	1.23	7.56	-106.3	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	Yes	COMMENTS Slight Sewer odor
Recharge time %	>90%	
Duplicate sample	No	
Pump intake depth	16 FT	
Sample method	pump	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-10

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4
Wellhead Condition	good
Elevation of Top of Casing (feet above msl)	
Depth of Well	17.00
Depth to Water (from top of casing)	Before: 7.64 After: 7.65
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	Micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5 L/m
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clean
Free Product Present?	NO
Thickness (ft):	

Purging Equipment/Pump: Peristaltic/ bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0820	1	18.04	804	2.84	7.62	-120.4	clean
	2	18.05	790	2.00	7.60	-118.7	"
	3	18.07	784	1.74	7.60	-112.3	"
	4	18.07	780	1.53	7.60	-108.7	"
0830	5	18.09	776	1.21	7.60	-106.2	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	>90%	
Duplicate sample	NO	
Pump intake depth	15ft	
Sample method	pump	
bailer/from pump/system		

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: DPE-11

Project Name:	Buestad	Date of Sampling:	2-27-13
Job Number:	298931	Name of Sampler:	J. Sigg
Project Address:	1630 Park Street, Alameda, CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4
Wellhead Condition	good
Elevation of Top of Casing (feet above msl)	
Depth of Well	18.00
Depth to Water (from top of casing)	Before: 7.68 After: 7.70
Water Elevation (feet above msl)	Before: After:
Purging and Sampling Method	Low-Flow (Minimal Drawdown) Purging / Sampling
Well Volumes Purged	Micropurged
Pump Speed (Default = 300 rpms)	300 RPM
Estimated Purge Rate-ml/min(Pump Speed * 1.67 ml/rev)	.5 L/min
Actual Volume Purged (liters)	5
Appearance of Purge Water/Turbidity/Color	Clear
Free Product Present?	NO
Thickness (ft):	

Purging Equipment/Pump: Peristaltic/ bladder/ centrifugal/ submersible

GROUNDWATER SAMPLES

Number of Samples / Container Size				Three (3) 40mL VOAs (HCL)			
Time	Volume Removed (gallons)	Temp (C°)	Conductivity (µS/cm)	DO (mg/L)	pH	ORP (meV)	Comments
0850	1	18.06	1020	3.21	7.52	+202.4	Clear
	2	18.06	1011	2.79	7.50	-190.2	"
	3	18.09	1004	2.17	7.48	-187.1	"
	4	18.11	1001	1.83	7.48	-184.3	"
0900	5	18.12	997	1.52	7.50	-180.1	"

Stabilization criteria: pH +/- 0.1; conductivity +/- 3%; DO +/- 10%; ORP +/- 10 meV

Odor	NO	COMMENTS
Recharge time %	190	
Duplicate sample	no	
Pump intake depth	16FT	
Sample method	pump	
bailer/from pump/system		

McCAMPBELL ANALYTICAL INC.

1538 Willow Pass Road, Pittsburg, CA 94565

Telephone: (925) 252-9262

Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH
 24 HR
 48 HR
 72 HR
 5 DAY

EDF Required? Yes No

PDF Required? Yes No

Report To: Robert Robitaille **Bill To:** AEI Consultants
Company: AEI Consultants, 2500 Camino Diablo, Walnut Creek, CA 94597
PO# WC083992 **Global ID:** T0600100655
E-Mail: rrobitaille@aeiconsultatns.com
Telephone: (925) 746-6000, ext. 148 **Fax:** (925) 746-6099
AEI Project No. 298931 **Project Name:** FSI
Project Location: 1630 Park St., Alameda, CA 94501
Sampler Signature: *John Siga*

SAMPLE ID	FIELD POINT NAME	SAMPLING		# of Containers	Type Containers	MATRIX					METHOD PRESERVED			Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCL	HNO ₃			
DPE-5		2-27-13	1100	4	VOA, amber L	X					X	X				

TPH-G (EPA 8015 M)
 TPH-D/TPH-MO (EPA 8015 M w/ Silica Gel Clean-up)
 BTEX, MTBE (EPA 8260B)

Relinquished By: <i>John Siga</i>	Date: 2-27-13	Time: 1:30 PM	Received By: <i>Marcus</i>
Relinquished By: <i>[Signature]</i>	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/° _____
 GOOD CONDITION _____
 HEAD SPACE ABSENT _____
 DECHLORINATED IN LAB _____

PRESERVATION APPROPRIATE CONTAINERS _____
 PRESERVED IN LAB _____

VOAS _____ O&G _____ METALS _____ OTHER _____

AEI CONSULTANTS
FIELD WORK ORDER (SOIL VAPOR SAMPLING)

Project Name: Foley Street Investments
 Project Number: 298931

Activity	Hours	
	Budget	Actual

Client Contact: John Buestad
 Project Manager: Bob Robitaille
 Gate / System Combo: _____
 PO Number: _____
 Scheduled Work Date: 2-27-13
 Flexible: YES NO
 Site Contact: N/A
 Site Phone: N/A
 Site Address: 1630 Park St.
Alameda, CA 94501

Summary of Work Requested

Re-sample Soil Vapor Monitoring Event (find a Dry Day- one week from rain)

- 1) Collect **Soil Vapor** samples from **VP-1, 2 and 3.**
- 2) Use **1-Liter summa** canisters equipped with **150 ml/min** regulators.
- 3) Stop pulling sample when ~5 in.Hg vacuum remaining in canister.
- 4) Inventory Drums at Site. Make sure all of ours are labeled.
- 5) Collect **Soil Vapor** samples from **VP-1, 2 and 3.**

Not Completed **Completed**

- 1. Removed standing water from well boxes; removed well caps; allowed water levels to stabilize.
- 3. Connected a 2-foot long section of nylon tubing to the soil vapor probe using new brass Swagelok fittings.
- 4. Determined the "total length of tubing purged" and recorded on the "Soil Vapor Field Sampling Form"
- 5. Determine the "total volume purged" and recorded on the "Soil Vapor Field Sampling Form"
- 6. Performed shut-in leak test; monitored sampling train for vacuum loss for at least 1 to 2 minutes.
- 7. Purged the dead air from the sampling train and soil gas probe using a 60-mL plastic syringe.
- 8. Connected the open end of the nylon tubing to the sampling train using new Swagelok fittings.
- 9. Placed plastic leak test dome over sampling equipment and filled with 80 to 90% helium gas.
- 10. Recorded starting vacuum, opened valve on Summa canister; started collecting soil vapor sample.
- 11. Recorded ending vacuum (4 to 5 in-Hg remaining); closed valve and disconnected Summa canister.
- 10. Transported samples to McCampbell Analytical, Inc. of Pittsburg, CA for analyses.

Lab Analyses: See Chain-of-Custody

Turnaround Time: Rush 24 hours 48 hours 72 hours Standard

Consumables: # of Bailers: 1 # of Drums: # of Well Plugs:
 Drums Onsite: # of Water: 2 # of Soil: # of Other:

AEI CONSULTANTS
FIELD WORK ORDER (SOIL VAPOR SAMPLING)

Requested by PM: _____ Completed by Tech: _____

Soil Vapor Notes:

To begin, a 1 liter summa canister connected to a flow controller, will be connected to the probe sampling lines. Prior to collecting the sample, soil vapor will be withdrawn from the inert tubing using a calibrated syringe connected via an on-off valve. A total of three purge volumes will be removed from each probe. Following purging, soil gas will be monitoring with an Eagle ® field meter for oxygen (O₂), carbon dioxide (CO₂), and total hydrocarbons. The sample canister will then be connected, opened, and the initial vacuum recorded. Vapor samples will be collected through the regulator at approximately 150 mL/minute. Upon reaching approximately 5 in Hg vacuum in the canister, the canister will be closed and removed from the sampling line. Samples will be appropriately labeled and entered onto the chain of custody prior to shipping to the laboratory. During sampling, a leak check gas will be used to confirm that the sample train was tight and leak free.

All vapor samples will be sealed and labeled immediately upon collection. Chain of custody documentation will be initiated prior to leaving the site. All samples will be shipped to a state certified laboratory on the day of collection. Soil vapor samples will be analyzed by EPA Method TO-3 for total petroleum hydrocarbons as gasoline (TPHg) and by EPA Method TO-15 for benzene, toluene, ethylbenzene, and xylenes (BTEX) & Naphthalene, N₂, CH₄, O₂, CO₂.

AEI CONSULTANTS
SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID: VP-1

Project Name:	Foley Street Investments	Date of Sampling:	2-27-13
Job Number:	298931	Start Time:	1130
Project Address:	1630 Park St. Alameda, CA 94501	End Time:	1136
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA

Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D. ▼
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW ▼
Wellbox Condition	▼
Depth of Probe (ft bgs)	6
Length of Tubing Above Grade (ft)	1
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	50
Appreciable Amount of Rain (>1/2") in Last Five Days?	no
Moisture / Water Present in Tubing?	no

SOIL GAS SAMPLING EQUIPMENT

Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6422
Sampling Manifold / Flow Controller Number	722
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL) ▼
Eagle Screening	THV ppmv/ 0, CH4 %/ 0.0, O2 %/ 20.7, CO2 %/ 0.4

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

AEI CONSULTANTS
SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID: VP-2

Project Name:	Foley Street Investments	Date of Sampling:	2-27-13
Job Number:	298931	Start Time:	1200
Project Address:	1630 Park St. Alameda, CA 94501	End Time:	1205
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA

Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D. ▼
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW ▼
Wellbox Condition	▼
Depth of Probe (ft bgs)	6
Length of Tubing Above Grade (ft)	1
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	50
Appreciable Amount of Rain (>1/2") in Last Five Days?	no
Moisture / Water Present in Tubing?	no

SOIL GAS SAMPLING EQUIPMENT

Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6170
Sampling Manifold / Flow Controller Number	6409
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL) ▼
Eagle Screening	THV ppmv/ 0 CH4 %/ 0.0 O2 %/ 19.6 CO2 %/ 1.4

NOTES & COMMENTS

cc = cubic centimeter 1 L = 1000 mL in-Hg = inches of mercury
mL = milliliter 1 mL = 1 cc ft bgs = feet below ground surface

AEI CONSULTANTS
SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID: VP-3

Project Name:	Foley Street Investments	Date of Sampling:	2-27-13
Job Number:	298931	Start Time:	1230
Project Address:	1630 Park St. Alameda, CA 94501	End Time:	1237
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA

Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D. ▼
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW ▼
Wellbox Condition	▼
Depth of Probe (ft bgs)	6
Length of Tubing Above Grade (ft)	1
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	50
Appreciable Amount of Rain (>1/2") in Last Five Days?	no
Moisture / Water Present in Tubing?	no

SOIL GAS SAMPLING EQUIPMENT

Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6409
Sampling Manifold / Flow Controller Number	818
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL) ▼
Eagle Screening	THV ppmv/ 0 CH4 %/ 0.0 O2 %/ 19.4 CO2 %/ 1.6

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565-1701
www.main@mccampbell.com

Telephone: (925) 252-9262

Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? No Yes

Report To: Robert Robitaille

Bill To: PO# WC083992

Lab Use Only

Company: AEI Consultants

2500 Camino Diablo, Walnut Creek, California 94597

E-Mail: rrobitaille@aeiconsultants.com

Tele: (925) 746-6048

Fax: (925) 746-6099

Project #: 298931

Project Name: FSI

Project Location: 1630 Park Street, Alameda, California

Sampler Signature:

John Sigg

Notes: TO15 Full List, TPH-g, BTEX, TVH, MTBE, TBA, TAME, DIPE, ETBE, Naphthlene, CO2, methane, Oxygen, Nitrogen, Isopropyl alcohol

Field Sample ID (Location)	Collection		Canister SN#	Sampler Kit SN#	Analysis Requested TO15 Full List	Indoor Air	Soil Gas	Canister Pressure/Vacuum			
	Date	Time						Initial	Final	Receipt	Final (psi)
VP-1	2-27-13	1130	6422	722	Atm. Gases, TPH(g), BTEX & Oxygenates		X				
VP-2		1200	6170	675	Atm. Gases, TPH(g), BTEX & Oxygenates		X				
VP-3		1230	6409	818	Atm. Gases, TPH(g), BTEX & Oxygenates		X				

Relinquished By:

John Sigg

Date:

2-27-13

Time:

1130

Received By:

M...

Relinquished By:

Date:

Time:

Received By:

Relinquished By:

Date:

Time:

Received By:

Temp (°C) : _____ Work Order #: _____

Condition: _____

Custody Seals Intact?: Yes _____ No _____ None _____

Shipped Via: _____

APPENDIX B

LABORATORY ANALYTICAL REPORTS W/ CHAIN OF CUSTODY DOCUMENTATION



Analytical Report

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Reported: 03/06/13
	Client P.O.: #WC083992	Date Completed: 03/05/13

WorkOrder: 1302791

March 06, 2013

Dear Robert:

Enclosed within are:

- 1) The results of the **14** analyzed samples from your project: **#298931; FSI**,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

McCAMPBELL ANALYTICAL INC.

1538 Willow Pass Road, Pittsburg, CA 94565

Telephone: (925) 252-9262

Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Yes No

PDF Required? Yes No

Report To: Robert Robitaille **Bill To:** AEI Consultants
Company: AEI Consultants, 2500 Camino Diablo, Walnut Creek, CA 94597
PO# WC083992 **Global ID:** T0600100655
E-Mail: rrobitaille@aeiconsultatns.com
Telephone: (925) 746-6000, ext. 148 **Fax:** (925) 746-6099
AEI Project No. 298931 **Project Name:** FSI
Project Location: 1630 Park St., Alameda, CA 94501
Sampler Signature: *John Siga*

Analysis Request														Other		Comments														
TPH-G (EPA 8015 M) TPH-D / TPH-MO (EPA 8015 M w/ Silica Gel Clean-up) BTEX, MTBE (EPA 8260B)																														
T	DPE-5	2-27-13	1100	4	VOA, amber L	X					X	X	X																	

Relinquished By: <i>John Siga</i>	Date: 2-27-13	Time: 1321	Received By: <i>Maura V</i>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/°	VOAS	O&G	METALS	OTHER
GOOD CONDITION	PRESERVATION			
HEAD SPACE ABSENT	APPROPRIATE			
DECHLORINATED IN LAB	CONTAINERS			
	PERSERVED IN LAB			



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1302791

ClientCode: AEL

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Robert Robitaille
 AEI Consultants
 2500 Camino Diablo, Ste.#200
 Walnut Creek, CA 94597
 (925) 283-6000 FAX: (925) 283-6121

Email: rrobitaille@aeiconsultants.com
 cc:
 PO: #WC083992
 ProjectNo: #298931; FSI

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

Requested TAT: 5 days

Date Received: 02/27/2013

Date Printed: 02/27/2013

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	
1302791-001	MW-1	Water	2/27/2013 5:30	<input type="checkbox"/>	A	A	C										
1302791-002	MW-2	Water	2/27/2013 6:00	<input type="checkbox"/>	A		C										
1302791-003	MW-3	Water	2/27/2013 6:30	<input type="checkbox"/>	A		C										
1302791-004	MW-4	Water	2/27/2013 4:30	<input type="checkbox"/>	A		C										
1302791-005	MW-5	Water	2/27/2013 5:00	<input type="checkbox"/>	A		C										
1302791-006	DEP- 1	Water	2/27/2013 7:00	<input type="checkbox"/>	A		C										
1302791-007	DEP-2	Water	2/27/2013 10:00	<input type="checkbox"/>	A		C										
1302791-008	DEP-4	Water	2/27/2013 9:30	<input type="checkbox"/>	A		C										
1302791-009	DEP-6	Water	2/27/2013 10:30	<input type="checkbox"/>	A		C										
1302791-010	DEP-8	Water	2/27/2013 7:30	<input type="checkbox"/>	A		C										
1302791-011	DEP-9	Water	2/27/2013 8:00	<input type="checkbox"/>	A		C										
1302791-012	DEP-10	Water	2/27/2013 8:30	<input type="checkbox"/>	A		C										
1302791-013	DEP-11	Water	2/27/2013 9:00	<input type="checkbox"/>	A		C										
1302791-014	DEP-5	Water	2/27/2013 11:00	<input type="checkbox"/>	A		C										

Test Legend:

1	MBTEX-8260B_W	2	PREFD REPORT	3	TPH(DMO)WSG_W	4		5	
6		7		8		9		10	
11		12							

Prepared by: Zoraida Cortez

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.



Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **2/27/2013 7:07:54 PM**
 Project Name: **#298931; FSI** Login Reviewed by: **Zoraida Cortez**
 WorkOrder N°: **1302791** Matrix: Water 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
 Container/Temp Blank temperature Cooler Temp: 2.8°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

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

 Comments:



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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Extracted 03/01/13-03/05/13
	Client P.O.: #WC083992	Date Analyzed 03/01/13-03/05/13

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline *

Extraction method: SW5030B

Analytical methods: SW8015Bm

Work Order: 1302791

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001B	MW-1	W	ND	1	99	
002B	MW-2	W	53	1	117	d1
003B	MW-3	W	ND	1	---#	c1
004B	MW-4	W	ND	1	90	
005B	MW-5	W	ND	1	93	
006B	DEP- 1	W	270	1	92	d1
007B	DEP-2	W	ND	1	99	
008B	DEP-4	W	ND	1	113	
009B	DEP-6	W	ND	1	113	
010B	DEP-8	W	ND	1	99	
011B	DEP-9	W	3300	10	115	d7
012B	DEP-10	W	820	1	---#	d1
013B	DEP-11	W	ND	1	101	
014B	DEP-5	W	3900	10	110	d1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference. %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:
c1) surrogate recovery outside of the control limits due to dilution / matrix interference / coelution / presence of surrogate compound in the sample
d1) weakly modified or unmodified gasoline is significant
d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Extracted: 02/27/13-03/01/13
	Client P.O.: #WC083992	Date Analyzed: 02/27/13-03/01/13

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1302791

Lab ID	1302791-001A	1302791-002A	1302791-003A	1302791-004A	Reporting Limit for DF=1	
Client ID	MW-1	MW-2	MW-3	MW-4		
Matrix	W	W	W	W		
DF	1	1	1	1		

Compound	Concentration				ug/kg	µg/L
Benzene	ND	1.8	ND	ND	NA	0.5
Ethylbenzene	ND	ND	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	NA	0.5
Toluene	ND	ND	ND	ND	NA	0.5
Xylenes, Total	ND	1.4	ND	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	106	110	108	107	
%SS2:	103	102	104	105	

Comments

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Extracted: 02/27/13-03/01/13
	Client P.O.: #WC083992	Date Analyzed: 02/27/13-03/01/13

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1302791

Lab ID	1302791-005A	1302791-006A	1302791-007A	1302791-008A	Reporting Limit for DF=1	
Client ID	MW-5	DEP- 1	DEP-2	DEP-4		
Matrix	W	W	W	W		
DF	1	1	1	1		

Compound	Concentration				ug/kg	µg/L
Benzene	ND	1.4	1.3	0.63	NA	0.5
Ethylbenzene	ND	0.53	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	NA	0.5
Toluene	ND	ND	ND	ND	NA	0.5
Xylenes, Total	ND	5.3	ND	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	108	91	92	94	
%SS2:	104	105	104	101	

Comments

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Extracted: 02/27/13-03/01/13
	Client P.O.: #WC083992	Date Analyzed: 02/27/13-03/01/13

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1302791

Lab ID	1302791-009A	1302791-010A	1302791-011A	1302791-012A	Reporting Limit for DF=1	
Client ID	DEP-6	DEP-8	DEP-9	DEP-10		
Matrix	W	W	W	W		
DF	1	1	1	1		

Compound	Concentration				ug/kg	µg/L
Benzene	ND	ND	5.5	5.3	NA	0.5
Ethylbenzene	ND	ND	5.7	6.0	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	NA	0.5
Toluene	ND	ND	ND	ND	NA	0.5
Xylenes, Total	ND	ND	16	4.4	NA	0.5

Surrogate Recoveries (%)

%SS1:	95	93	89	88	
%SS2:	103	102	97	102	

Comments

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Extracted: 02/27/13-03/01/13
	Client P.O.: #WC083992	Date Analyzed: 02/27/13-03/01/13

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1302791

Lab ID	1302791-013A	1302791-014A			Reporting Limit for DF = 1	
Client ID	DEP-11	DEP-5				
Matrix	W	W				
DF	1	20				

Compound	Concentration				ug/kg	µg/L
Benzene	ND	440			NA	0.5
Ethylbenzene	ND	120			NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND<10			NA	0.5
Toluene	ND	370			NA	0.5
Xylenes, Total	ND	570			NA	0.5

Surrogate Recoveries (%)

%SS1:	94	99			
%SS2:	101	95			

Comments

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Extracted: 02/27/13
	Client P.O.: #WC083992	Date Analyzed: 03/01/13-03/06/13

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C/3630C

Analytical methods: SW8015B

Work Order: 1302791

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1302791-001C	MW-1	W	ND	ND	1	84	
1302791-002C	MW-2	W	ND	ND	1	90	
1302791-003C	MW-3	W	ND	ND	1	83	
1302791-004C	MW-4	W	ND	ND	1	82	
1302791-005C	MW-5	W	ND	ND	1	90	
1302791-006C	DEP- 1	W	110	ND	1	88	e4
1302791-007C	DEP-2	W	99	ND	1	83	e2
1302791-008C	DEP-4	W	ND	ND	1	85	
1302791-009C	DEP-6	W	160	ND	1	85	e2
1302791-010C	DEP-8	W	ND	ND	1	99	
1302791-011C	DEP-9	W	2200	ND	1	91	e4
1302791-012C	DEP-10	W	660	ND	1	83	e4
1302791-013C	DEP-11	W	ND	ND	1	88	
1302791-014C	DEP-5	W	1200	2600	1	92	e7,e4,e2

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

#) cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; &) low or no surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

e2) diesel range compounds are significant; no recognizable pattern

e4) gasoline range compounds are significant.

e7) oil range compounds are significant



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 75114

WorkOrder: 1302791

EPA Method: SW8260B		Extraction: SW5030B					Spiked Sample ID: 1302754-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Benzene	ND	20	96.8	104	7.14	92.3	70 - 130	20	70 - 130	
Methyl-t-butyl ether (MTBE)	ND	20	92	101	9.67	99.8	70 - 130	20	70 - 130	
Toluene	ND	20	89.3	95.5	6.48	90.3	70 - 130	20	70 - 130	
%SS1:	106	25	107	107	0	110	70 - 130	20	70 - 130	
%SS2:	104	25	102	102	0	103	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 75114 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302791-001A	02/27/13 5:30 AM	02/27/13	02/27/13 10:26 PM	1302791-002A	02/27/13 6:00 AM	02/28/13	02/28/13 6:38 PM
1302791-003A	02/27/13 6:30 AM	02/27/13	02/27/13 11:45 PM	1302791-004A	02/27/13 4:30 AM	02/28/13	02/28/13 12:25 AM
1302791-005A	02/27/13 5:00 AM	02/28/13	02/28/13 1:05 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 75155

WorkOrder: 1302791

EPA Method: SW8260B		Extraction: SW5030B					Spiked Sample ID: 1302791-010A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Benzene	ND	10	87	83.3	4.18	103	70 - 130	20	70 - 130	
Methyl-t-butyl ether (MTBE)	ND	10	99	97.2	1.88	109	70 - 130	20	70 - 130	
Toluene	ND	10	88.5	82.6	6.82	102	70 - 130	20	70 - 130	
%SS1:	93	25	96	98	2.38	95	70 - 130	20	70 - 130	
%SS2:	102	25	100	100	0	102	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 75155 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302791-006A	02/27/13 7:00 AM	02/28/13	02/28/13 3:06 PM	1302791-007A	02/27/13 10:00 AM	02/28/13	02/28/13 3:48 PM
1302791-008A	02/27/13 9:30 AM	02/28/13	02/28/13 4:30 PM	1302791-009A	02/27/13 10:30 AM	02/28/13	02/28/13 5:11 PM
1302791-010A	02/27/13 7:30 AM	02/28/13	02/28/13 5:53 PM	1302791-011A	02/27/13 8:00 AM	02/28/13	02/28/13 10:39 PM
1302791-012A	02/27/13 8:30 AM	02/28/13	02/28/13 11:20 PM	1302791-013A	02/27/13 9:00 AM	03/01/13	03/01/13 12:01 AM
1302791-014A	02/27/13 11:00 AM	03/01/13	03/01/13 11:18 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 75160

WorkOrder: 1302791

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1302740-008A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) [£]	ND	60	104	103	0.658	85.4	70 - 130	20	70 - 130	
MTBE	ND	10	89.7	93.4	3.71	94.7	70 - 130	20	70 - 130	
Benzene	ND	10	105	107	1.51	100	70 - 130	20	70 - 130	
Toluene	ND	10	103	104	1.19	99.4	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	106	105	0.738	101	70 - 130	20	70 - 130	
Xylenes	ND	30	105	103	1.15	101	70 - 130	20	70 - 130	
%SS:	98	10	96	97	1.33	95	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 75160 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302791-001B	02/27/13 5:30 AM	03/01/13	03/01/13 5:46 AM	1302791-002B	02/27/13 6:00 AM	03/05/13	03/05/13 5:39 AM
1302791-003B	02/27/13 6:30 AM	03/01/13	03/01/13 11:29 PM	1302791-004B	02/27/13 4:30 AM	03/01/13	03/01/13 11:58 PM
1302791-005B	02/27/13 5:00 AM	03/02/13	03/02/13 12:28 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 75164

WorkOrder: 1302791

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1302836-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) [£]	ND	60	103	98.8	4.55	117	70 - 130	20	70 - 130	
MTBE	ND	10	107	105	2.46	106	70 - 130	20	70 - 130	
Benzene	ND	10	109	104	4.08	110	70 - 130	20	70 - 130	
Toluene	ND	10	106	103	3.13	108	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	109	106	2.46	113	70 - 130	20	70 - 130	
Xylenes	ND	30	107	106	0.454	111	70 - 130	20	70 - 130	
%SS:	94	10	97	94	2.47	95	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 75164 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302791-006B	02/27/13 7:00 AM	03/01/13	03/01/13 5:02 PM	1302791-007B	02/27/13 10:00 AM	03/05/13	03/05/13 3:42 AM
1302791-008B	02/27/13 9:30 AM	03/05/13	03/05/13 4:11 AM	1302791-009B	02/27/13 10:30 AM	03/01/13	03/01/13 7:32 PM
1302791-010B	02/27/13 7:30 AM	03/01/13	03/01/13 8:31 PM	1302791-013B	02/27/13 9:00 AM	03/01/13	03/01/13 9:01 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 75194

WorkOrder: 1302791

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1302809-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) [£]	ND	60	103	104	1.02	104	70 - 130	20	70 - 130	
MTBE	ND	10	87.4	86.8	0.684	91.6	70 - 130	20	70 - 130	
Benzene	ND	10	93.3	94	0.688	101	70 - 130	20	70 - 130	
Toluene	ND	10	93.9	95.8	1.98	99.9	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	94.9	96.3	1.53	100	70 - 130	20	70 - 130	
Xylenes	ND	30	95.9	97.6	1.84	101	70 - 130	20	70 - 130	
%SS:	106	10	96	98	1.58	97	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 75194 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302791-011B	02/27/13 8:00 AM	03/02/13	03/02/13 1:13 AM	1302791-012B	02/27/13 8:30 AM	03/05/13	03/05/13 3:31 AM
1302791-014B	02/27/13 11:00 AM	03/02/13	03/02/13 3:10 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 75070

WorkOrder: 1302791

EPA Method: SW8015B		Extraction: SW3510C/3630C					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	94.4	N/A	N/A	70 - 130	
%SS:	N/A	625	N/A	N/A	N/A	77	N/A	N/A	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 75070 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302791-001C	02/27/13 5:30 AM	02/27/13	03/05/13 3:01 AM	1302791-002C	02/27/13 6:00 AM	02/27/13	03/01/13 11:30 PM
1302791-003C	02/27/13 6:30 AM	02/27/13	03/05/13 7:39 AM	1302791-004C	02/27/13 4:30 AM	02/27/13	03/05/13 8:50 AM
1302791-005C	02/27/13 5:00 AM	02/27/13	03/02/13 3:01 AM	1302791-006C	02/27/13 7:00 AM	02/27/13	03/01/13 11:30 PM
1302791-007C	02/27/13 10:00 AM	02/27/13	03/06/13 5:36 AM	1302791-008C	02/27/13 9:30 AM	02/27/13	03/05/13 1:51 AM
1302791-009C	02/27/13 10:30 AM	02/27/13	03/05/13 6:30 AM	1302791-010C	02/27/13 7:30 AM	02/27/13	03/04/13 5:40 PM
1302791-011C	02/27/13 8:00 AM	02/27/13	03/02/13 12:40 AM	1302791-012C	02/27/13 8:30 AM	02/27/13	03/05/13 4:11 AM
1302791-013C	02/27/13 9:00 AM	02/27/13	03/02/13 11:14 AM	1302791-014C	02/27/13 11:00 AM	02/27/13	03/02/13 1:51 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



Analytical Report

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Reported: 03/07/13
	Client P.O.: #WC083992	Date Completed: 03/07/13

WorkOrder: 1302779

March 08, 2013

Dear Robert:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **#298931; FSI**,
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

1302779

McCAMPBELL ANALYTICAL INC.
 1534 Willow Pass Road
 Pittsburg, CA 94565-1701
 www.main@mccampbell.com
 Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD
TURN AROUND TIME
 RUSH 24 HR 48 HR 72 HR 5 DAY
 EDF Required? No Yes

Report To: Robert Robitaille Bill To: PO# WC083992

Lab Use Only

Company: AEI Consultants
 2500 Camino Diablo, Walnut Creek, California 94597
 E-Mail: rrobitaille@aeiconsultants.com
 Tele: (925) 746-6048 Fax: (925) 746-6099
 Project #: 298931 Project Name: FSI
 Project Location: 1630 Park Street, Alameda, California

Pressurized By	Date	Pressurization Gas	
		N2	He

Sampler Signature: *John Sigg*

Notes: TO15 Full List, TPH-g, BTEX, TVH, MTBE, TBA, TAME, DIPE, ETBE, Naphthlene, CO2, methane, Oxygen, Nitrogen, Isopropyl alcohol

Field Sample ID (Location)	Collection		Canister SN#	Sampler Kit SN#
	Date	Time		
VP-1	2-27-13	1130	6422	722
VP-2	↓	1200	6170	675
VP-3	↓	1230	6409	818

Analysis Requested TO15 Full List	Indoor Air	Soil Gas	Canister Pressure/Vacuum			
			Initial	Final	Receipt	Final (psi)
Atm. Gases, TPH(g), BTEX & Oxygenates		X				
Atm. Gases, TPH(g), BTEX & Oxygenates		X				
Atm. Gases, TPH(g), BTEX & Oxygenates		X				

Relinquished By: *John Sigg* Date: 2-27-13 Time: 1321 Received By: *M...*

Temp (°C): _____ Work Order#: _____

Relinquished By: _____ Date: _____ Time: _____ Received By: _____

Condition: _____
 Custody Seals Intact?: Yes _____ No _____ None _____

Relinquished By: _____ Date: _____ Time: _____ Received By: _____

Shipped Via: _____



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1302779

ClientCode: AEL

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Robert Robitaille
 AEI Consultants
 2500 Camino Diablo, Ste.#200
 Walnut Creek, CA 94597
 (925) 283-6000 FAX: (925) 283-6121

Email: rrobitaille@aeiconsultants.com
 cc:
 PO: #WC083992
 ProjectNo: #298931; FSI

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

Requested TAT: 5 days

Date Received: 02/27/2013

Date Printed: 02/27/2013

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	
1302779-001	VP-1	Soil Gas	2/27/2013 11:30	<input type="checkbox"/>	A	A	A										
1302779-002	VP-2	Soil Gas	2/27/2013 12:00	<input type="checkbox"/>	A		A										
1302779-003	VP-3	Soil Gas	2/27/2013 12:30	<input type="checkbox"/>	A		A										

Test Legend:

1	LG_SUMMA_SOILGAS	2	PREFD REPORT	3	TO15+GAS_SOIL(UG/M3)	4		5	
6		7		8		9		10	
11		12							

The following SamplDs: 001A, 002A, 003A contain testgroup.

Prepared by: Maria 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.



Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **2/27/2013 4:11:26 PM**
 Project Name: **#298931; FSI** LogIn Reviewed by: **Maria Venegas**
 WorkOrder N°: **1302779** Matrix: Soil Gas 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
 Container/Temp Blank temperature Cooler Temp: NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

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

 Comments:



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.mcccampbell.com> / E-mail: main@mcccampbell.com

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Reported: 03/07/13
	Client P.O.: #WC083992	Date Completed: 03/07/13

Work Order: 1302779

March 07, 2013

CASE NARRATIVE REGARDING TO-15 ANALYSIS

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.



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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Extracted: 03/05/13-03/07/13
	Client P.O.: #WC083992	Date Analyzed: 03/05/13-03/07/13

Light Gases*

Extraction Method: ASTM D 1946-90

Analytical Method: ASTM D 1946-90

Work Order: 1302779

Lab ID	1302779-001A	1302779-002A	1302779-003A		Reporting Limit for DF = 1 and Pressure Ratio (Final/Initial) = 2
Client ID	VP-1	VP-2	VP-3		
Matrix	Soil Gas	Soil Gas	Soil Gas		
Initial Pressure (psia)	12.72	12.84	12.82		
Final Pressure (psia)	25.35	25.58	25.55		
DF	1	1	1		

Compound	Concentration			µL/L	ug/L
Carbon Dioxide	15,000	13,000	3700	50	NA
Methane	ND	ND	1.1	1.0	NA
Nitrogen	710,000	710,000	710,000	4000	NA
Oxygen	180,000	190,000	190,000	4000	NA

Surrogate Recoveries (%)

%SS:	N/A	N/A	N/A		
------	-----	-----	-----	--	--

Comments					
-----------------	--	--	--	--	--

* soil vapor samples are reported in µL/L.
 %SS = Percent Recovery of Surrogate Standard
 DF = Dilution Factor



AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #298931; FSI	Date Sampled: 02/27/13
		Date Received: 02/27/13
	Client Contact: Robert Robitaille	Date Extracted: 03/04/13
	Client P.O.: #WC083992	Date Analyzed: 03/04/13

TPH gas + Volatile Organic Compounds in µg/m³*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1302779

Lab ID	1302779-001A	Initial Pressure (psia)	12.72
Client ID	VP-1	Final Pressure (psia)	25.35
Matrix	Soil Gas		

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	ND	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrachloroethene	30	1.0	14	Tetrahydrofuran	ND	1.0	6.0
Toluene	ND	1.0	7.7	TPH(g)	ND	1.0	1800
1,2,4-Trichlorobenzene	ND	1.0	15	1,1,1-Trichloroethane	ND	1.0	11
1,1,2-Trichloroethane	ND	1.0	11	Trichloroethene	ND	1.0	11
Trichlorofluoromethane	ND	1.0	11	1,2,4-Trimethylbenzene	ND	1.0	10
1,3,5-Trimethylbenzene	ND	1.0	10	Vinyl Acetate	ND	1.0	180
Vinyl Chloride	ND	1.0	5.2	Xylenes, Total	ND	1.0	27

Surrogate Recoveries (%)

%SS1:	130	%SS2:	120
%SS3:	111		

Comments:

*vapor samples are reported in µg/m³.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



Table with 4 rows and 3 columns: AEI Consultants, Client Project ID: #298931; FSI, Date Sampled: 02/27/13, 2500 Camino Diablo, Ste.#200, Client Contact: Robert Robitaille, Date Received: 02/27/13, Walnut Creek, CA 94597, Client P.O.: #WC083992, Date Analyzed: 03/04/13

TPH gas + Volatile Organic Compounds in µg/m³*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1302779

Table with 4 columns: Lab ID (1302779-002A), Client ID (VP-2), Matrix (Soil Gas), Initial Pressure (psia) (12.84), Final Pressure (psia) (25.58)

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various compounds like Acetone, Benzene, etc.

Surrogate Recoveries (%)

Table with 4 columns: %SS1 (130), %SS2 (120), %SS3 (111)

Comments:

*vapor samples are reported in µg/m³.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



Table with 4 rows and 3 columns: AEI Consultants, Client Project ID: #298931; FSI, Date Sampled: 02/27/13, 2500 Camino Diablo, Ste.#200, Date Received: 02/27/13, Walnut Creek, CA 94597, Client Contact: Robert Robitaille, Date Extracted: 03/04/13, Client P.O.: #WC083992, Date Analyzed: 03/04/13

TPH gas + Volatile Organic Compounds in µg/m³*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1302779

Table with 4 columns: Lab ID (1302779-003A), Client ID (VP-3), Matrix (Soil Gas), Initial Pressure (psia) (12.82), Final Pressure (psia) (25.55)

Main data table with 8 columns: Compound, Concentration *, DF, Reporting Limit, Compound, Concentration *, DF, Reporting Limit. Lists various compounds like Acetone, Benzene, etc. with ND values.

Surrogate Recoveries (%)

Table with 2 rows: %SS1: 129, %SS2: 120; %SS3: 111

Comments:

*vapor samples are reported in µg/m³.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



QC SUMMARY REPORT FOR ASTM D 1946-90

W.O. Sample Matrix: SoilGas

QC Matrix: SoilGas

BatchID: 75191

WorkOrder: 1302779

EPA Method: ASTM D 1946-90		Extraction: ASTM D 1946-90					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µL/L	µL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Carbon Dioxide	N/A	50	N/A	N/A	N/A	87.4	N/A	N/A	70 - 130	
Methane	N/A	50	N/A	N/A	N/A	72.2	N/A	N/A	70 - 130	
Nitrogen	N/A	26000	N/A	N/A	N/A	89.4	N/A	N/A	70 - 130	
Oxygen	N/A	7000	N/A	N/A	N/A	88.3	N/A	N/A	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

BATCH 75191 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302779-001A	02/27/13 11:30 AM	03/05/13	03/05/13 2:01 PM	1302779-001A	02/27/13 11:30 AM	03/05/13	03/05/13 2:01 PM
1302779-001A	02/27/13 11:30 AM	03/06/13	03/06/13 10:22 AM	1302779-002A	02/27/13 12:00 PM	03/05/13	03/05/13 2:22 PM
1302779-002A	02/27/13 12:00 PM	03/05/13	03/05/13 2:22 PM	1302779-002A	02/27/13 12:00 PM	03/06/13	03/06/13 10:47 AM
1302779-003A	02/27/13 12:30 PM	03/05/13	03/05/13 2:46 PM	1302779-003A	02/27/13 12:30 PM	03/06/13	03/06/13 11:11 AM
1302779-003A	02/27/13 12:30 PM	03/07/13	03/07/13 9:32 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 75220

WorkOrder: 1302779

Analyte	Extraction: TO15		Spiked Sample ID: N/A						
	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acrylonitrile	N/A	25	N/A	N/A	N/A	77	N/A	N/A	60 - 140
tert-Amyl methyl ether (TAME)	N/A	25	N/A	N/A	N/A	102	N/A	N/A	60 - 140
Benzene	N/A	25	N/A	N/A	N/A	105	N/A	N/A	60 - 140
Benzyl chloride	N/A	25	N/A	N/A	N/A	86.7	N/A	N/A	60 - 140
Bromodichloromethane	N/A	25	N/A	N/A	N/A	115	N/A	N/A	60 - 140
Bromoform	N/A	25	N/A	N/A	N/A	126	N/A	N/A	60 - 140
t-Butyl alcohol (TBA)	N/A	25	N/A	N/A	N/A	127	N/A	N/A	60 - 140
Carbon Disulfide	N/A	25	N/A	N/A	N/A	111	N/A	N/A	60 - 140
Carbon Tetrachloride	N/A	25	N/A	N/A	N/A	114	N/A	N/A	60 - 140
Chlorobenzene	N/A	25	N/A	N/A	N/A	98.8	N/A	N/A	60 - 140
Chloroethane	N/A	25	N/A	N/A	N/A	125	N/A	N/A	60 - 140
Chloroform	N/A	25	N/A	N/A	N/A	110	N/A	N/A	60 - 140
Chloromethane	N/A	25	N/A	N/A	N/A	136	N/A	N/A	60 - 140
Dibromochloromethane	N/A	25	N/A	N/A	N/A	118	N/A	N/A	60 - 140
1,2-Dibromo-3-chloropropane	N/A	25	N/A	N/A	N/A	112	N/A	N/A	60 - 140
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
1,3-Dichlorobenzene	N/A	25	N/A	N/A	N/A	92	N/A	N/A	60 - 140
1,4-Dichlorobenzene	N/A	25	N/A	N/A	N/A	77.4	N/A	N/A	60 - 140
Dichlorodifluoromethane	N/A	25	N/A	N/A	N/A	119	N/A	N/A	60 - 140
1,1-Dichloroethane	N/A	25	N/A	N/A	N/A	113	N/A	N/A	60 - 140
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	111	N/A	N/A	60 - 140
cis-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	108	N/A	N/A	60 - 140
trans-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	107	N/A	N/A	60 - 140
1,2-Dichloropropane	N/A	25	N/A	N/A	N/A	112	N/A	N/A	60 - 140
cis-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	104	N/A	N/A	60 - 140
trans-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	106	N/A	N/A	60 - 140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	N/A	25	N/A	N/A	N/A	112	N/A	N/A	60 - 140
Diisopropyl ether (DIPE)	N/A	25	N/A	N/A	N/A	115	N/A	N/A	60 - 140
1,4-Dioxane	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140
Ethyl acetate	N/A	25	N/A	N/A	N/A	115	N/A	N/A	60 - 140
Ethyl tert-butyl ether (ETBE)	N/A	25	N/A	N/A	N/A	106	N/A	N/A	60 - 140

LCS = Laboratory Control Sample

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

 QA/QC Officer



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 75220

WorkOrder: 1302779

EPA Method: TO15		Extraction: TO15					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Ethylbenzene	N/A	25	N/A	N/A	N/A	92.5	N/A	N/A	60 - 140	
Freon 113	N/A	25	N/A	N/A	N/A	80.8	N/A	N/A	60 - 140	
Hexachlorobutadiene	N/A	25	N/A	N/A	N/A	82.1	N/A	N/A	60 - 140	
4-Methyl-2-pentanone (MIBK)	N/A	25	N/A	N/A	N/A	114	N/A	N/A	60 - 140	
Methyl-t-butyl ether (MTBE)	N/A	25	N/A	N/A	N/A	110	N/A	N/A	60 - 140	
Methylene chloride	N/A	25	N/A	N/A	N/A	113	N/A	N/A	60 - 140	
Naphthalene	N/A	25	N/A	N/A	N/A	96.3	N/A	N/A	60 - 140	
Styrene	N/A	25	N/A	N/A	N/A	95.7	N/A	N/A	60 - 140	
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140	
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	100	N/A	N/A	60 - 140	
Tetrachloroethene	N/A	25	N/A	N/A	N/A	94.4	N/A	N/A	60 - 140	
Tetrahydrofuran	N/A	25	N/A	N/A	N/A	98	N/A	N/A	60 - 140	
Toluene	N/A	25	N/A	N/A	N/A	102	N/A	N/A	60 - 140	
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	84.5	N/A	N/A	60 - 140	
1,1,1-Trichloroethane	N/A	25	N/A	N/A	N/A	112	N/A	N/A	60 - 140	
1,1,2-Trichloroethane	N/A	25	N/A	N/A	N/A	104	N/A	N/A	60 - 140	
Trichloroethene	N/A	25	N/A	N/A	N/A	104	N/A	N/A	60 - 140	
1,2,4-Trimethylbenzene	N/A	25	N/A	N/A	N/A	95.6	N/A	N/A	60 - 140	
1,3,5-Trimethylbenzene	N/A	25	N/A	N/A	N/A	97.8	N/A	N/A	60 - 140	
Vinyl Chloride	N/A	25	N/A	N/A	N/A	112	N/A	N/A	60 - 140	
%SS1:	N/A	500	N/A	N/A	N/A	116	N/A	N/A	60 - 140	
%SS2:	N/A	500	N/A	N/A	N/A	121	N/A	N/A	60 - 140	
%SS3:	N/A	500	N/A	N/A	N/A	112	N/A	N/A	60 - 140	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

LCS = Laboratory Control Sample

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

 QA/QC Officer



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 75220

WorkOrder: 1302779

EPA Method: TO15		Extraction: TO15					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	

BATCH 75220 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1302779-001A	02/27/13 11:30 AM	03/04/13	03/04/13 3:19 PM	1302779-002A	02/27/13 12:00 PM	03/04/13	03/04/13 4:00 PM
1302779-003A	02/27/13 12:30 PM	03/04/13	03/04/13 4:41 PM				

LCS = Laboratory Control Sample

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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 QA/QC Officer