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Alameda County Environmental Health

September 7, 2012

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

#### Subject: Perjury Statement and Report Transmittal

1600 – 1630 Park Street 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, C. A

John Buestad President

JB/pm

Attachment: AEI Consultants, Data Gap Investigation and Interim Source Removal Workplan Addendum (September 7, 2012)

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



AE Consultants Environmental & Engineering Services

September 7, 2012

# REVISED DATA GAP INVESTIGATION and INTERIM SOURCE REMOVAL WORKPLAN ADDENDUM

### Property Identification:

1630 Park Street Alameda, California

AEI Project No. 298931 ACEHD Fuel Leak Case No. RO0000008

### Prepared for:

Foley Street Investments Attn: Mr. John Buestad 2533 Clement Avenue Alameda, CA 94501

Prepared by: AEI Consultants 2500 Camino Diablo Walnut Creek, CA 94597 (925) 746-6000

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September 7, 2012

Alameda County Environmental Health Department Attn: Ms. Karel Detterman 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

#### Subject: Revised Data Gap Investigation and Interim Source Removal Workplan Addendum 1630 Park Street Alameda, California AEI Project No. 298931 ACEHD Fuel Leak Case No. RO0000008

Dear Ms. Detterman:

AEI Consultants (AEI) has prepared this Revised Addendum to the Data Gap Investigation and Interim Source Removal Workplan on behalf of Foley Street Investments (FSI), developer of the subject site (See Figure 1 and Figure 2). The subject of this Revised Addendum is the leaking underground storage tank (LUST) case located at the property 1630 Park Street, known as the Good Chevrolet site. The Alameda County Environmental Health Department (ACEHD) is the agency with regulatory oversight of the LUST case. This Addendum addresses comments to the original Data Gap Investigation and Interim Source Removal Workplan (AEI, May 4, 2012) which were provided by the ACEHD in correspondence dated July 20, July 31, and August 24, 2012.

The original Workplan Addendum included the following key items:

- 1. Excavation Target Soil Concentrations (ACEH July 20 letter, Technical Comment 4);
- 2. Additional Former Tank Pit and Lift Excavation Confirmation Sampling (ACEH July 20 letter, Technical Comment 5);
- 3. Revised Soil Vapor Sampling Plan (ACEH July 20 letter, Technical Comment 6);
- 4. Discussion of Additional Remedial Efforts (ACEH July 20 letter, Technical Comment 7);
- 5. Revised Groundwater Monitoring Schedule (ACEH July 20 letter, Technical Comment 8);
- 6. Preliminary Site Conceptual Model (ACEH July 20 letter, Technical Comment 10).

This Revised Workplan Addendum includes the following additions and clarifications of information already presented to address comments in ACEH's August 24 letter, Technical Comment 2, and in a telephone conversation with Ms. Karel Detterman on August 24, 2012:

- 1. Correction of typographic error for target soil concentration for total xylenes (Section 1.0);
- 2. Justification of the tank pit excavation within the context of the initial Site Conceptual Model (SCM) and the proposed remediation goals (Section 1.0);
- 3. Clarification of excavation target soil concentrations as presented Sections 5.2.1 and 5.2.3 in the May 2, 2012 Data Gap Workplan (Section 1.0);
- 4. Data gap evaluation of former waste-oil UST within the context of the initial SCM and the proposed remediation goals (Section 6.7.1);
- 5. Justification of the proposed remediation goals with respect to the former waste-oil UST in context with the initial SCM(Section 6.7.1);
- 6. Clarification of the Rate of collection of confirmatory tank pit excavation floor samples (Section 2.0)
- 7. Site Conceptual Model presented in tabular form.
- 8. Data Gaps and Proposed Investigations presented in tabular form.

# 1.0 Excavation Target Soil Concentrations and Rationale

Section 5.2.1 of the May 4, 2012, Workplan proposed excavation bottom target soil concentrations based on Table B of the San Francisco Bay Regional Water Quality Control Board, California EPA, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*. These targets are based on the screening levels in the document for shallow soil at commercial sites overlying a non-drinking water aquifer. Based on the request from the ACEH, the excavation bottom target soil concentrations have been modified using Table A of the guidance document which are based on sites overlying a drinking water aquifer.

The revised cleanup targets for the excavation bottom samples are summarized below:

<u>Constituent</u>	<u>Target Soil Concentration*</u>
ТРН-д	83 mg/kg
TPH-d	83 mg/kg
TPH-mo	2,500 mg/kg
Benzene	0.044 mg/kg
Toluene	2.9 mg/kg
Ethylbenzene	3.3 mg/kg
Total Xylenes	2.3 mg/kg

\*Based Table A of the RWQCB 2008 ESL Guidance Document.

The rationale for the excavation of the former UST pit is to remove the volume of impacted soil present around and within the pit which remained, due, at least in part, to the plastic lining within the excavation that may have reduced the effectiveness of recent vacuum extraction activities. The presence of this soil was witnessed by AEI, FSI, and ACEH during the exploratory trench conducted across the former excavation in June 2012. Although verification of soil conditions relating to the possible occurrence of a release from the former waste-oil tank will be performed, the driver for re-excavation of this location is not specifically the waste-oil UST. As discussed below (Sec 6.7.1), although data is limited, soil sample results at the time of removal of the waste-oil did not indicate a significant oil range hydrocarbon release.

As described in the original Data Gap Workplan, the proposed excavations are not planned to extend beyond the target areas or to "chase" impacts laterally if such impacts are found at the planned lateral extents of the excavations. Efforts will be made to remove the impacted soil vertically within the proposed excavations to reach the Target Soil Concentrations at the base of the excavated areas. The anticipated excavation depths of 15 feet for the UST pit excavation and 12 feet for the hydraulic lift excavations are based on soil sample analytical data from samples collected from borings installed near the proposed excavations. Tables 3 through 5 present a summary of the soil sample analytical data for samples collected from these borings and from all soil borings across the site. Figures 2 through 4 present cross-sections through the proposed uST pit and in close alignment with the hydraulic lift areas. Soil analytical results posted at the appropriate depths in the cross-sections suggest that the vertical extent of TPH-g is less than approximately 14 feet bgs, although 1 to 2 feet of variability should be expected. Soil sample analytical data in Tables 3 through 5 confirm that this is the case across the site and also suggests that the vertical extent of TPH-mo impacts is less than approximately 12 feet bgs.

It is expected that within the excavations, all soil that contains impacts above the stated Target Soil Concentrations will be removed at the bottoms of the excavation. This is supported by the data referenced above and the Site Conceptual Model (SCM). However, if impacts are still present at the proposed depths, as determined in the field through PID screening of soil samples and visual observation, additional soil may be excavated as feasible based on the excavation equipment limits, the geometry of the excavation, and safety and stability considerations.

As a contingency, if confirmation sampling shows that bottom or sidewall impacts remain, they will be addressed through other remedial measures such as monitored natural attenuation, insitu treatment, or possibly continued HVDPE. This excavation removal action and the HVPDE performed within the last year are interim removal activities; a corrective action plan (CAP) has not been finalized for the site. Such contingency measures would be evaluated during the preparation of a CAP.

# 2.0 Former Tank Pit and Lift Excavation Confirmation Sampling

Section 5.2.5 of the original May 4, 2012, Workplan proposed confirmation sampling and analytical intervals at the rate of 2 sidewall and 1 bottom sample from each excavation at a minimum. Based on ACEH comments, the sampling plan has been modified to include

collection of soil samples from each excavation sidewall and from the excavation floors at the rate of 1 sample per every 20 linear feet of wall and excavation bottom. In addition, the samples will be positively biased towards the worse-case indicators of contamination, as requested.

# 3.0 Soil Vapor Sampling Plan

Section 5.5 of the original May 4, 2012 Workplan describes the sampling and analytical methods for samples collected from existing and proposed soil vapor probes at the site. Based on ACEH comments, the methods for soil vapor samples collected during future sampling events will be modified to include:

- Laboratory analysis of soil vapor samples by EPA Method TO-15 for analysis of benzene, ethylbenzene, toluene and total xylenes (BTEX), naphthalene, and TVHC (C5-C-11).
- Laboratory analysis of samples by ASTM Method D 1946-90 for atmospheric gases (oxygen, methane, carbon dioxide and nitrogen).

The scope of these analyses will be performed on the original three vapor monitoring points (VP-1 to VP-3) and those proposed to be installed. The location of replacement vapor monitoring points will be proposed in a workplan to ACEH once the building footprint details have been finalized.

# 4.0 Additional Remedial Efforts

Section 5.2.7 of the original May 4, 2012, Workplan describes the addition of an oxygen-release compound to former tank pit and lift excavations backfill material. ACEH has recommended against adding the compound on the basis that since the chosen corrective action at the site is high vacuum dual phase extraction (HVDPE), any benefit gained by the addition of the compound would be negated during HVDPE activities.

AEI respectfully disagrees with the recommendation on the basis that the proposed compound is designed to release oxygen slowly and continuously for up to 12-months. We agree that operation of the HVDPE system immediately following oxygen release compound placement would negate some of the benefit of the oxygen-release compound, however; since the anticipated operation of the HVDPE system (if needed at all) would be of limited duration and would not likely occur until deemed necessary by several episodes of quarterly groundwater monitoring, the long term benefits of the addition of the compound would still be realized in the interim. Further, the modest cost associated with adding the compound during the backfilling of the proposed excavations compared with the potential long-term benefit by further accelerating the time to closure, and reducing the likelihood of significantly more aggressive and expensive additional HVDPE, makes the proposed action very appealing.

### 5.0 Groundwater Monitoring Schedule

Section 5.3 of the original May 4, 2012, Workplan describes the groundwater monitoring program for the site including a schedule of planned sampling dates. The schedule included one year of post-corrective action monitoring. ACEH has requested that the schedule be extended to include up to 2 years of post-corrective action monitoring. In accordance with current regulations, a minimum of one year of monitoring is anticipated. Additional monitoring needs will be reviewed with ACEH during and after the first year. The Revised Groundwater Monitoring Schedule is included as Attachment C.

## 6.0 Initial Site Conceptual Model

The following section presents an updated preliminary Site Conceptual Model (SCM) of the release occurrence, including a discussion of the physical setting of the site, distribution of contaminants of concern (COCs), potential exposure pathways, and data gaps that may exist in the understanding of the release. The key elements of the SCM are summarized in tabular form in Attachment A.

### 6.1 Geologic Setting and Hydrology

The site is located on Alameda Island along the eastern margin of San Francisco Bay. The near surface sediments of the area are mapped as Holocene and Pleistocene Merritt Sands (Qms) deposits (Helley, et al). Depth to bedrock is estimated at 300 to 800 feet below land surface (Norfleet Consultants, 1998). According to information obtained from the U.S Geological Survey (USGS), the site is located at between 20 and 25 feet above mean sea level (amsl) with the local topography sloping gently to the northeast. The nearest surface water body is the tidal canal located approximately 1500 to 2000 feet to the northeast.

Based upon recent drilling of soil borings conducted by AEI in 2011 and 2012, groundwater is first observed in borings at depths of approximately 9 to 11 feet bgs and stabilizes at depths between approximately 7.5 to 8.5 feet bgs. The depth to water in the groundwater monitoring wells has generally ranged from approximately 7.5 to 9.5 feet bgs since the wells were installed. Based on the groundwater monitoring conducted at the site, groundwater flows fairly consistently in a northwesterly direction at an approximate hydraulic gradient of  $1 \times 10^{-2}$  to  $2 \times 10^{-2}$  ft/ft and exists as an unconfined aquifer. Based on the logs of soil borings drilled at the site, sediments across the site are fairly consistent; consisting primarily of poorly graded fine to medium sand with varying clay and silt content. Refer to Figures 3 and 4 for fence diagrams, based on logs of borings at the site, which depict the sediments across the release area.

Groundwater monitoring well construction details for the wells at the site are summarized in Table 1 and a comprehensive summary of depth to water groundwater measurements is included in Table 2. The most recent groundwater surface contour map, including a rose diagram depicting the historic groundwater flow direction and other pertinent site features, is included as Figure 6. Soil boring and well construction logs are included in Attachment D.

#### 6.2 Release Occurrence

The release of TPH-g, BTEX, and other gasoline constituents originated from the former 500 gallon gasoline UST system removed in 1986 from near the northern side of the existing building. The exact cause of the release is not known, though typically such releases occur from failures of the UST itself or the associated piping and pump system. The timing, duration and volume of the oil release are unknown.

The source of the heavier range hydrocarbons detected in samples collected within the former building appear to be from several of the five former hydraulic lifts at the northern end of the building although the former waste oil UST may have contributed to the heavier range petroleum detected as well. Again, the timing, duration and volume of the oil release are unknown.

#### 6.3 Contaminants of Concern

The primary contaminants of concern at the site consist of gasoline range hydrocarbons and oil range hydrocarbons released in the northeastern area of the existing building. The following exhibit presents a summary of the maximum concentrations of the more significant contaminants of concern in soil and groundwater.

	Maximu	m Concentratio	n in Soil	Maximum Concentration in Groundwater			
Contaminant	mg/kg Date		Sample ID	µg/l	Date	Sample ID	
TPH-g	15,000	10/15/93	EB2-2S	200,000	7/25/11	AEI-4-W	
Benzene	84	10/15/93	EB2-2S	21,000	7/25/11	AEI-4-W	
Toluene	710	10/15/93	EB2-2S	30,000	7/25/11	AEI-4-W	
Ethyl benzene	260	10/15/93	EB2-2S	4,300	5/1/08	GP8W	
Xylenes	1400	10/15/93	EB2-2S	21,000	5/1/08	GP8W	
MTBE	9.3	1/21/97	EB10-S1	110	1/21/97	EB12-WS1	
TPH-d	10,000	7/25/11	AEI-6-7′	120,000	7/25/11	AEI-6-W	
TPH-mo	24,000	7/25/11	AEI-6-7′	300,000	7/25/11	AEI-6-W	
Lead	140	1/17/12	AEI-27-3	<0.5	na	na	

#### 6.4 Soil Contamination

Gasoline impacted soil appears to be centered on the former UST and extends laterally in each direction, primarily to the north-northwest toward Park Street. To the east, south, and west, impacted soil appears to extend approximately 20 to 50 feet from the former UST hold and approximately 100 feet to the north. The lateral extent of gasoline impacted soil is reasonably well defined in each direction (Figure 6). Tables 3 to 5 present a summary of soil sample analytical results.

Oil impacted soil was identified adjacent to several former lifts in the northeastern corner of the existing building. While the lateral extent of oil impacted soil has not been fully defined it is expected to be limited based on the typically low volumes released from such lifts.

The vertical extent of impacted soil has been generally well defined by past investigations. Vertically, the top of the impacted zone begins at approximately 7 to 8 feet bgs and ends between approximately 12 to 14 feet bgs. Figures 3 and 4 depict the approximate extent of vertical impacts. The zone of impact appears to be limited to approximately 4 to 8 feet in thickness, which corresponds to just above the water table (capillary fringe) to several feet below the average water table.

## 6.5 Groundwater Contamination

The dissolved phase plume is also centered on the former UST hold and spreads generally in a northwesterly direction. The extent of the impacts in groundwater have been defined to the south and southeast, as demonstrated by grab groundwater samples collected in January 2012, from borings AEI-24, AEI-25 and AEI-26 and to the east of the former tank pit as demonstrated by grab groundwater samples collected from borings GP3 (April 2008) and AEI-27 in (January 2012) (Tables 6 to 8). Groundwater impacts are also well defined to the northwest as demonstrated by analysis of groundwater samples collected in May 2012, from monitoring wells MW-4 and MW-5 (Table 9).

Grab groundwater samples collected from temporary borings AEI-21, AEI-22 and AEI-23 in January 2012, suggest that the extent of impacts are not completely defined west and southwest of the former UST locations. Additionally, although recent data from monitoring well MW-1 show low concentrations of gasoline range hydrocarbons (Table 9), historic grab groundwater samples collected in April 2008, from GP-1, GP-4, GP-5 and from EB-5 in October 1993, suggest that the significant hydrocarbons in groundwater may exist to the north and northeast of the former UST tank pit.

Based on the above, it appears that the extent of hydrocarbon impacts in groundwater is not defined to the west/southwest or to the north/northeast. These data gaps are addressed in the May 4, 2012, Data Gap Investigation and Interim Source Removal Workplan.

The data show the leading edge of the plume extending under Park Street, but diminishing beyond wells MW-4 and MW-5 (Figure 5, 5a and 5b). It should be noted that the majority of the groundwater data are from "grab" groundwater samples collected from temporary soil borings, which tend to be biased high relative to true dissolved phase concentration data that would be expected from monitoring wells. Nevertheless the data suggest that soil with petroleum concentrations near saturation levels and the presence of free phase product in and around the release area existed prior to the recent implementation of interim remedial actions. The remedial actions to date were focused on the core of the soil and groundwater plumes and have removed approximately 18,134 pounds of hydrocarbons from the soil and 390,460 gallons of contaminated groundwater. This reduction of contaminant mass in conjunction with the proposed 'hot spot' excavations will reduce the contaminant loading to groundwater beneath the site. Based on groundwater monitoring data, concentrations were reduced after the remedial actions and have generally decreased over the last 10 years. Tables 6 through 9 present of summary of the groundwater analytical data for the site.

### 6.6 Receptors and Exposure Pathways

Human and environmental exposure pathways refer to the routes by which environmental receptors can be exposed to contaminants. Human receptors include onsite occupants of a

property and offsite persons who could be exposed to impacted soils, soil vapor, or groundwater. Environmental receptors include resources such as surface waters or groundwater and the flora and fauna in the area surrounding the site.

Soil exposure pathways include direct contact with impacted soil and leaching of contaminants from soil into groundwater. Recent dual phase extraction activities were intended to remove the highest concentrations of contaminants in soil at the core of the plume. Additional interim remedial action is planned to excavate remaining 'hot spots' at the site, including the removal of soil contained in the former UST pit and beneath the former hydraulic lifts. Once these activities are complete, the soil exposure pathway is expected to be eliminated or reduced to levels that will naturally degrade over time.

Groundwater exposure pathways to humans include direct contact and ingestion of impacted water. Groundwater exposure pathways to environmental receptors include discharge to surface waters. Given the apparent extent of the dissolved phase plume and distance to the nearest surface waters, impact to surface water is not considered a complete pathway. Given the depth to water of over 7 feet bgs the exposure from direct contact with groundwater is not considered to be complete with the possible exception of water wells in the vicinity of the site. A water well survey was conducted in 2012 (AEI, March 30, 2012) which concluded that no water wells exist within 2000 feet of the site that could be impacted by the site groundwater. In addition, a preferential pathway study was conducted in 2012 to determine if underground utility corridors could influence the flow of groundwater in the vicinity of the site (AEI, March 30, 2012). The study found that utilities that lie within the expected extents of the groundwater plume are buried at depths that would not encounter groundwater with the exception of one sanitary sewer line located near the center of Park Street. Groundwater monitoring data from wells MW-4 and MW-5, located between the utility line and the site, however, suggest that the groundwater plume diminishes before this potential pathway is encountered (Figure 5). Based on the above, the groundwater exposure pathway is not considered complete. However, despite the lack of documented use or realistic future use of the shallow groundwater beneath the site, per the aguifer designation in the Basin Plan, ACEH has requested that the aguifer be considered of potential drinking water use for the purpose of remedial planning.

The vapor inhalation (vapor intrusion) exposure pathway for humans is potentially complete where volatile contaminants are present in shallow soils beneath an occupied structure. Recent testing of soil vapor samples, however, showed that no detectable concentrations of contaminants were present in shallow soil vapor. Soil vapor samples were collected from dedicated sampling points installed to a depth of 5 feet bgs near the UST hold and within the core of the groundwater plume. The soil vapor data are summarized in Table 10. Quarterly soil vapor sampling of existing and proposed sampling points has been proposed in the May 4, 2012, Workplan. Mitigation measures will be addressed based on the results of the sampling and, if needed, will be incorporated into the design of the new buildings at the site.

Due to the urbanized nature of the area, exposure to flora and fauna is not relevant and therefore not evaluated.

## 6.7 Data Gaps

Data gaps are identified based on prior assessments where information is needed to better understand the nature of a release, its fate and transport, or its possible impacts. This addendum addresses comments from the ACEH to the May 4, 2012, Data Gap Investigation and Interim Source Removal Workplan, which was prepared to specifically address the current data gaps. The May 4, 2012, Workplan includes a thorough analysis of the current data gaps at the site and presents a scope of work to attempt fill them. The key elements of the Data Gap analysis presented in the May 4, 2012 workplan and through the subsequent SCM analyses are summarized below and in Attachment B. Additional discussion of the former waste-oil UST is presented in Sec. 6.7.1 below.

- The extent of hydrocarbon impacts in groundwater is not defined to the west/southwest, or to the north/northeast; stability of plume following interim remedial action needs to be assessed (Item 2 Attachment B).
  - Install additional groundwater monitoring wells
  - Initial quarterly groundwater monitoring program (commenced)
- Unknown condition of former UST pit fill material and possibility of plastic sheeting which could inhibit remedial efforts.
  - Excavate test-pit to determine backfill condition. (Completed, removed for data gaps summary table)
- Soil vapor conditions unknown to assess the potential for vapor intrusion (Item 3 Attachment B).
  - Initiate soil vapor investigation and periodic monitoring program. (Commenced)
- Human health threats to potential receptors (Item 4 Attachment B).
  - Identify receptors and pathways (Commenced)
  - Perform assessment of risks (pending completion of removal action and data gaps investigation)

### 6.7.1 Former Waste Oil UST

An additional data gap identified by the ACEH in the July 31, 2012, directive letter is the former waste oil tank that was located adjacent to the former gasoline UST (Item 1 Attachment B). According to a report prepared by Groundwater Technology in April 1987, the 300-gallon waste oil tank was removed in 1986 and a soil sample collected from the waste oil UST tank pit at a depth 8 feet bgs contained 57 ppm TPH-mo. No further sampling for TPH-mo was performed during the investigation that followed in 1987 nor does it appear that ACEH requested further investigation of the waste oil UST at that time.

In July 2011 and January 2012, AEI analyzed soil samples for TPH-mo in samples collected from 22 soil borings (see Table 3). Concentrations of TPH-mo up to a maximum of 24,000 mg/kg were reported in the samples; however, the only samples which exceeded the proposed Target Soil Concentration of 2500 mg/kg were collected from borings directly adjacent to the hydraulic

lifts. Soil samples collected at locations that are not adjacent to the lifts contained low to nondetectable levels. As an example, a soil sample collected at a depth of 8 to 8.5 feet bgs in the boring for DPE-3, located in undisturbed soil less than 5 feet from the UST pit, contained 58 mg/kg TPH-mo.

TPH-mo was also analyzed in grab groundwater samples from these borings (See Table 6). Similar to the soil samples, the majority of grab groundwater samples with elevated TPH-mo were collected near the hydraulic lifts. It should be noted that grab groundwater samples typically contain higher concentrations of a contaminant due to the presence of soil particles in the water. A groundwater sample collected from properly constructed groundwater monitoring well would be expected to have much lower concentrations of THP-mo than a grab sample collected from the same location. TPH-mo, which was added to the analytical suite in the May 2012 groundwater monitoring, was not detected in any of the wells (refer to the June 11, 2012 Groundwater Monitoring Report).

It is expected that the majority of TPH-mo range hydrocarbons in soil will be removed during the proposed excavations around the former lifts. As noted in Sec. 1.0, the rationale for the proposed excavation is the removal of source mass at the former UST pit and around the former lift; however, the data gap relating to the possibility of a significant release from the waste-oil UST will be assessed through sample collection during the excavation of the former UST pit. Excavation confirmation samples will be analyzed to determine any remaining concentrations of TPH-mo post-excavation. The extent of THP-mo in groundwater appears minimal as referenced above however will be further determined during the future groundwater monitoring events, as TPH-mo has been added to the analytical suite for all groundwater samples.

# 7.0 References

- Alameda County Environmental Health Department (ACEHD), November 4, 2011. *Request for Pilot Test Workplan*
- ACEHD, November 23, 2011. Conditional Approval of Pilot Test Workplan
- ACEHD, April 16, 2012. Corrective Action Plan
- ACEHD, July 20, 2012. Directive letter regarding Modified Approval of Data Gap Investigation and Interim Source Removal Work Plan.
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- Norfleet Consultants, 1998. *Groundwater Study and Water Supply History of the East Bay Plain, Alameda and Contra Costa Counties, California.* Prepared for the Friends of the San Francisco Estuary, P.O. Box 791, Oakland, California, and dated June 15, 1998.

# 8.0 Report Limitations

This report has been prepared by AEI Consultants relating to the property located at 1630 Park Street, in the City of Alameda, Alameda County, California. This report includes a summary of site conditions and relies heavily on information obtained from public records and other resources; AEI makes no warrantee that the information summarized in this report includes consideration of all possible resources or information available for the site, whether referenced on not. Material samples have been collected and analyzed, and where appropriate conclusions drawn and recommendations made based on these analyses and other observations. This report may not reflect subsurface variations that may exist between sampling points. These variations cannot be fully anticipated, nor could they be entirely accounted for, in spite of exhaustive additional testing. This document should not be regarded as a guarantee that no further contamination, beyond that which could have been detected within the scope of past investigations is present beneath the property or that all contamination present at the site will be identified, treated, or removed. Undocumented, unauthorized releases of hazardous material(s) and petroleum products, the remains of which are not readily identifiable by visual inspection and/or are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation and may or may not become apparent at a later time. This document contains estimates of costs for various activities that could be implemented at the site. These estimates are based on reasonably expected costs for similar activities; however, AEI provides no guarantee implicit or explicit that costs will not be significantly higher or lower than those estimated. All specified work has been performed in accordance with generally accepted practices in environmental engineering, geology, and hydrogeology and performed under the direction of appropriate California registered professionals.

We welcome comments and questions from ACEHD staff. Please contact us (925) 746-6000.

Sincerely, AEI Consultants

Robert Robitaille Sr. Project Manager

6 Peter J. McIntyre, PG ALIFORNI Sr. Vice President, Geologist

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

# FIGURES

















# TABLES

#### 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	0.02	20 - 25	#3 Sand
DPE-1	11/15/2011	25.88	PVC	16	15	10	4	7 - 15	0.01	6.5 - 16	#2/12 Sand
DPE-2	11/15/2011	26.22	PVC	16	15	10	4	7 - 15	0.01	6.5 - 16	#2/12 Sand
DPE-3	11/14/2011	25.27	PVC	16	14	10	4	7 - 14	0.01	6.5 - 16	#2/12 Sand
DPE-4	1/19/2012	26.06	PVC	17	17	10	4	8 - 17	0.01	7.5 - 17	#2/12 Sand
DPE-5	1/20/2012	26.25	PVC	18	18	10	4	8 - 18	0.01	7.5 - 18	#2/12 Sand
DPE-6	1/20/2012	26.13	PVC	18	18	10	4	8 - 18	0.01	7.5 - 18	#2/12 Sand
DPE-8	1/20/2012	25.36	PVC	18	18	10	4	8 - 18	0.01	7.5 - 18	#2/12 Sand
DPE-9	1/20/2012	25.09	PVC	18	18	10	4	8 - 18	0.01	7.5 - 18	#2/12 Sand
DPE-10	1/20/2012	25.14	PVC	17	17	10	4	8 - 17	0.01	7.5 - 17	#2/12 Sand
DPE-11	1/20/2012	25.57	PVC	18	18	10	4	8 - 18	0.01	7.5 - 18	#2/12 Sand
MW-1	1/15/1987	25.37	PVC	-	20	8	2	5 - 20	-	-	-
MW-2	1/15/1987	25.48	PVC	-	20	8	2	5 - 20	-	-	-
MW-3	1/15/1987	25.13	PVC	-	20	8	2	5 - 20	-	-	-
MW-4	4/20/1994	25.58	PVC	-	23	8	2	8 - 23	-	-	-
MW-5	4/20/1994	24.31	PVC	-	22	8	2	7 - 22	-	-	-
VP-1	12/6/2011	-	Poly/SS	6	6	1.25	1/4	5.1 - 5.6	Mesh	4.7 - 6	#30 Mesh Sand
VP-2	12/6/2011	-	Poly/SS	5.9	5.9	1.25	1/4	5.1-5.6	Mesh	4.7-5.9	#30 Mesh Sand
VP-3	12/6/2011	-	Poly/SS	5.75	5.75	1.25	1/4	5.1-5.6	Mesh	4.7-5.75	#30 Mesh Sand

PVC = polyvinyl chloride Poly/SS = Polyethelene tubing with stainless-steel tip TOC = top of casing "-" = not available

# Table 2 Groundwater Elevation Data AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Well ID	Date	Well	Depth to	Groundwater
(Screen Interval)	Collected	Elevation	Water	Elevation
		(ft amsl)	(ft)	(ft amsl)
NNN/ 1		104 7/	0.00	05.02
	Jui-89	104.76	8.93	95.83
(5 - 20 feet bgs)	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
N/14/ 0	1 1 00	101.0/	0.04	05 ( 0
IVIVV-2	Jul-89	104.86	9.24	95.62
(5 - 20 feet bgs)	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

# Groundwater Elevation Data AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Well ID	Date Collected	Well	Depth to	Groundwater
	Collected	(ft ams/)	(ft)	(ft ams/)
		(it anisty		(it anoy
MW-2 (continued)	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
		404.50	0.00	05 50
MVV-3	Jui-89	104.52	9.00	95.52
(5 - 20 feet bgs)	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		/.81	96.71
	Nov-02		8.37	96.15
	Feb-03		1.48	97.04
	Jun-03	05 13	1.67	96.85
	Apr-08	25.17	1.74	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
MW-4	Apr-94	104.86	9.29	95.57
(8 - 23 feet bas)	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		-	-

# Groundwater Elevation Data

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

Well ID	Date	Well	Depth to	Groundwater
(Screen Interval)	Collected	Elevation	Water	Elevation
		(IT amsi)	(ft)	(IT amsi)
MW-4 (continued)	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
MW-5	Apr-94	103.62	8.27	95.35
(7 - 22 feet bgs)	Jul-94		8.50	95.12
、 3 <i>7</i>	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	24.31	7.46	16.86
DPE-1	Dec-11	25.88	8.81	17.07
(7 - 15 feet bgs)	Jan-12	25.88	8.78	17.10
	May-12	25.88	7.72	18.16
	Doc 11	26.22	0.20	16.02
(7 15 feet bas)	Dec-11	20.22	9.29	10.95
(7 - 15 leet bys)	May-12	26.22	7.89	18.33
	5	05.07	7.00	17.05
UPE-3	Dec-11	25.27	7.92	17.35
(7 - 15 feet bgs)	Jan-12	25.27	8.98	10.29
	iviay-12	25.27	0.75	18.52
DPE-4	Jan-12	26.06	9.11	16.95
(8-17 feet bgs)	May-12	26.06	8.59	17.47
DPE-5	Jan-12	26.25	-	-
(8-18 feet bgs)				
	lan 10	76 1 2	0 50	17 EE
UPE-0 (9.19 foot bac)	Jan-12 May 12	20.13 26.12	0.50 7 12	1/.55 19-70
(o-to leet bys)	way-12	20.15	7.43	10.70
	lan 10	<b>25.2</b> /		
DPE-8 (8-18 feet bas)	Jan-12	25.36	-	-
(0.101001093)				
DPE-9	Jan-12	25.09	8.12	16.97
(8-18 feet bgs)				
DPF-10	lan-12	25.14	-	-
(8-17 feet has)	Mav-12	25.14	7.73	17.41
(0.171001.093)	<i>may</i> 12	20.17	,	
	lor 10			
UPE-11 (0.10 fact here)	Jan-12 May 12	25.57	-	- 17/7
(8-18 reet bgs)	iviay-12	25.57	7.90	17.07

ft amsl = feet above mean sea level

# Groundwater Elevation Data AEI Project No. 298931, 1600-1630 Park Street, Alameda, CA

Well ID	Date	Well	Depth to	Groundwater
(Screen Interval)	Collected	Elevation	Water	Elevation
		(ft amsl)	(ft)	(ft amsl)
· · · · · · · · · · · · · · · · · · ·				

All water level depths are measured from the top of casing "-" = not measured bgs = below ground surface

#### Soil Sample Analytical Data TPH, MBTEX and POG AEI Project No. 298931, 1630 Park Street, Alameda, California

Sample	Date	Approx. Depth	TPH-g	TPH-d*	TPH-mo*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG
ID	Collected	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
						EPA Method SW	/8021B/8015B/m				EPA Method SM5520E/F
MW 1 10	1/15/1007	10	24				2.0	2.6		1 0	
MNV 1 15	1/15/1987	10	24 ~1.0	-	-	-	2.9	3.0 ~0.1	-	1.0 ~0.1	-
10100-1-15	1/13/1/07	15	<1.0	-	-	-	<0.1	<0.1	-	<0.1	-
MW-2-5	1/15/1987	5	<1.0	-	-	-	<0.1	<0.1	-	<0.1	-
MW-2-10	1/15/1987	10	350	-	-	-	14	22	-	23	-
MW 2 10	1/15/1007	10	200				0.0	16		16	
MN/ 2 15	1/15/1987	10	~10	-	-	-	7.0 ~0.1	<01	-	<pre>/01</pre>	-
10100-3-13	1/13/1707	15	<1.0	-	-	-	<0.1	<0.1	-	<0.1	-
SB-5-10	1/15/1987	10	6.5	-	-	-	<0.1	0.22	-	<0.1	-
EB1-S2	10/15/1993	8.5	510	-	-	-	0.89	10	5.8	41	-
EB1-S3	10/15/1993	11	2,300	-	-	-	22	190	57	280	-
EB2-2S	10/15/1993	10	15,000	-	-	-	84	710	260	1,400	-
EB2-S3	10/15/1993	11.5	200	-	-	-	4.3	15	3.9	20	-
FB3-52	10/15/1993	10	2 200	-	_	_	94	71	42	200	-
EB3-S3	10/15/1993	12 5	610				12	3.2	4 5	200	
200 00	10/10/17/0	12.0	010				1.2	0.2	1.0	2.7	
EB4-S2	10/15/1993	8	4,900	-	-	-	32	230	84	440	-
EB4-S3	10/15/1993	10.5	7,600	-	-	-	60	390	130	630	-
	10/15/1002	0	1 000				< 2 F	22	77	140	
EDD-32	10/15/1993	9 11 E	1,600	-	-	-	< 2.5	15	27	140	-
ED3-33	10/13/1773	11.5	14	-	-	-	0.021	1.5	0.49	2.5	-
EB6-S2	10/15/1993	8.5	6,800	-	-	-	20	230	100	590	-
EB7-S2	10/15/1993	6.5	<50	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	-
EB7-S3	10/15/1993	8.5	1,000	-	-	-	3.8	45	21	110	-
MW4-S1	4/20/1994	4.5	<50	-		-	< 0.5	< 0.5	< 0.5	0.013	-
MW4-S2	4/20/1994	9	9.7	-	-	-	1.1	0.82	0.42	1.3	-
MW4-S3	4/20/1994	14	<50	-	-	-	<0.5	0.008	< 0.5	0.022	-
			50								
MW5-S1	4/20/1994	4.5	<50	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	-
MW5-S2	4/20/1994	9	1,100	-	-	-	12	43	20	93	-
MW5-S3	4/20/1994	14	1.1	-	-	-	0.033	0.17	0.044	0.22	-
EB8-S2	1/21/1997	9.5	2,000	-	-	<4	8.4	83	44	210	-
EB8-S3	1/21/1997	13.5	18	-	-	0.10	3.2	1.2	0.47	1.7	-
									_		
EB9-S1	1/21/1997	6.5	1.8	-	-	<5	0.071	0.052	0.026	0.074	-
EB9-S2	1/21/1997	9.5	1,300	-	-	<4	7.1	54	29	130	-
EB10-S1	1/21/1997	8.5	2,300	-	-	9.3	9.1	100	50	190	-

## Soil Sample Analytical Data TPH, MBTEX and POG

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

Sample	Date	Approx. Depth	TPH-g	TPH-d*	TPH-mo*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG
ID	Collected	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg) EPA Method SV	(mg/kg) /8021B/8015B/m	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg) EPA Method SM5520E/F
EB11-S1	1/21/1997	9.5	3,800	-	-	< 9	8.8	190	97	510	-
EB11-S2	1/21/1997	12	13	-	-	<0.1	1.1	1.6	0.47	1.4	-
EB12-S1	1/21/1997	9.5	300	-	-	<0.6	0.95	0.59	3.5	18	-
EB12-S2	1/21/1997	12	1,300	-	-	6.2	9.4	23	35	130	-
GP1-11.5	4/29/2008	11.5	130	-	-	< 0.005	<0.10	0.29	<0.10	0.42	-
GP1-15	4/29/2008	15	<1.0	-	-	< 0.005	< 0.005	0.0081	0.0065	0.028	-
GP2-11	4/29/2008	11	120	-	-	<0.010	< 0.050	0.87	0.43	1.2	-
GP2-13.5	4/29/2008	13.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	-
GP3-6 75	4/29/2008	6.75	<1.0	-	_	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_
GP3-11.5	4/29/2008	11.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	<0.005	<0.005	-
GP4-11.5	4/29/2008	11.5	2.7	-	-	< 0.005	0.14	0.052	0.072	0.17	-
GP4-14.5	4/29/2008	14.5	99	-	-	<0.020	0.48	1.4	1.0	4.5	-
GP5-11.5	4/29/2008	11.5	4.6	-	-	< 0.005	0.12	0.078	0.14	0.48	-
GP5-19	4/29/2008	19	1.5	-	-	< 0.005	< 0.005	0.022	0.0069	0.032	-
GP6-11	4/29/2008	11	130	-	-	<0.10	0.11	1.0	1.1	5.4	-
GP7-8	4/30/2008	8	390	-	-	< 0.050	0.84	2.2	4.3	18	-
GP7-19.5	4/30/2008	19.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	<0.005	< 0.005	-
GP8-8.5	5/1/2008	8.5	1,100	-	-	<0.050	<0.10	3.2	7.3	45	-
GP8-19.5	5/1/2008	19.5	5.8	-	-	< 0.005	0.0091	0.067	0.048	0.21	-
GP9-7.5	5/1/2008	7.5	<1.0	-	-	< 0.005	<0.005	<0.005	< 0.005	< 0.005	-
GP9-11.25	5/1/2008	11.25	<1.0	-	-	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	-
GP10-7.5	4/30/2008	7.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	-
GP10-19.5	4/30/2008	19.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	<0.005	< 0.005	-
GP11-6	4/30/2008	6	<1.0	-	-	<0.005	< 0.005	0.011	0.0053	0.026	-
GP11-15.5	4/30/2008	15.5	2,100	-	-	<0.10	5.7	71	38	180	-
GP11-18	4/30/2008	18	87	-	-	<0.020	0.059	0.93	0.67	4.2	-
GP12-7.5	4/30/2008	7.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	<0.005	<0.005	-
GP12-11	4/30/2008	11	4.7	-	-	< 0.005	0.015	0.21	0.067	0.32	-
GP12-15.5	4/30/2008	15.5	<1.0	-	-	< 0.005	< 0.005	0.0071	0.0051	0.025	-
GP13-7.25	4/30/2008	7.25	<1.0	-	-	< 0.005	< 0.005	<0.005	< 0.005	<0.005	-
GP13-11	4/30/2008	11	<1.0	-	-	< 0.005	< 0.005	<0.005	< 0.005	< 0.005	-
GP13-14	4/30/2008	14	<1.0	-	-	< 0.005	< 0.005	<0.005	<0.005	<0.005	-
GP14-7.5	4/30/2008	7.5	<1.0	-	-	< 0.005	<0.005	< 0.005	<0.005	<0.005	-

## Soil Sample Analytical Data TPH, MBTEX and POG

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

Sample	Date	Approx. Depth	TPH-g	TPH-d*	TPH-mo*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG
ID	Collected	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg) EPA Method SW	(mg/kg) /8021B/8015B/m	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg) EPA Method SM5520E/F
GP14-11	4/30/2008	11	<1.0	-	-	<0.005	< 0.005	<0.005	<0.005	<0.005	-
GP15-7.5	4/30/2008	7.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	<0.005	<0.005	-
GP16-7.5	5/1/2008	7.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	<0.005	<0.005	-
GP16-10.5	5/1/2008	10.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	-
GP17-7.5	5/1/2008	7.5	<1.0	-	-	< 0.005	< 0.005	< 0.005	< 0.005	<0.005	-
GP17-11.5	5/1/2008	11.5	<1.0	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	-
GP18-7.5	5/1/2008	7.5	<1.0	-	-	< 0.005	< 0.005	<0.005	< 0.005	<0.005	-
GP18-10	5/1/2008	10	<1.0	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	-
GP19-7	5/1/2008	7	<1.0	-	-	< 0.005	<0.005	<0.005	< 0.005	< 0.005	-
GP20-8	5/1/2008	8	<1.0	-	-	< 0.005	<0.005	<0.005	<0.005	< 0.005	-
GP21-7.5	5/2/2008	7.5	2.1	-	-	< 0.005	0.006	0.028	0.012	0.065	-
GP21-15.5	5/2/2008	15.5	<1.0	-	-	< 0.005	0.0064	0.022	0.0057	0.027	-
GP21-19.5	5/2/2008	19.5	<1.0	-	-	<0.005	<0.005	0.0092	<0.005	0.023	-
GP22-10.5	5/2/2008	10.5	1,100	-	-	<0.20	0.67	13	15	70	-
GP22-15.5	5/2/2008	15.5	<1.0	-	-	< 0.005	< 0.005	<0.005	< 0.005	<0.005	
GP23-7.5	5/2/2008	7.5	53	-	-	< 0.005	<0.050	0.13	< 0.050	0.37	
GP23-11.5	5/2/2008	11.5	1.9	-	-	< 0.005	0.062	0.041	0.043	0.18	-
GP23-16	5/2/2008	16	2	-	-	< 0.005	< 0.005	0.027	0.018	0.099	
GP24-8.5	5/2/2008	8.5	3,600	-	-	<1.0	1.2	32	62	410	
GP24-19.5	5/2/2008	19.5	<1.0	-	-	<0.005	< 0.005	< 0.005	< 0.005	<0.005	-
AEI-3-7'	7/25/2011	7	1,200	1,700	4,000	<10	2.6	25	10	48	
AEI-3-15'	7/25/2011	15	<1.0	1.6	<5.0	<10	< 0.005	< 0.005	< 0.005	< 0.005	-
AEI-4-7'	7/25/2011	7	5,100	2,100	710	<50	6.2	83.0	54.0	280.0	-
AEI-4-15'	7/25/2011	15	1.2	1.3	<5.0	< 0.05	0.029	0.071	0.031	0.17	-
AFL-6-7'	7/25/2011	7	470	10 000	24 000	< 5.0	<0.50	< 0.50	< 0.50	< 0.50	
AEI-6-14'	7/25/2011	, 14	<1.0	1.4	<5.0	<5.0	< 0.50	<0.50	<0.50	< 0.50	-
	7/05/0014	-	100	( 000	44.000						
AEL-/-/	7/25/2011	/	100	6,300	14,000	- -E 0	-	-	-	-	-
AE1-7-13	1/25/2011	13	< 1.0	J.1	7.4	<5.0	<0.50	<0.50	<0.50	<0.50	-
AEI-8-7'	7/25/2011	7	<1.0	720	2,900	-	-	-	-	-	-
AEI-8-14'	7/25/2011	14	<1.0	<1.0	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	-
AEI-10-8'	7/26/2011	8	<1.0	1.2	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	-

#### Soil Sample Analytical Data TPH, MBTEX and POG AEI Project No. 298931, 1630 Park Street, Alameda, California

Sample	Date	Approx. Depth	TPH-g	TPH-d*	TPH-mo*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG
ID	Collected	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
						EPA Method SW	8021B/8015B/m				EPA Method SM5520E/F
AEI-11-3'	7/26/2011	3	<1.0	2.2	8.5	-	-	-	-	-	-
AEI-12-3'	7/26/2011	3	<1.0	2.6	<5.0	-	-	-	-	-	-
AEI-13-3'	7/26/2011	3	<1.0	4.2	<5.0	-	-	-	-	-	-
AEI-14-7'	7/26/2011	7	<1.0	-	-	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-15-7'	7/26/2011	7	<1.0	-	-	< 0.05	<0.005	< 0.005	< 0.005	< 0.005	-
AEI-16-7'	7/26/2011	7	<1.0	1.4	<5.0	-				-	<50
AEI-17-8'	7/26/2011	8	<1.0	1.1	<5.0	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-18-8'	7/26/2011	8	<1.0	<1.0	<5.0	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-19-8'	7/26/2011	8	<1.0	<1.0	<5.0	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-20-7.5'	1/17/2012	7.5	8.4	-	-	< 0.05	0.0071	0.084	0.069	0.38	-
AEI-20-11'	1/17/2012	11	600	-	-	< 0.50	0.89	2.9	10	39	-
AEI-20-15'	1/17/2012	15	3.3	-	-	< 0.05	<0.005	0.028	< 0.005	0.017	-
AEI-21-7'	1/17/2012	7	<1.0	-	-	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-21-11'	1/17/2012	11	46	-	-	< 0.05	0.020	0.42	0.27	0.60	-
AEI-21-14'	1/17/2012	14	<1.0	-	-	< 0.05	<0.005	< 0.005	< 0.005	< 0.005	-
AEI-22-9'	1/17/2012	9	3,100	-	-	< 0.05	3.2	46	62	400	-
AEI-22-11'	1/17/2012	11	8.6	-	-	<0.10	0.71	0.77	0.31	1.3	-
AEI-22-14'	1/17/2012	14	3,300	-	-	< 0.05	8.3	84	61	370	-
AEI-23-6'	1/17/2012	6	<1.0	<1.0	<5.0	< 0.05	< 0.005	<0.005	< 0.005	<0.005	-
AEI-23-9.5'	1/17/2012	9.5	7.5	100	180	< 0.05	< 0.005	0.027	< 0.005	0.0055	-
AEI-23-12.5'	1/17/2012	12.5	460	360	270	<5.0	<0.50	1.4	<0.50	0.80	-
AEI-24-7'	1/17/2012	7	<1.0	<1.0	<5.0	< 0.05	< 0.005	<0.005	< 0.005	<0.005	-
AEI-24-10.5'	1/17/2012	10.5	<1.0	<1.0	<5.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	-
AEI-24-13'	1/17/2012	13	<1.0	<1.0	<5.0	< 0.05	<0.005	<0.005	<0.005	< 0.005	-
AEI-25-7.5'	1/17/2012	7.5	<1.0	<1.0	<5.0	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-25-10'	1/17/2012	10	<1.0	<1.0	<5.0	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-25-14'	1/17/2012	14	<1.0	<1.0	<5.0	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-26-7.5'	1/17/2012	7.5	<1.0	<1.0	<5.0	< 0.05	< 0.005	<0.005	< 0.005	<0.005	-
AEI-26-10.5'	1/17/2012	10.5	<1.0	<1.0	<5.0	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-26-14'	1/17/2012	14	<1.0	<1.0	<5.0	< 0.05	<0.005	< 0.005	< 0.005	< 0.005	-
AEI-27-3'	1/17/2012	3	<1.0	3.2	7.9	< 0.05	<0.005	<0.005	< 0.005	0.013	-

#### Soil Sample Analytical Data TPH, MBTEX and POG

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

Sample	Date	Approx. Depth	TPH-g	TPH-d*	TPH-mo*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	POG
ID	Collected	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
						EPA Method SW	00718/00128/W				EPA Method Sivi5520E/F
AEI-28-7'	1/17/2012	7	<1.0	<1.0	<5.0	< 0.05	<0.005	<0.005	< 0.005	< 0.005	-
AEI-28-11'	1/17/2012	11	12,000	2,100	44	<10	21	210	210	1,000	-
AEI-28-13'	1/17/2012	13	7.8	2.0	<5.0	< 0.05	0.050	0.29	0.31	1.4	-
DPE-1, 7-7.5'	11/15/2011	7	1,800	330	46	<50	9.7	64	29	150	-
DPE-2, 8-8.5'	11/15/2011	8	2,200	280	140	<15	7.6	57	34	170	-
DPE-3, 8-8.5'	11/14/2011	8	2,000	1,000	58	<50	6.7	48	47	240	-
	4/00/0040		0.000			10	45			140	
DPE-5, TT	1/20/2012	11	2,300	-	-	<10	15	99	33	140	-
DPE-5, 14'	1/20/2012	14	1.1	-	-	< 0.05	<0.005	0.17	<0.005	0.016	-
	1/20/2012	10	F10			.1.0	.0.10	0.14	0.47	0.07	
DPE-6, 10	1/20/2012	10	510	-	-	< 1.0	<0.10	0.14	0.47	0.96	-
DPE-6, 14'	1/20/2012	14	<1.0	-	-	< 0.05	<0.005	<0.005	<0.005	<0.005	-
DPF_7 10'	1/10/2012	10	2 200	_	_	~5.0	~5.0	16	17	240	_
	1/10/2012	14 5	2,200	-	-	< J.0	< J.0	20	47 0 F	240	-
DPE-7, 14.5	1/19/2012	14.5	010	-	-	< 5.0	< 5.0	3.9	9.5	55	-

mg/kg = milligrams per kilogram (equivalent to parts per million)

MDL = method detection limit POG = petroleum oil and grease

TPH = total petroleum hydrocarbons MTBE = methyl butyl tertiary ethyl

TPH-g = TPH as gasoline

TPH-d = TPH as diesel

"\*" = with silica gel cleanup "-" = not available

"<" = less than

TPH-mo = TPH as motor oil "-" = no

Page 5 of 5
# Soil Sample Analytical Data VOCs, Fuel Oxygenates, SVOCs, and PCBs AEI Project No. 298931, 1630 Park Street, Alameda, California

Sample	Date	Approx. Depth	1,4-Dioxane	All target VOCs	Fuel Oxygenates^	All target SVOCs	All other target PCBs
ID	Collected	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			EPA Method SW8260	EPA Method SW8260	EPA Method SW8260B	EPA Method 8270	EPA Method SW8082
004 44 5	1/00/00005						
GP1-11.5	4/29/2008	11.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP1-15	4/29/2008	15	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP2-11	4/29/2008	11			< MDI		
GP2-13 5	4/29/2008	13.5			<mdi< td=""><td></td><td></td></mdi<>		
012 1010	112112000	1010			SINDE		
GP3-6.75	4/29/2008	6.75	-		<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP3-11.5	4/29/2008	11.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP4-11.5	4/29/2008	11.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP4-14.5	4/29/2008	14.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP5-11 5	4/29/2008	11.5			< MDI		
GP5-19	4/29/2008	19	-	-	<mdi< td=""><td>-</td><td>-</td></mdi<>	-	-
0.017	112112000	.,			, mbe		
GP6-11	4/29/2008	11	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP7-8	4/30/2008	8	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP7-19.5	4/30/2008	19.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
000 0 5	F (4 (0000	0.5					
GP8-8.5	5/1/2008	8.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP8-19.5	5/1/2008	19.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP9-7.5	5/1/2008	7.5	-		<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP9-11.25	5/1/2008	11.25	-		<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP10-7.5	4/30/2008	7.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP10-19.5	4/30/2008	19.5	-		<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
0011 (	4/20/2000	,					
GPTI-6	4/30/2008	0 15 5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP11-15.5 CD11-10	4/30/2008	10.0	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
0111-10	4/30/2000	10	-	-	< WDE	-	-
GP12-7.5	4/30/2008	7.5	-		<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP12-11	4/30/2008	11	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP12-15.5	4/30/2008	15.5	-		<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP13-7.25	4/30/2008	7.25	-		<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP13-11	4/30/2008	11	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP13-14	4/30/2008	14	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP14-7.5	4/30/2008	7.5			<mdi< td=""><td>-</td><td>_</td></mdi<>	-	_
GP14-7.5 GP14-11	4/30/2008	7.0 11				-	-
01/4-11	7/ 30/ 2000		-	·	SWIDE	-	
GP15-7.5	4/30/2008	7.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP16-7.5	5/1/2008	7.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP16-10.5	5/1/2008	10.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
0043.3.5	5 /4 /0000						
GP17-7.5	5/1/2008	7.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP17-11.5	5/1/2008	11.5	-	-	< ML)	-	-

#### Soil Sample Analytical Data VOCs, Fuel Oxygenates, SVOCs, and PCBs

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

Sample	Date	Approx. Depth	1,4-Dioxane	All target VOCs	Fuel Oxygenates^	All target SVOCs	All other target PCBs
ID	Collected	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			EPA Method SW8260	EPA Method SW8260	EPA Method SW8260B	EPA Method 8270	EPA Method SW8082
GP18-7 5	5/1/2008	7.5			< MDI		
GP18-10	5/1/2008	10	-		<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP19-7	5/1/2008	7	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
CD20.9	E /1 /2009	0			MDI		
GP20-6	5/1/2006	0	-	-	< NIDL	-	-
GP21-7.5	5/2/2008	7.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP21-15.5	5/2/2008	15.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP21-19.5	5/2/2008	19.5	-		<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP22-10.5	5/2/2008	10.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP22-15.5	5/2/2008	15.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP23-7.5	5/2/2008	7.5	-	-	<mdi< td=""><td>-</td><td>-</td></mdi<>	-	-
GP23-11.5	5/2/2008	11.5	-	-	< MDI	-	-
GP23-16	5/2/2008	16	-	-	<mdi< td=""><td>-</td><td>-</td></mdi<>	-	-
GP24-8.5	5/2/2008	8.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
GP24-19.5	5/2/2008	19.5	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-
	7/05/0011	10					.1.0
AEI-3-10	//25/2011	10	-	-	-	-	<1.0
AEI-4-10'	7/25/2011	10	-	-	-	-	< 0.25
AEI-6-10'	7/25/2011	10	-	-	-	-	<0.05
ΔFI-7-11'	7/25/2011	11					< 0.50
ALL / II	112312011						\$0.00
AEI-8-11'	7/25/2011	11	-	-	-		< 0.05
451 44 01	7/0/ /0011	2		MDI			
AEI-11-3	//26/2011	3	-	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
AEI-12-3'	7/26/2011	3	-	<mdl< td=""><td></td><td>-</td><td>-</td></mdl<>		-	-
AEI-13-3'	7/26/2011	3	-	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
AEL-14-7'	7/26/2011	7		_	< MDI	_	_
ALI-14-7	112012011	,	-	-		-	-
AEI-15-7'	7/26/2011	7	-		<mdl< td=""><td></td><td></td></mdl<>		
		_					
AEI-16-7'	7/26/2011	7	<0.02	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>&lt;0.05</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>&lt;0.05</td></mdl<></td></mdl<>	<mdl< td=""><td>&lt;0.05</td></mdl<>	<0.05
AF1-27-3'	1/17/2012	3	-	< MDI			
MEI 27 5	111112012	5		SINDE			

mg/kg = milligrams per kilogram (equivalent to parts per million)

MDL = method detection limit

VOCs = volatile organic compounds

SVOCs = semi-volatile organic compounds

PCBs = polychlorinated biphenyls "<" = less than

"-" = not available

- Intravalative
 - Intravalative
 - The fuel oxygenates tert-amyl methyl ether (TAME), t-butyl alcohol (TBA),
 1,2-dibromomethane (EDB), 1,2-dichloroethane (1,2-DCA), diisopropyl ether (DIPE), methanol,

ethanol, ethyl tert-butyl ether (ETBE), methyl tert-butyl ether (MTBE), and 1,2-Dichloroethane (EDC)

# Table 5Soil Sample Analytical Data

#### Metals

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

Sample ID	Date Collected	Approx. Depth (feet)	Cd mg/kg	Cr (total)* mg/kg EPA	Pb mg/kg Method SW6010I	Ni mg/kg 3	Zn mg/kg
AEL 11 2'	7/26/2011	2	-15	60	<5.0	24	16
ALI-TI-5	//20/2011	5	< 1.5	00	< 5.0	24	10
AEI-12-3'	7/26/2011	3	<1.5	31	<5.0	15	10
AEI-13-3'	7/26/2011	3	<1.5	29	<5.0	14	9.7
AEI-14-7'	7/26/2011	7	-	-	<5.0	-	-
AEI-15-7'	7/26/2011	7	-	-	<5.0	-	-
AEI-16-7'	7/26/2011	7	<1.5	54	<5.0	48	27
AEI-17-8'	7/26/2011	8	-	-	<5.0	-	-
AEI-18-8'	7/26/2011	8	-	-	<5.0	-	-
AEI-19-8'	7/26/2011	8	-	-	<5.0	-	-
*AEI-27-3'	1/17/2012	3	<0.25	38	140	17	140

#### Notes:

mg/kg = milligrams per kilogram

"-" = not available

Cd = Cadmium

Cr = Chromium

Pb = Lead

Ni = Nickel

Zn = Zinc

\*AEI-27-3' = Antimony - 1.2 mg/kg, Arsenic - 4.0 mg/kg, Barium - 130 mg/kg, Cobalt - 3.7 mg/kg, Copper - 18 mg/kg, Mercury - 0.32 mg/kg and Vanadium - 28 mg/kg by CAM 17 EPA Method SW3050B.

## Groundwater Analytical Data - Grab Samples TPH, MBTEX and TRPH

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

Sample ID	Date Collected	TPH-g (µg/L)	TPH-d* (µg/L)	TPH-mo* (µg/L)	MTBE (µg/L) EPA Method SW	Benzene (µg/L) /8021B/8015Bm	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TRPH (µg/L) EPA Method E418.1
HP-1	4/23/1993	<50	-	-	-	<0.5	<0.5	<0.5	<0.5	-
HP-2	4/23/1993	<50	-	-	-	<0.5	<0.5	<0.5	<0.5	-
EB3-WSIA	10/15/1993	120,000	-	-	-	9,600	20,000	3,400	14,000	-
EB5-WSIA	10/15/1993	83,000	-	-	-	3,900	15,000	3,100	13,000	-
EB8-WS1	1/21/1997	25,000	-	-	<80	2,600	3,200	780	3,600	-
EB10-WS1	1/21/1997	81,000	-	-	<370	13,000	12,000	3,300	8,000	-
EB11-WS1	1/21/1997	49,000	-	-	<180	6,900	6,000	2,100	4,600	-
EB12-WS1	1/21/1997	38,000	-	-	110	1,400	1,400	1,800	7,400	-
P1-WS1	1/21/1997	74,000	-	-	<78	1,100	5,800	3,800	18,000	-
P2-WS1	1/21/1997	6,800	-	-	<10	2,200	290	310	560	-
P3-WS1	1/21/1997	220	-	-	<5.0	1.9	17	10	49	-
GP1W	4/29/2008	70,000	-	-	<500	6,800	6,600	2,300	12,000	-
GP2W	4/29/2008	910	-	-	<5.0	0.69	2.9	30	64	-
GP3W	4/29/2008	<50	-	-	<5.0	<0.5	<0.5	<0.5	<0.5	-
GP4W	4/29/2008	46,000	-	-	<500	570	3,200	1,500	7,500	-
GP5W	4/29/2008	12,000	-	-	<60	140	480	270	1,100	-
GP6W	4/29/2008	22,000	-	-	<170	920	1,600	900	3,500	-
GP7W	4/30/2008	22,000	-	-	<180	2,600	320	810	2,600	-
GP8W	5/1/2008	140,000	-	-	<650	9,000	20,000	4,300	21,000	-
GP9W	5/1/2008	550	-	-	<5.0	53	0.52	2.1	25	-
GP10W	4/30/2008	11,000	-	-	<100	1,900	490	480	770	-

## Groundwater Analytical Data - Grab Samples TPH, MBTEX and TRPH

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

Sample ID	Date Collected	TPH-g (µg/L)	TPH-d* (µg/L)	TPH-mo* (µg/L)	MTBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TRPH (µg/L)
					EPA Method SW	/8021B/8015Bm				EPA Method E418.1
GP11W	4/30/2008	42,000	-	-	<452	1,900	4,200	1,700	7,600	-
GP12W	4/30/2008	61,000	-	-	< 500	4,500	11,000	1,700	7,700	-
GP13W	4/30/2008	6,200	-	-	<10	220	53	150	440	-
GP14W	4/30/2008	300	-	-	<5.0	46	1.9	19	11	-
GP15W	4/30/2008	<50	-	-	<5.0	<0.5	0.69	<0.5	1.1	-
GP16W	5/1/2008	<50	-	-	<5.0	<0.5	<0.5	<0.5	<0.5	-
GP17W	5/1/2008	<50	-	-	<5.0	<0.5	1.7	<0.5	2	-
GP18W	5/1/2008	<50	-	-	<5.0	<0.5	2.1	0.79	4	-
GP19W	5/1/2008	85	-	-	<5.0	<0.5	0.80	<0.5	<0.5	-
GP20W	5/1/2008	<50	-	-	<5.0	<0.5	<0.5	<0.5	<0.5	-
GP21W	5/2/2008	9,400	-	-	<50	560	1,400	260	1,300	-
GP22W	5/2/2008	3,900	-	-	<25	36	160	120	610	-
GP23W	5/2/2008	16,000	-	-	<90	830	1,900	540	2,600	-
GP24W	5/2/2008	110,000	-	-	<450	6,500	4,200	3,100	13,000	-
AEI-1-W	7/25/2011	<50	<50	<250	-				-	-
AEI-2-W	7/25/2011	<50	<50	<250	-				-	-
AEI-3-W	7/25/2011	11,000	12,000	29,000	<50	1,100	1,900	210	860	-
AEI-4-W	7/25/2011	200,000	25,000	19,000	<500	21,000	30,000	3,600	16,000	-
AEI-5-W	7/25/2011	<50	<50	<250	-	-	-	-	-	-
AEI-6-W	7/25/2011	18,000	120,000	300,000	<50	<5.0	7.7	<5.0	28	-
AEI-7-W	7/25/2011	280	11,000	28,000	-	-	-	-	-	-

#### **Groundwater Analytical Data - Grab Samples** TPH, MBTEX and TRPH

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

Sample ID	Date Collected	TPH-g (µg/L)	TPH-d* (µg/L)	TPH-mo* (µg/L)	MTBE (µg/L) EPA Method SW	Benzene (µg/L) /8021B/8015Bm	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TRPH (µg/L) EPA Method E418.1
AEI-8-W	7/25/2011	<50	1,600	3,800	-	-	-	-	-	-
AEI-9-W	7/25/2011	<50	<50	<250	-	-	-	-	-	-
AEI-10-W	7/26/2011	<50	<50	400	-	-	-	-	-	-
AEI-14-W	7/26/2011	<50	-	-	<5.0	<0.5	<0.5	<0.5	<0.5	-
AEI-15-W	7/26/2011	<50	-	-	<5.0	<0.5	<0.5	<0.5	<0.5	-
AEI-16-W	7/26/2011	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0
AEI-17-W	7/26/2011	<50	89	590	<5.0	<0.5	<0.5	<0.5	<0.5	-
AEI-18-W	7/26/2011	<50	<100	<500	<5.0	<0.5	<0.5	<0.5	<0.5	-
AEI-19-W	7/26/2011	<50	<100	<500	<5.0	<0.5	<0.5	<0.5	<0.5	-
AEI-20	1/17/2012	130,000	-	-	<500	1,200	2,200	4,400	20,000	
AEI-21	1/17/2012	110,000	-	-	<500	160	520	1,200	3,300	
AEI-22	1/17/2012	61,000	-	-	<500	790	4,400	1,500	7,200	
AEI-23	1/17/2012	9,000	8,400	1,500	<50	<5.0	16	12	<5.0	
AEI-24	1/17/2012	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
AEI-25	1/17/2012	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
AEI-26	1/17/2012	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
AEI-27	1/17/2012	<50	<100	<500	<5.0	<0.5	<0.5	<0.5	<0.5	
AEI-28	1/17/2012	16,000	4,500	<250	<100	160	690	540	2,500	

 $\mu$ g/L = micrograms per liter

"<" = less than MDL = method detection limit

TPH = total petroleum hydrocarbons TPH-g = TPH as gasoline

TPH-d = TPH as diesel

TRPH = total recoverable petroleum hydrocarbons MTBE and BTEX analysis for AEI-16-W performed by EPA Method SW8260B

#### Groundwater Analytical Data - Grab Samples TPH, MBTEX and TRPH

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

Sample ID	Date Collected	TPH-g (µg/L)	TPH-d* (µg/L)	TPH-mo* (µg/L)	MTBE (µg/L) EPA Method S\	Benzene (µg/L) W8021B/8015Bm	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TRPH (µg/L) EPA Method E418.1
			LFA MELIOU L410.1							

TPH-mo = TPH as motor oil

MTBE = methyl tertiary butyl ether

"\*" = with silica gel cleanup

"-" = not available

#### Groundwater Analytical Data - Grab Samples VOCs, Fuel Oxygenates, SVOCs, and PCBs

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

Sample ID	Date Collected	1,4-Dioxane (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L) EPA Method S	MTBE (µg/L) W8260B	Fuel Oxygenates^ (µg/L)	All Target VOCs (µg/L)	All Target SVOCs (µg/L) EPA Method 8270	All Target PCBs (µg/L) EPA Method SW8082
GP1W	4/29/2008	-	<20	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP2W	4/29/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP3W	4/29/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP4W	4/29/2008	-	<20	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP5W	4/29/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP6W	4/29/2008	-	24	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP7W	4/30/2008	-	<20	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP8W	5/1/2008	-	<20	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP9W	5/1/2008	-	7.7	<0.5	1.1	1.2	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP10W	4/30/2008	-	<20	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP11W	4/30/2008	-	<20	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP12W	4/30/2008	-	<20	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP13W	4/30/2008	-	8.9	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP14W	4/30/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP15W	4/30/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP16W	5/1/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP17W	5/1/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP18W	5/1/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP19W	5/1/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP20W	5/1/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-

#### Groundwater Analytical Data - Grab Samples VOCs, Fuel Oxygenates, SVOCs, and PCBs

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

Sample ID	Date Collected	1,4-Dioxane (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L) EPA Method S	MTBE (µg/L) W8260B	Fuel Oxygenates^ (µg/L)	All Target VOCs (µg/L)	All Target SVOCs (µg/L) EPA Method 8270	All Target PCBs (µg/L) EPA Method SW8082
GP21W	5/2/2008	-	<2.0	0.65	< 0.5	< 0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP22W	5/2/2008	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP23W	5/2/2008	-	<20	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
GP24W	5/2/2008	-	75	<5.0	<5.0	<5.0	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
AEI-14-W	7/26/2011	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
AEI-15-W	7/26/2011	-	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td>-</td><td>-</td><td>-</td></mdl<>	-	-	-
AEI-16-W	7/26/2011	<2.0	<2.0	<0.5	<0.5	<0.5	<mdl< td=""><td><mdl< td=""><td><mdl< td=""><td>&lt;0.5</td></mdl<></td></mdl<></td></mdl<>	<mdl< td=""><td><mdl< td=""><td>&lt;0.5</td></mdl<></td></mdl<>	<mdl< td=""><td>&lt;0.5</td></mdl<>	<0.5
AEI-27	1/17/2012	-	-	-	-	-	-	<mdl< td=""><td>-</td><td>-</td></mdl<>	-	-

mg/kg = milligrams per kilogram (equivalent to parts per million)

VOCs = volatile organic compounds

SVOCs = semi-volatile organic compounds

PCBs = polychlorinated biphenyls

TBA = t-butyl alcohol

EDB = 1,2-dibromomethane

EDC = 1,2-dichloroethane

MTBE = methyl tert-butyl ether

"-" = not available

"<" = less than

"^" = fuel oxygenates tert-amyl methyl ether (TAME),

1,2-dichloroethane (1,2-DCA), diisopropyl ether (DIPE), methanol, ethanol, and ethyl tert-butyl ether (ETBE)

MDL = method detection limit

### Grab Groundwater Sample Analytical Data

### **Metals**

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

Sample ID	Date Collected	Cd µg/L	Cr (total) µg/L EF	Pb µg/L PA Method E200.8	Ni µg/L	Zn µg/L
AEI-14-W*	7/26/2011	-	-	21	-	-
AEI-15-W*	7/26/2011	-	-	66	-	-
AEI-16-W**	7/26/2011	<0.25	<0.5	<0.5	8.7	<5.0

#### Notes:

 $\mu$ g/L = micrograms per liter

"\*" = total

"\*\*" = dissolved

Cd = Cadmium

Cr = Chromium

Pb =Lead

Ni = Nickel

Zn = Zinc

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

Sample	Date	Notes	TPH-d	TPH-mo	TPH-g EPA Meth	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA EPA Met	DIPE	Ethanol	ETBE	Methanol	Lead
10			(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)
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	а	-	-	2,200	720	180	82	150	-	-	-	-	-	-	-	-	-	-	-
	7/8/1993	a	-	-	3,200	1,200	110	97	100	-	-	-	-	-	-	-	-	-	-	-
	10/15/1993	а	-	-	3,700	1,400	43	94	36	-	-	-	-	-	-	-	-	-	-	-
	1/25/1994	а	-	-	1,600	, 680	16	41	35	-	-	-	-	-	-	-	-	-	-	-
	4/28/1994	а	-	-	6,100	1,900	380	250	340	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	а	-	-	6,000	1,800	510	220	450	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	а	-	-	3,000	1,100	79	82	87	-	-	-	-	-	-	-	-	-	-	-
	1/26/1995	а	-	-	1,600	660	100	82	87	-	-	-	-	-	-	-	-	-	-	-
	4/13/1995	а	-	-	3,800	1,200	270	120	260	-	-	-	-	-	-	-	-	-	-	-
	7/21/1995	а	-	-	5,200	1,500	450	190	400	-	-	-	-	-	-	-	-	-	-	-
	10/25/1995	а	-	-	5,900	1,800	450	210	400	-	-	-	-	-	-	-	-	-	-	-
	1/21/1997	а	-	-	3,100	1,100	87	160	180	<7.3	-	-	-	-	-	-	-	-	-	-
	11/12/1998	а	-	-	1,000	280	3	3.3	7.9	<30	-	-	-	-	-	-	-	-	-	-
	1/16/2001	а	-	-	4,700	1,20	18	150	49	-	<5	<5.0	<25	<5.0	<5.0	<5.0	-	<5.0	-	-
	6/27/2002	а	-	-	5,900	230	7.7	<5	1,500	-	<5	<5.0	<50	<5.0	<5.0	<5.0	-	<5.0	-	-
	11/18/2002	а	-	-	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	а	-	-	3,100	480	6.7	220	420	-	<2.5	-	-	<2.5	<2.5	-	-	-	-	-
	4/3/2008	а	-	-	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	а	-	-	610	100	6.2	46	77	-	<2.5	<2.5	<10	-	-	<2.5	-	<2.5	-	-
	12/6/2011	а	-	-	900	160	<5.0	68	76	-	<5.0	<5.0	<20	-	-	<5.0	-	<5.0	-	-
	1/24/2012	а	-	-	190	25	<1.0	1.4	4.6	<1.0	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	210	<50	2,600	200	51	93	610	<5.0	-	-	-	-	-	-	-	-	-	-

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

Sample	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
ID					EPA Meth	ods 8020,	8021B, or 8	3260B							EPA Met	hod 8260	)B			
			(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)
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	а	-	-	52,000	13,000	8,400	1,700	5,300	-	-	-	-	-	-	-	-	-	-	-
	7/8/1993	а	-	-	6,400	2,500	470	280	530	-	-	-	-	-	-	-	-	-	-	-
	10/15/1993	а	-	-	17,000	3,900	870	500	940	-	-	-	-	-	-	-	-	-	-	-
	1/25/1994	а	-	-	16,000	5,400	1,140	640	1,500	-	-	-	-	-	-	-	-	-	-	-
	4/28/1994	а	-	-	15,000	4,00	910	480	1,200	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	а	-	-	18,000	6,000	760	630	1,600	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	а	-	-	9,500	2,700	230	320	640	-	-	-	-	-	-	-	-	-	-	-
	1/26/1995	а	-	-	5,900	1,900	290	230	500	-	-	-	-	-	-	-	-	-	-	-
	4/13/1995	а	-	-	10,000	3,300	620	360	930	-	-	-	-	-	-	-	-	-	-	-
	7/21/1995	а	-	-	9,900	3,300	320	390	830	-	-	-	-	-	-	-	-	-	-	-
	10/25/1995	а	-	-	13,000	4,900	400	580	990	-	-	-	-	-	-	-	-	-	-	-
	1/21/1997	а	-	-	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	а	-	-	23,000	, 8,200	260	1,000	, 820	<30	-	<30	<150	<30	<30	<30	-	<30	-	-
	6/27/2002	а	-	-	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	а	-	-	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	а	-	-	6.500	2,100	210.0	560	310	-	<50	<50	<200	-	-	<50	-	<50	-	_
	12/6/2011	а	-	-	4,800	1,600	<50	260	<50	-	<50	<50	<200	-	-	<50	-	<50	-	-
	1/24/2012	a	-	-	2,500	100	22.0	<5.0	410	<5.0	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	68	<50	140	14	2.8	2.9	12	<0.5	-	-	-	-	-	-	-	-	-	-

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 FPA Meth	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA FPA Met	DIPE	Ethanol B	ETBE	Methanol	Lead
10			(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)
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	а	-	-	6,500	2,600	280	260	190	-	-	-	-	-	-	-	-	-	-	-
	7/8/1993	а	-	-	5,200	2,100	260	250	180	-	-	-	-	-	-	-	-	-	-	-
	10/15/1993	а	-	-	11,000	3,500	580	430	370	-	-	-	-	-	-	-	-	-	-	-
	1/25/1994	а	-	-	6,200	2,500	270	160	28	-	-	-	-	-	-	-	-	-	-	-
	4/28/1994	а	-	-	5,300	1,700	190	210	180	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	а	-	-	5,900	2,000	360	260	330	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	а	-	-	8,000	2,200	580	260	170	-	-	-	-	-	-	-	-	-	-	-
	1/26/1995	а	-	-	3,700	1,200	150	150	190	-	-	-	-	-	-	-	-	-	-	-
	4/13/1995	а	-	-	4,000	1,400	200	180	210	-	-	-	-	-	-	-	-	-	-	-
	7/21/1995	а	-	-	5,700	2,000	280	270	280	-	-	-	-	-	-	-	-	-	-	-
	10/25/1995	а	-	-	11,000	3,500	1,100	460	680	-	-	-	-	-	-	-	-	-	-	-
	1/21/1997	а	-	-	2,200	860	63	71	80	<5	-	-	-	-	-	-	-	-	-	-
	11/12/1998	d	-	-	180	44	0.51	<0.5	0.92	<20	-	-	-	-	-	-	-	-	-	-
	1/16/2001	а	-	-	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	а	-	-	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	а	-	-	7,600	2,400	58	250	170	<100	<5.0	<5.0	<20	<5.0	<5.0	<5.0	<500	<5.0	<5,000	<0.5
	6/23/2011	а	-	-	1,300	560	21	86	150	-	<12	<12	<50	-	-	<12	-	<12	-	-
	12/6/2011	а	-	-	1,800	620	28	22	46	-	<17	<17	<67	-	-	<17	-	<17	-	-
	1/24/2012	а	-	-	3,700	1,200	68	34	130	<25	-	-	-	-	-	-	-	-	-	-
	5/18/2012	f	<50	<50	75	5.3	<0.5	<0.5	1.6	<0.5	-	-	-	-	-	-	-	-	-	-

## 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 EPA Meth	Benzene ods 8020, 3	Toluene 8021B, or	Ethylbenzene 8260B	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA EPA Met	DIPE hod 8260	Ethanol )B	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)
MW-4	4/28/1994	b,c	-	-	190	3.8	2.9	2.1	3.1	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	а	-	-	180	15	9.2	7.6	28	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	а	-	-	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	а	-	-	53	2.7	<0.5	1.0	1.7	-	<0.5	<0.5	<2.0	-	-	<0.5	-	<0.5	-	-
	5/23/2012	f	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
MW-5	4/28/1994	а	-	-	30,000	4,000	3,000	810	3,500	-	-	-	-	-	-	-	-	-	-	-
	7/27/1994	а	-	-	9,300	2,000	800	290	940	-	-	-	-	-	-	-	-	-	-	-
	10/27/1994	а	-	-	15,000	2,700	1,300	420	1,100	-	-	-	-	-	-	-	-	-	-	-
	1/26/1995	а	-	-	7,900	2,100	680	240	860	-	-	-	-	-	-	-	-	-	-	-
	4/13/1995	а	-	-	7,900	2,400	580	340	630	-	-	-	-	-	-	-	-	-	-	-
	7/21/1995	а	-	-	11,000	3,400	760	610	1,200	-	-	-	-	-	-	-	-	-	-	-
	10/25/1995	а	-	-	13,000	2,900	830	570	1,100	-	-	-	-	-	-	-	-	-	-	-
	1/21/1997	а	-	-	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	а	-	-	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	а	-	-	170	48	<0.5	<0.5	1.4	-	<0.5	-	-	<0.5	<0.5	-	-	-	-	-
	4/3/2008	а	-	-	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	а	-	-	82	5.1	<0.5	12.0	8.4	-	<0.5	<0.5	<2.0	-	-	<0.5	-	<0.5	-	-
	5/18/2012	f	<50	<50	120	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-

## 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 EPA Meth	Benzene ods 8020, 8	Toluene 8021B, or	Ethylbenzene 8260B	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA EPA Met	DIPE hod 8260	Ethanol )B	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-1	12/6/2011	а	-	-	9,200	1,800	570	460	1,100	-	<50	<50	<200	-	-	<50	-	<50	-	-
	1/24/2012 5/18/2012	a f	- 280	- <50	3,200 540	170 49	58 <1.0	<5.0 <1.0	620 17	<5.0 <1.0	-	-	-	-	-	-	-	-	-	-
DPE-2	12/6/2011	a	-	-	22,000	2,100	3,300 26	650 11	3,300	- <25	<100	<100	<400 -	-	-	<100	-	<100	-	-
	5/18/2012	f	<50	<50	220	33	3.2	<0.5	30	<0.5	-	-	-	-	-	-	-	-	-	-
DPE-3	12/6/2011	a	-	-	6,400 5,500	550 290	560 240	180 44	1,000	- <50	<17	<17	<67 -	-	-	<17	-	<17	-	-
	5/18/2012	f	260	<50	1,100	78	37	11	89	<1.7	-	-	-	-	-	-	-	-	-	-
DPE-4	1/24/2012 5/18/2012	a f	- <50	- <50	730 <50	66 <0.5	6.0 <0.5	7.1 <0.5	83 <0.5	2.5 <0.5	- -	- -	- -	- -	-	-	-	-	-	- -
DPE-6	1/24/2012 5/18/2012	a f	- <50	- <50	64* <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	3.2 <0.5	<0.5 <0.5	-	- -	- -	- -	-	- -	-	- -	-	- -
DPE-9	1/24/2012	а	<50	<50	4,400	160	390	93	1,100	<5.0	-	-	-	-	-	-	-	-	-	-
DPE-10	5/18/2012	f	420	<50	1,700	150	<5.0	<5.0	<5.0	160	-	-	-	-	-	-	-	-	-	-
DPE-11	5/18/2012	f	260	<50	930	6.4	4.6	4.6	160	<1.2	-	-	-	-	-	-	-	-	-	-
ESL			83	83	83	0.044	2.9	3.3	2.3	0.023	0.023	NA	0.075	0.00033	0.0045	NA	NA	NA	NA	750

Groundwater Analytical Data- Monitoring Wells

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

Sampl	e Date	9	Notes	TPH-d	TPH-mo	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	MTBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	ETBE	Methanol	Lead
ID		EPA Methods 8020, 8021B, or 8260B														EPA Met	nod 8260	JΒ			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)	(µg/L)

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

 $\mu g/L = micrograms per liter (ppb)$ 

ESL = Environmental Screening Levels, Table A-2, Shallow Soil, Commercial- Potential Drinking Water, San Francisco Regional Water Quality Control Board, Revised May 2008 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 coounds (the most mobile fraction) are significant.

e = Laboratory note indicates that one to a few isloated non-targed peaks are present.

f = Laboratory note indicates that low surrogate due to matrix interference.

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

#### Soil Vapor Monitoring Analytical Data

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

						Contami	nants of Concerr	1					
Sample ID	Sample Date	TPH-g (C-C12)	TVH (C5-C11)	Benzene	Toluene	Ethyl- benzene	Xylenes	Oxygenates (TAME, DIPE, ETBE, MTBE)	Oxygenates (TBA)	Isopropyl Alcohol	CH4	02	CO2
		(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	%	%	%
VP-1 *	5/17/2012 5/30/2012	<1,800	NA O	<6.5	<7.7	<8.8	<27	NA	NA	<50	0	17.7	0.5
	7/12/2012	<1,800	<1,800	<6.5	<7.7	<8.8	<27	ND	<62	<50	ND	27.0	1.7
VP-2	5/17/2012	<1,800	NA	<6.5	<7.7	<8.8	<27	NA	NA	<50	0	19 /	0.4
	7/12/2012	<1,800	<1,800	<6.5	<7.7	<8.8	<27	ND	230	<50	ND	28.0	1.3
VP-3 *	5/17/2012 5/30/2012	<1,800	NA 0	<6.5	<7.7	<8.8	<27	NA	NA	<50	0	18.2	0.9
	7/12/2012	<1,800	<1,800	<6.5	<7.7	<8.8	<27	ND	<62	290	0.00011	28.0	2.4
ESL		10,000	NA	84	63,000	980	21,000	NA	NA	NA			

Notes:

TPH-g= total petroleum hydrocarbons as gasoline

µg/m3 = micrograms per cubic meter (ppbv)

NA = Not applicable

ESL = Environmental Screening Levels, Table E-2, San Francisco Regional Water Quality Control Board (Shallow Soil Gas- Lowest Residential), Revised May 2008

Field monitoring performed using an Eagle photo-ionization detector/multi-gas meter

### ATTACHMENT A

SCM Element	SCM Sub-Element	Description	Figures & Tables Reference	Data Gap	How to Address Data Gap
Geology & Hydrogeology	Regional	The site is located on Alameda Island. The near surface sediments of the area are mapped as Holocene and Pleistocene Merritt Sands (Qms) deposits (Helley, et al). Depth to bedrock is estimated at 300 to 800 feet below land surface (Norfleet Consultants, 1998). According to information obtained from the U.S Geological Survey (USGS), the site is located at between 20 and 25 feet above mean sea level (amsl) with the local topography sloping gently to the northeast.	n/a	None	n/a
	Site	<b>Geology</b> : Based on the logs of soil borings drilled at the site by AEI, sediments across the site are fairly consistent; consisting primarily of poorly graded fine to medium sand with varying clay and silt content to a depth of at least 25 feet bgs, the maximum depth explored. Logs of borings for remediation wells installed in November 2011 were consistent with these prior observations. <b>Hydrology</b> : During the drilling conducted by AEI in 2011-12, groundwater was first observed in the temporary direct push borings at depths of approximately 9 to 11 feet bgs and stabilized at between approximately 7.5 to 8.5 feet bgs. The depth to water in the groundwater monitoring wells has generally ranged from approximately 7.5 to 9.5 feet bgs since the wells were installed. Based on the groundwater monitoring conducted at the site, groundwater flows fairly consistently in a northwesterly direction at an approximate hydraulic gradient of 1x10 <sup>-2</sup> to 2x10 <sup>-2</sup> ft/ft. and exists as an unconfined aquifer.	Figures 3, 4 and 5; Tables 1 and 2; Boring Logs.	None	n/a
Surface Water Bodies		The nearest surface water body is the tidal canal located approximately 1500 to 2000 feet to the northeast.	Figure 1	None	n/a
Nearby Wells		In January 2012, a 2,000-foot radius well search was requested and received from the Alameda County Department of Public Works (ACDPW). The results of the well search were reviewed and wells which appeared to be associated with monitoring or remediation at other sites or soil borings were excluded from the review. According to the results of the well search, ten (10) wells are located within 2,000 feet of the site. Based on the 2008 groundwater sampling from the soil borings and cumulative groundwater monitoring data, it appears that the length of the plume at the site is no more than approximately 200 feet in length. None of the wells noted in this well search are located within the expected plume length for this site. As such, none of the listed wells are expected to be impacted by the hydrocarbons at the site.	March 30, 2012 Subsurface Investigation and Well Installation Report: Section 9.0.	None	n/a
Potential Source(s)	On Site	<ul> <li>Former USTs: one 300-gallon waste-oil underground storage tank (UST) and one 500-gallon gasoline UST were removed from adjacent to the northern side of the building in 1986 at which time a release of petroleum hydrocarbons, primarily gasoline, was discovered.</li> <li>Hydraulic Lifts &amp; Repair Area: A total of 10 current and former underground hydraulic lifts were identified within the building. Investigation of these lift locations and associated drain features in July 2011 identified releases of hydraulic oil range hydrocarbons near five (5) of the lifts in the northeastern end of the building. No significant impact was identified in the other lift areas or near the drain features investigated.</li> <li>Former Paint Booth: A paint booth was identified in a 1950 Sanborn map. Soil boring SB-27 was drilled in this location in Jan. 2012; no significant release was identified.</li> <li>Former USTs (South end of site): one 10,000-gallon gasoline UST, one 4,000-gallon gasoline UST, and one 550-gallon waste oil UST at the southern portion of the site were removed in November 2011. Based on soil and groundwater analytical data from samples collected in and near the UST at the time of removal, no significant release was identified and these former USTs are not a source of impact to the subject property.</li> </ul>	See Previous Reports	None	n/a

SCM Element	SCM Sub-Element	Description	Figures & Tables Reference	Data C
Potential Source(s)	Off Site	<ul> <li>1650 Park St: According to records on file with the ACEH, one 100-gallon waste oil UST and one 550-gallon gasoline UST were removed from the property in 1995 and 233 tons of soil were excavated and disposed at BFI Landfill in Livermore, California. Following soil removal and groundwater sampling, ACEH granted case closure in 2001. Based on onsite groundwater flow direction and case closure status of 1650 Park St, this site is not a source of impact to the subject site.</li> <li>Other nearby LUST Cases: Several nearby LUST cases are identified on GeoTracker, including 1541 Park St, 1700 Park St, and 1701 Park St. Based on documented groundwater flow direction at the site, regulatory status of these cases, and/or the configuration of their plumes, these sites do not appear to be source of impact to the subject site.</li> </ul>	GeoTracker ACEH website	None
Release Occurrence	Gasoline UST	The release of TPH-g, BTEX, and other gasoline constituents originated from the former 500 gallon gasoline UST system removed in 1986 from near the northern side of the existing building. The exact cause of the release is not known, though typically such releases occur from failures of the UST itself or the associated piping and pump system. The timing, duration and volume of the oil release are unknown.	See Previous Reports	None
	Waste-Oil UST	According to a report prepared by Groundwater Technology in April 1987, the 300-gallon waste oil tank was removed in 1986 and a soil sample collected from the waste oil UST tank pit at a depth 8 feet bgs contained 57 ppm TPH-mo. No further sampling for TPH-mo was performed during the investigation that followed in 1987 nor does it appear that ACEH requested further investigation of the waste oil UST at that time. TPH-mo, which was added to the analytical suite in the May 2012 groundwater monitoring, was not detected in any of the wells (refer to the June 11, 2012 Groundwater Monitoring Report). This information indicates that a release from that waste oil UST was not significant.	Groundwater Technology, Inc., April 1987; AEI, June 11, 2012 Groundwater Monitoring Report.	ACEH has requested furthe presence of oil-range hydro the former waste-oil UST
	Hydraulic Lifts	The source of the heavier range hydrocarbons detected in samples collected within the former building appear to be from several of the five former hydraulic lifts at the northern end of the building although the former waste oil UST may have contributed to the heavier range petroleum detected to some small degree. Again, the timing, duration and volume of the oil release are unknown.	See Previous Reports	None
Constituents of Concern		The primary contaminants of concern are gasoline and gasoline constituents [TPH-g, benzene, toluene, ethylbenzene, and xylenes (BTEX)] from the gasoline UST release. MTBE has not been detected during recent sample analyses nor have significant concentrations of fuel oxygenates been detected. Heavier hydrocarbons (reported as TPH-d and TPH-mo) have been detected in the area of the hydraulic lifts. No PCBs were detected in samples from near the lifts and no VOCs were detected in samples near the paint booth or drain features within the repair shop. Lead has been detected in soil around the former USTs and may be a constituent of concern in the soil	Tables 3, 4, 5 (soil); Tables 6, 7, 8, 9 (water).	None

бар	How to Address Data Gap
	n/a
	n/a
er assessment of the ocarbons in the area of	Waste-oil constituent analyses will be included in the analytical suite during forth- coming excavation sampling and during the next groundwater monitoring events.
	n/a
	n/a (see above for discussion of waste-oil UST constituents)

SCM Element	SCM Sub-Element	Description	Figures & Tables Reference	Data Gap	How to Address Data Gap
Nature and Extent of Impacts	Impacts in Soil	Gasoline impacted soil is centered on the former UST and extends laterally in each direction, primarily to the north-northwest toward Park Street. The zone of impact is thickest at the UST pit and thins with distance from the pit. Examples include: DPE-1 located adjacent to and down gradient of the pit with approximately 5 feet of impact; AEI-28 located 45 feet west and down/cross gradient of the pit with approximately 2.5 feet of impact; and AEI-24 located 45 south up-cross gradient of the pit with no impacts. To the east, south, and west, impacted soil appears to extend approximately 20 to 50 feet from the former UST hold and approximately 100 feet to the north. It appears that the gasoline constituents travelled vertically from its source (the UST) then spread laterally along the groundwater surface. The lateral extent of gasoline impacted soil is reasonably well defined in each direction.	Figures 3, 4 and 6 Tables 3, 4 and 5 Boring Logs	None	n/a
	Impacts in Groundwater	The dissolved phase plume is also centered on the former UST hold and spreads generally in a northwesterly direction. The extent of the impacts in groundwater have been defined to the south and southeast, as demonstrated by grab groundwater samples collected in January 2012, from borings AEI-24, AEI-25 and AEI-26 and to the east of the former tank pit as demonstrated by grab groundwater samples collected from borings GP3 (April 2008) and AEI-27 in (January 2012) (Tables 6 to 8). Groundwater impacts are also well defined to the northwest as demonstrated by analysis of groundwater samples collected in May 2012, from monitoring wells MW-4 and MW-5 (Table 9).	Figure 5; Tables 6, 7, 8, 9.	Grab groundwater samples collected from temporar	Install four (4) additional groundwater monitoring wells and use existing well DPE 6 for groundwater monitoring.
	Impacts in Vapor Phase	Soil vapor sample analysis from three soil gas probes (VP-1 to VP-3) located immediately adjacent to the release area did not detect volatile gasoline constituents (TPH-g, MTBE, BTEX) in May 2012. This suggests that the potential for vapor intrusion into future commercial structures is minimal.	Table 10	Further monitoring is required by ACEH to assess vapor phase volatile constituents	Additional soil gas monitoring and analyses for volatile constituents and atmospheric gases to assess extent and attenuation of vapor phase constituents in the shallow vadose zone.

SCM Element	SCM Sub-Element	Description	Figures & Tables Reference	Data Gap	How to Address Data Gap
Migration Pathways	Preferential Pathways / Conduits	A conduit study was conducted for the major underground utilities near the site (See Subsurface Investigation and Well Installation Report, 3/30/12) and a previous but incomplete study was provided in a correspondence dated June 6, 2008 from Blymar Engineers, Inc. Information regarding the utilities was obtained from multiple sources. With the exception of the sanitary sewer in the center of Park St, all other underground utilities did not intersect the water table and are not preferential conduits to dissolved phase plume migration. All existing onsite utilities been recently removed or will be removed prior to development. Information about the sanitary sewer lines was provided by the APWD. The maps provided by the APWD indicate that a 10-inch sanitary sewer line runs along the middle of Park Street and that the line is between 10.3 and 11.3 feet deep. The depth to water in the groundwater monitoring wells has generally ranged from approximately 7.5 to 9.5 feet bgs. As such, it appears that only the 10-inch sanitary sewer line which runs along the middle of Park Street may intersect groundwater at the site. Wells MW-4 and MW-5 are located between the site release area and the sanitary sewer line. During the most recent groundwater monitoring in May 2012, all constituents (TPH-g, TPH-d, TPH-mo, MTBE and BTEX) were all reported as non-detect with the exception of 120 µg/L of TPH-g in MW-5. This suggests that significant petroleum mass (i.e. free phase product) has not intersected the sewer line. Although low dissolved phase concentrations may have intersected the sewer line in the past, with minor plume deflection resulting, the low concentrations detected in MW-4 and MW-5 suggests that any such deflection would not be materially significant. Therefore the sewer line is not considered a preferential pathway of concern.	March 30, 2012 Subsurface Investigation and Well Installation Report: Section 8.0, Figure 8	None	n/a
Potential Receptors & Risks	On Site	Potable water is and will be provided by municipal sources for the foreseeable future, therefore direct contact with groundwater is not considered. Potential receptors at the site could include: -future commercial use occupants via vapor intrusion -future construction workers via direct contact with soil, groundwater, or vapors -future maintenance / construction workers via direct contact with soil or vapors	n/a	Risk to onsite receptors is not known	Human health risks will be evaluated upon completion of interim source removal excavation, groundwater and soil gas monitoring, and implementation of data gaps investigation. Mitigation measures will be recommended, as needed, during construction.
	Off Site	Potential offsite receptors could include nearby water producing wells, if present (none identified)	n/a	Likelihood of threat to offsite receptors is minimal	Human health risks will be evaluated upon completion of interim source removal excavation, groundwater and soil gas monitoring, and implementation of data gaps investigation.

### ATTACHMENT B

#### ATTACHMENT B Data Gaps and Proposed Investigations Former Good Chevrolet 1630 Park Street, Alameda, CA

Item	Data Gap	Description	Proposed Investigation	Rationale	Analyses
1	Waste-Oil UST	According to a report prepared by Groundwater Technology in April 1987, the 300-gallon waste oil tank was removed in 1986 and a soil sample collected from the waste oil UST tank pit at a depth 8 feet bgs contained 57 ppm TPH-mo. No further sampling for TPH-mo was performed during the investigation that followed in 1987 nor does it appear that ACEH requested further investigation of the waste oil UST at that time. TPH-mo, which was added to the analytical suite in the May 2012 groundwater monitoring, was not detected in any of the wells (refer to the June 11, 2012 Groundwater Monitoring Report). This information indicates that a release from that waste oil UST was not significant, however; ACEH has requested further assessment of the presence of oil-range hydrocarbons in the area of the former waste-oil UST.	Waste-oil constituent analyses will be included in the analytical suite during forth-coming excavation of the former tank pit (Note: the rationale for which is driven by residual gasoline source, not specifically the former Waste-Oil UST) soil sampling and during the next groundwater monitoring events.	If significant TPH-mo constituents are present in the bottom or sidewall soil samples collected from the excavations, it would indicate a possible source location. If TPH-mo concentrations are detected in groundwater collected from the existing or proposed monitoring wells, their distribution would suggest the location of source area and potentially provide further delineation of the dissolved TPH-mo plume.	<u>Soil:</u> TPH-mo by EPA Method 8015 Sample with the highest detection of TPH- mo will be analyzed for the items listed in Item 2 below for DPE-9 <u>Water:</u> TPH-mo by EPA Method 8015
2	Impacts in Groundwater	The extent of hydrocarbon impacts in groundwater is not defined to the west/southwest, or to the north/northeast.	Install four (4) additional groundwater monitoring wells and use existing well DPE-6 for groundwater monitoring.	New wells will be located in the gaps of the current monitoring well array. Well DPE-6 is ideally located to fill the gap south of the former UST pit.	Water: TPHmo and TPHd by EPA Method 8015M with silica gel cleanup; TPHg by EPA Method 8015 Modified; BTEX by EPA Method 8260B. Additional analyses for DPE-9: Chlorinated VOC's and fuel oxygenates by EPA Method 8260B; LUFT 5 metals (Cd, CR, Pb, Ni, Zn) by ICAP or AA; PCB, PCP, PNA, creosote, and 1,4-dioxane by EPA Method 8270.
3	Impacts in Vapor Phase	Soil vapor sample analysis from three soil gas probes (VP-1 to VP-3) located immediately adjacent to the release area did not detect volatile gasoline constituents (TPH-g, MTBE, BTEX) in May 2012. This suggests that the potential for vapor intrusion into future commercial structures is minimal. Further monitoring is required by ACEH to assess vapor phase volatile constituents.	Install soil vapor monitoring points in critical areas. Probe locations to be determined once building footprint is approved. A workplan will be submitted to ACEH with proposed locations. Initiate periodic soil gas sampling and analyze for volatile constituents and atmospheric gases.	Perform an assessment of the magnitude and extent of vapor phase constituents in the shallow vadose zone, if present. Periodic monitoring will allow an assessment of the attenuation of the vapor phase constituents, if present.	Soil Gas: TPHg by EPA Method TO-3; TVHC, naphthalene and BTEX by EPA Method TO-15; Atmospheric gases by ASTM D 1946-90
4	Human Health Risks (Onsite Workers)	Risk to onsite receptors is not known. Potential receptors at the site could include: -future commercial use occupants via vapor intrusion -future construction workers via direct contact with soil, groundwater, or vapors -future maintenance / construction workers via direct contact with soil or vapors	Human health risks will be evaluated upon completion of interim source removal excavation, groundwater and soil gas monitoring, and implementation of data gaps investigation. Mitigation measures will be recommended, as needed, during construction.	Risk to onsite receptors will be based on soil, groundwater and soil gas data. Risk will be assessed once the interim source removal excavation is complete and proposed wells and soil gas monitoring points are installed and sampled.	Soil Gas: TPHg by EPA Method TO-3; TVHC, naphthalene and BTEX by EPA Method TO-15; Atmospheric gases by ASTM D 1946-90 <u>Water:</u> TPHmo and TPHd by EPA method 8015 Modified with silica gel cleanup; TPHg by EPA Method 8015 Modified; BTEX by EPA Method 8260B. <u>Soil:</u> TPHg by EPA Method 8015 Modified; TPH-mo by EPA 8015; BTEX by EPA Method 8260B.

## ATTACHMENT C

#### Table 10 (Revised)

#### Proposed Groundwater Monitoring Schedule

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

Existing Monitoring						Proposed	d Schedule				
Existing	Well Diameter in inches	20	)12		20	13			20	14	
Wells	(screen interval in ft bgs)	3 <sup>rd</sup> QTR July	4 <sup>th</sup> QTR November	1 <sup>st</sup> QTR February	2 <sup>nd</sup> QTR May	3 <sup>rd</sup> QTR August	4 <sup>th</sup> QTR November	1 <sup>st</sup> QTR February	2 <sup>nd</sup> QTR May	3 <sup>rd</sup> QTR August	4 <sup>th</sup> QTR November
MW-1	2" (5-20)	Х	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	2" (5-20)	х	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3	2" (5-20)	Х	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	2" (8-23)	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
MW-5	2" (7-22)	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
DPE-1	4" (7-15)	Х	NA	NA	NA	NA	NA	NA	NA	NA	NA
DPE-2	4" (7-15)	Х	NA	NA	NA	NA	NA	NA	NA	NA	NA
DPE-3	4" (7-14)	Х	NA	NA	NA	NA	NA	NA	NA	NA	NA
DPE-4	4" (8-17)	Х	NA	NA	NA	NA	NA	NA	NA	NA	NA
DPE-5	4" (8-18)		NA	NA	NA	NA	NA	NA	NA	NA	NA
DPE-6	4" (8-18)	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
DPE-8	4" (8-18)		NA	NA	NA	NA	NA	NA	NA	NA	NA
DPE-9	4" (8-18)		NA	NA	NA	NA	NA	NA	NA	NA	NA
DPE-10	4" (8-17)	Х	NA	NA	NA	NA	NA	NA	NA	NA	NA
DPE-11	4" (8-18)	Х	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	2" (7-17) - planned		Х	Х	Х	Х	Х	Х	Х	Х	Х
MW-7	2" (7-17) - planned		Х	Х	Х	Х	Х	Х	Х	Х	Х
MW-8	2" (7-17) - planned		Х	Х	Х	Х	Х	Х	Х	Х	Х
MW-9	2" (7-17) - planned		х	Х	Х	Х	Х	Х	Х	Х	х

Notes:

Х

= Well will be monitored and sampled

NA = Well not accessible or has been abandoned.

Groundwater Samples will be analyzed for:

TPHmo and TPHd by EPA method 8015 Modified with silica gel cleanup, TPHg by EPA method 8015 Modified, and VOCs by EPA method 8260B.

Assumes that by 4<sup>th</sup> QTR 2012, DPE wells beneath the building will be plumbed for extraction beneath the building foundation.

Assumes that MW-6 through MW-9 will be installed during 4<sup>th</sup> QTR 2012.

## ATTACHMENT D



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\_ Page <u>1</u> of <u>1</u>



	Project Good_Chevro Location 1630_Park_S Date Drilled 1/15/87_ Surface Elevation Screen: Dia020 Casing: Dia2_inch Drilling CompanyKvillb DrillerCPruner	DWATER DLOGY, INC. SYSTEMS LetOwner t. Alamesigec: Total Depth of Hole Water Level, Initial Length 15 feet Length 5 feet augDrilling V	Aonitoring Well _3	Drilling Log Sketch Map Notes
	Depth (Feel) Well Construction Notes	Sample Number Graphic Log	Description/So	l Classification
ę,	- 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0	A 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	<pre>3 inches Asphalt 8 inches base course Tan silty sand (loos</pre>	e, dry, no product dense) lium dense, dry, no .ay, strong product se, dry, slight 1/15/87
-			(grades no prod Drilled to 20 feet,	luct odor) installed well
-1	-2 2- -2 4- 02100144			Page 1 of 1

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Page 1 of 1 ------

## SUBSURFACE DATA LOG

•

		7	7	7	14	/	7	MW-4 DATE: 4/20/94
	15	4 · · ·	, ५५ - /		/ 2/	Ľ.		LOCATION: Good Chevrolet - Park Street
13		8 8		9~/	and l	2/	. /	C: EQUIPMENT: Exploration Geoservices
18	5 × 5		3. 7	<u>š</u> / c	<b>v</b> 2	}/\$	) ) ) )	PROJECT No
$\square$	/		/ 8	<u> </u>	<u> </u>	//	-{	A/C Pavement and Aggregate Base
			:		_			
							SM	SAND, fine to medium grained with some gravel,
								gray, moist, medium dense
		9	0.5	S1	5 —			
						<b>└──</b> <u></u>		
		37	3.8	S2			SM S	AND, fine to medium grained, gray, dense, wet
				ļ		s	м	SAND, fine to medium grained, red, wet, dense
		39	a.8	<b>S</b> 3	15			· .
					_			
	}				-			
					20			
1								
1								Boring terminated at 23.0 feet.
					25			Monitoring well constructed (2-inch). Ground water encountered at 11 feet
ł								
					-			
Geo	Plex	XUS,	Inc.	• • • • • • • • • •	<u></u>			FIGURE 4



## SUBSURFACE DATA LOG

Der	in or or of the line of the li	21.1 ms 11.1	Mit ( uda	Augle The	11) HL (1)		LOG No <u>MW-5</u> DATE: <u>4/20/94</u> LOCATION: <u>Good Chevrolet - Park Street</u> EQUIPMENT: <u>Exploration Geoservices</u> PROJECT No
				-			A/C Pavement and Aggregate Base
				-	-	SM	SILTY SAND, redish-brown, moist, medium dense
	12	0.8	S1	5 -			
				-	-		- grey staining of sand noted
	29	25.8	\$2	- 10 —			
				-			- redish-brown
	39	15.5	<b>S</b> 3	- 15 —			· ·
				-			
				- 20 -	-		
				-			
				-	-		Boring terminated at 22 feet Monitoring well constructed (2-inch). Ground water encountered at 12 feet
				25			-
				-			
				-			
Con Ple	XUS	Inc				<u> </u>	FIGURE 5



### Project: Foley Street Investments, LLC Project Location: 1600 - 1630 Park Street, Alameda, CA Project Number: 298931

### Log of Boring AEI-1

Sheet 1 of 1

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole <b>13 feet bgs</b>
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level 10.5 feet ATD, 8.27 feet	Sampling	Well
and Date Measured after 15 mins	Method(s) <b>Tube</b>	Permit.
Borehole Backfill Neat grout cement	Location Existing Hydraulic Lift	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
70	)			Other		Concrete		
	_			SP		Sand, minor silt, brown, loose, poorly graded, dry to slightly moist, no – apparent odors or staining √ color change to yellowish brown		
- 5		$\times$	AEI-1-4'				1.8	
-		$\times$	AEI-1-7' AEI-1-8'			 	1.4	
- 10	<b>)</b>			SP				
-		X	AEI-1-12'				2.4	
_	_				<u>r di stant</u> i d	Bottom of Boring at 13 feet bgs		
- 15	5							
								Figure

C:\Documents and Settings\aange\\Desktop\beustad tables\Logs\Buestad Logs.bgs [AEI geoprobe 15.tpl]

### Project: Foley Street Investments, LLC Project Location: 1600 - 1630 Park Street, Alameda, CA Project Number: 298931

### Log of Boring AEI-2

Sheet 1 of 1

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole <b>13 feet bgs</b>
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level 10.5 feet ATD, 7.57 feet	Sampling	Well
and Date Measured after 20 mins	Method(s) <b>Tube</b>	Permit.
Borehole Backfill Neat grout cement	Location Existing Hydraulic Lift	

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, opm	REMARKS AND OTHER TESTS
	 ۲	0			Other	Ŭ			
	_	-			SP		Sand, minor silt, dark brown, loose, sand is poorly graded, dry to slightly – moist, no apparent odors or staining –		
	_	-	-				$\overline{}$ color change to yellowish brown-brown		
	_	-	-						
	_	5—	X	AEI-2-5'				2.5	
p]	_	-					<ul> <li>✓ sand increasing in density and moisture</li> <li>–</li> </ul>		
El geoprobe 15.t	_	-		AEI-2-7.5'				1.8	
estad Logs.bgs [Af	-	- 10		AEI-2-10'				1.6	
ad tables\Logs\Bu		-			SP		Sand, yellowish brown, very moist, no apparent odors or staining (ATD) ≚ 		
esktop/beust	_	-	X	AEI-2-13'			Bottom of Boring at 13 feet bgs	<1	
gs\aangel\D	-	-							
ts and Settin	_	15—							
C:\Documen		-							Figure
## Log of Boring AEI-3

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre		
Drilling	Drill Bit	Total Depth		
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 15 feet bgs		
Drill Rig	Drilling Environmental Control	Approximate		
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation		
Groundwater Level 12 feet ATD, 7.75 feet after	Sampling	Well		
and Date Measured 15 mins	Method(s) <b>Tube</b>	Permit.		
Borehole Backfill Neat grout cement	Location Former Hydraulic Lift			

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	٦	0			Other		Concrete		
	_	-			SP		Sand, dark brown, loose, poorly graded, dry to slightly moist, no apparent – odors or staining –		
	_	-	-				└── V color change to yellowish brown-brown	-	
	_	-						-	
	_	-	X	AEI-3-4'				-	
	_	5	-						
		-						-	
15.tpl]	_	-	X	AEI-3-7'			<ul> <li>strong petroleum hydrocarbon odors and staining noted, sand</li> <li>increasing in density and moisture</li> </ul>		
AEI geoprobe	_	-	X	AEI-3-8'			(after 15 mins) 里	1048	
estad Logs.bgs [/	_	- 10—		AEI-3-10'				941	
d tables\Logs\Bu		-		AEI-3-12'				214	
esktop\beusta	_	-			54		Sand, dark olive grey, strong petroleum hydrocarbon odors and stàining - noted, wet		
igs/aangel/D	_	-		ΔEL-3-15'			<ul> <li>v petroleum hydrocarbon odors and staining end, color back to</li> <li>yellowish brown</li> </ul>	26.2	
ts and Settir	_	15—	$\cap$	<u>AEI-0-10</u>		NA QUÉ	Bottom of Boring at 15 feet bgs	20.2	
C:\Documen						·		·	Figure

## Log of Boring AEI-4

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 15 feet bgs
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level <b>10 feet ATD, 7.97 feet after</b>	Sampling	Well
and Date Measured <b>20 mins</b>	Method(s) <b>Tube</b>	Permit.
Borehole Backfill Neat grout cement	Location Former Hydraulic Lift	

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	7	0			Other		Concrete		
	_	-			SP		Sand, minor silt, dark brown, loose, poorly graded, dry to slightly moist, – no apparent odors or staining –		
	-	-					✓ color change to yellowish brown		
	_	-		AEI-4-4'				1.7	
	_	5—							
5.tpl]		-		AEI-4-7'			<ul> <li>→ strong petroleum hydrocarbon odors and staining noted, sand</li> <li>_ increasing in density and moisture</li> </ul>	1281	
s [AEI geoprobe 1	_	-	$\times$	AEI-4-8.5'			(after 20 mins) ¥		
ad Logs.bgs	_	10	X	AEI-4-10'	S D		(ATD) ⊻	1329	-
ettings\aange\/Desktop\/beustad tables\/Logs\/Buesta	_	- - 15—		AEI-4-13' AEI-4-15'	5°		Sand, dark olive grey, strong petroleum hydrocarbon odors and stâining noted, wet	1043 239	
ents and Se							Bottom of Boring at 15 feet bgs		
C:\Docume									Figure

## Log of Boring AEI-5

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre		
Drilling	Drill Bit	Total Depth		
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole <b>13 feet bgs</b>		
Drill Rig	Drilling Environmental Control	Approximate		
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation		
Groundwater Level 10.5 feet ATD, 7.68 feet	Sampling	Well		
and Date Measured after 20 mins	Method(s) <b>Tube</b>	Permit.		
Borehole Backfill Neat grout cement	Location Existing Hydraulic Lift			

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	٦	0			Other		Concrete		
		-			SP		Sand, very minor silt, dark brown, loose, poorly graded, dry to slightly – moist, no apparent odors or staining		
	-	-					√ color change to yellowish brown-brown 		
	_	-							
	_	-	-						
	-	5—							
		-					▼ sand increasing in density and moisture		
.tpl]	_	-		AEI-5-6.5			-	4.1	
oprobe 15	_	_	X	AEI-5-8'			(after 20 mins) ≚	2.4	
s [AEI geo	_	_							
d Logs.bg	_	10							
suesta					S D		(ATD) ⊒		-
s/Logs/	_	-			0.				
ustad table	-	-	X	AEI-5-12'				6.7	
esktop\bei	_	-					Bottom of Boring at 13 feet bgs		-
aangel\D(	_	-							
id Settings/	_	15—	X	AEI-5-15'				1.7	
uments an		-							
C:\Doct									Figure

## Log of Boring AEI-6

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling Method Direct Push - Geoprobe	Drill Bit Size/Type <b>3 inch</b>	Total Depth of Borehole <b>14 feet bgs</b>
Drill Rig Type <b>Truck-mounted Geoprobe 5410</b>	Drilling Environmental Control Contractor Associates	Approximate Surface Elevation
Groundwater Level 11.5 feet ATD, 7.8 feet after and Date Measured 20 mins	Sampling Method(s) <b>Tube</b>	Well Permit.
Borehole Backfill Neat grout cement	Location Former Hydraulic Lift	

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	٦	0			Other		Concrete		
		-	-		SP		Sand, dark brown, loose, poorly graded, dry to slightly moist, no apparent – odors or staining –		
	_	-	-						
	_	-					<ul> <li>✓ color change to yellowish brown</li> <li>–</li> </ul>		
	_	-	X	AEI-6-4'				3.1	
	_	5							
	_	-		AEI-6-6'			$\overline{\mathbb{V}}$ sand increasing in density and moisture	11.6	
15.tpl]	-	-	X	AEI-6-7'				105	
: [AEI geoprobe	_	-	X	AEI-6-8'			(after 20 mins) ≚ √ strong petroleum hydrocarbon odors and staining noted		
gs\Buestad Logs.bgs	_	10	X	AEI-6-10'				82	
eustad tables\Lo	_	-	X	AEI-6-12'	SP		(ATD) Sand, dark olive grey, strong petroleum hydrocarbon odors and staining - noted, wet -	36.4	
ngel\Desktop\b	_	-		AEI-6-14'			✓ petroleum hydrocarbon odors and staining end, color back to yellowish brown	32.3	-
ts and Settings\aar	_	15—					Bottom of Boring at 14 feet bgs		
C:\Document		-						1	Figure

## Log of Boring AEI-7

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre		
Drilling	Drill Bit	Total Depth		
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole <b>14 feet bgs</b>		
Drill Rig	Drilling Environmental Control	Approximate		
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation		
Groundwater Level <b>11 feet ATD, 7.95 feet after</b>	Sampling	Well		
and Date Measured <b>20 mins</b>	Method(s) <b>Tube</b>	Permit.		
Borehole Backfill Neat grout cement	Location Former Hydraulic Lift			

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	٦	0			Other		Concrete		
		-	-		SP		Sand, dark brown, loose, poorly graded, dry to slightly moist, no apparent – odors or staining –		_
	_	-	-				$\sim$ color change to yellowish brown		
	_	-		AEI-7-4'				4.1	
	_	5—	-				✓ sand increasing in density and moisture		
pprobe 15.tpl]	_	-	X	AEI-7-7'				102	
stad Logs.bgs [AEI geo	_	- 10—	-				<ul> <li>strong petroleum hydrocarbon odors and staining noted</li> <li></li></ul>		
ogs/Bue:	_	-	$\boxtimes$	AEI-7-11'	S D			75	-
gel\Desktop\beustad tables\L	_	-	$\times$	AEI-7-13'			<ul> <li>V petroleum hydrocarbon odors and staining</li> <li>✓ petroleum hydrocarbon odors and staining end, color back to</li> <li>✓ yellowish brown</li> </ul>	57	
its and Settings\aan	_	15—	-				Bottom of Boring at 14 feet bgs		
C:\Documer									Figure

## Log of Boring AEI-8

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole <b>14 feet bgs</b>
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level <b>11 feet ATD, 7.54 feet after</b>	Sampling	Well
and Date Measured <b>20 mins</b>	Method(s) <b>Tube</b>	Permit.
Borehole Backfill Neat grout cement	Location Former Hydraulic Lift	

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	٦	0			Other		Concrete		
		-	-		SP		Sand, dark brown, loose, poorly graded, dry to slightly moist, no apparent – odors or staining		
	_	-					 ↓ color change to yellowish brown		
	_	-		AEI-8-4'				12.8	
	_	5	-				✓ sand increasing in density and moisture		
obe 15.tpl]	_	-	X	AEI-8-7'				140	
gs.bgs [AEI geopro	_	-		AEI-8-9'			$\overline{\mathbb{V}}$ strong petroleum hydrocarbon odors and staining noted	92	
Logs\Buestad Lo	_	10		AEI-8-11'	SP			81	
Jesktop\beustad tables\	_	-	-				noted, oily water noted in pores, wet ✓ petroleum hydrocarbon odors and staining end, color back to yellowish brown		
d Settings\aangel\D	_	- 15—		AEI-8-14'			Bottom of Boring at 14 feet bgs	24.1	
C:\Documents an		-							Figure

## Log of Boring AEI-9

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre	
Drilling	Drill Bit	Total Depth	
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole <b>14 feet bgs</b>	
Drill Rig	Drilling Environmental Control	Approximate	
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation	
Groundwater Level <b>10 feet ATD, 7.89 feet after</b>	Sampling	Well	
and Date Measured <b>15 mins</b>	Method(s) <b>Tube</b>	Permit.	
Borehole Backfill Neat grout cement	Location Existing Hydraulic Lift		

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	٦	0	$\square$		Other		Concrete		
		-			SP		Sand, very minor silt, dark brown, loose, poorly graded, dry to slightly – moist, no apparent odors or staining –		
	_	-					$\overline{\mathbb{V}}$ color change to yellowish brown		
	_	-	-						
	_	- 5		AEI-9-5'				4.7	
		-					$\overline{V}$ sand increasing in density and moisture		
e 15.tpl]	_	-	X	AEI-9-7'				10.4	
-ogs.bgs [AEI geoprob	_	-		AEI-9-8'			(after 15 mins) ⊻		
ustad tables\Logs\Buestad L	_	10— - -	X	AEI-9-11'	SP		Sand, brown, very moist, no apparent odors or staining (ATD) ⊻ 	9.5	
s\aangel\Desktop\bet	_	-	$\times$	AEI-9-14'			Bottom of Boring at 14 feet bgs		
its and Settings	_	15—							
C:\Documer									Figure

## Log of Boring AEI-10

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 15 feet bgs
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level 9.5 feet ATD, 8.24 feet after	Sampling	Well
and Date Measured 20 mins	Method(s) <b>Tube</b>	Permit.
Borehole	Location Existing Hydraulic Lift	



## Log of Boring AEI-11

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 5 feet bgs
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level	Sampling	Well
and Date Measured Not Encountered ATD	Method(s) <b>Tube</b>	Permit.
Borehole Backfill Neat grout cement	Location Drain	

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	٦	0	$\square$		Other		Concrete		
		-			SP		Sand, very minor silt, dark brown, loose, poorly graded, dry to slightly – moist, no apparent odors or staining –	-	
	-	-					✓ color change to vellowish brown	-	
			$\square$	AFI-11-3'				17	
	_	-		<u>, 11-11-</u> 3					
	_	5—	X	AEI-11-5'			Bottom of Boring at 5 feet bgs	<1	
	-	-						1	
be 15.tpl]	_	-	-						
El geopro	-	-						-	
gs.bgs [AE	_	-						-	
estad Loc	-	10						-	
igs/But	_	_						-	
es/Lo									
stad tab	-	-						-	
<top beu;<="" td=""><td>_</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td></top>	_	-						-	
gel/Des		_							
js\aan									
s and Setting	_	15—						-	
C:\Document					I	I		1	Figure

## Log of Boring AEI-12

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 8 feet bgs
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level	Sampling	Well
and Date Measured Not Encountered ATD	Method(s) <b>Tube</b>	Permit.
Borehole Backfill Neat grout cement	Location Drain	

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	7	0			Other		Concrete		
		-			SP		Sand, very minor silt, dark brown, loose, poorly graded, dry to slightly – moist, no apparent odors or staining –		
	_	-	-				$\overline{\mathbb{V}}$ color change to yellowish brown	-	
	_	-	X	AEI-12-3'				1.1	
	_	-	-					-	
	_	5	X	AEI-12-5'				1.5	
	_	_	-						
15.tpl]	-	-							
probe	_	_	X	AEI-12-8'			✓ increasing in density and moisture	2.7	-
AEI geo							Bottom of Boring at 8 feet bgs		
gs.bgs [/	-	-							
uestad Lo	-	10							
s\Logs\B	_	-	_					-	
ustad table	_	-							
sktop\bet	_	-							
∖aangel\D€	-	-							
and Settings'	-	15—							
C:\Documents								I	Figure

## Log of Boring AEI-13

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 8 feet bgs
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level	Sampling	Well
and Date Measured Not Encountered ATD	Method(s) <b>Tube</b>	Permit.
Borehole Backfill Neat grout cement	Location Drain	

	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	٦	0			Other		Concrete		
		-			SP		Sand, very minor silt, dark brown, loose, poorly graded, dry to slightly – moist, no apparent odors or staining	-	-
	_	-					✓ color change to yellowish brown		
	_	-	X	AEI-13-3'			-	1.1	
	_	-						-	
	_	5—	X	AEI-13-5'				1.5	
[]		-	-				$\overline{}$ increasing in density and moisture		
e 15.tp		-							
probe	_	-	Х	AEI-13-8'				2.7	-
nts and Settings\aange\\Desktop\beustad tables\Logs\Buestad Logs.bgs [AEI ge	-		-				Bottom of Boring at 8 reet bgs	-	
C:\Docume									Figure

## Log of Boring AEI-14

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 15 feet bgs
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level 10.5 feet ATD, 7.4 feet after	Sampling	Well
and Date Measured 20 mins	Method(s) <b>Tube</b>	Permit.
Borehole	Location Existing Gas UST	



## Log of Boring AEI-15

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 15 feet bgs
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level 9.5 feet ATD, 7.78 feet after	Sampling	Well
and Date Measured 10 mins	Method(s) <b>Tube</b>	Permit.
Borehole	Location Existing Gas UST	



## Log of Boring AEI-16

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre
Drilling	Drill Bit	Total Depth
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 15 feet bgs
Drill Rig	Drilling Environmental Control	Approximate
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation
Groundwater Level 9 feet ATD, 7.93 feet after	Sampling	Well
and Date Measured 20 mins	Method(s) <b>Tube</b>	Permit.
Borehole	Location Existing Waste Oil UST	



## Log of Boring AEI-17

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre		
Drilling	Drill Bit	Total Depth		
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 15 feet bgs		
Drill Rig	Drilling Environmental Control	Approximate		
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation		
Groundwater Level 10.5 feet ATD, 8.39 feet	Sampling	Well		
and Date Measured after 15 mins	Method(s) <b>Tube</b>	Permit.		
Borehole Backfill Neat grout cement	Location Former Oil and Gas Area - Southwestern Corner			



## Log of Boring AEI-18

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre		
Drilling	Drill Bit	Total Depth		
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 15 feet bgs		
Drill Rig	Drilling Environmental Control	Approximate		
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation		
Groundwater Level 11.5 feet ATD, 8.45 feet	Sampling	Well		
and Date Measured after 10 mins	Method(s) <b>Tube</b>	Permit.		
Borehole Backfill Neat grout cement	Location Former Oil and Gas Area - Southwestern Corner			



## Log of Boring AEI-19

Date(s) Drilled July 25, 2011	Logged By Adrian Angel	Checked By Peter McIntyre		
Drilling	Drill Bit	Total Depth		
Method Direct Push - Geoprobe	Size/Type <b>3 inch</b>	of Borehole 15 feet bgs		
Drill Rig	Drilling Environmental Control	Approximate		
Type <b>Truck-mounted Geoprobe 5410</b>	Contractor Associates	Surface Elevation		
Groundwater Level 9 feet ATD, 8.5 feet after 15	Sampling	Well		
and Date Measured mins	Method(s) <b>Tube</b>	Permit.		
Borehole Backfill Neat grout cement	Location Former Oil and Gas Area - Southwestern Corner			



## Log of Boring AS-1

Definition         11/1/1/11         Logged By Bryan Campbell         Checked By Bryan Campbell           Definition         StarsPripe         10 inch         For Definition	Project: Alamec Project Location Project Number	la, Califo n: 1630 : 29893′	ornia Park Street, Alameda, California	Log	of Bo Sheet	<b>oring AS-1</b> 1 of 1
understand     understand <th>Date(s) Drilled 11/14/11 Drilling Method Hollow Stem Drill Rig Type Geoprobe 64 Groundwater Level and Date Measured Borehole Bockfill Well Comp</th> <th>Auger 520D etion</th> <th>Logged By       Bryan Campbell         Drill Bit       10 inch         Drilling       Contractor         RSI Drilling       Sampling         Method(s)       Direct-Push Sample         Location       1630 Park Street, Ala</th> <th>r Checke Total D of Bore Surface Hamme Data meda, California</th> <th>epth hole 25 fee Elevation</th> <th>n Campbell et bgs</th>	Date(s) Drilled 11/14/11 Drilling Method Hollow Stem Drill Rig Type Geoprobe 64 Groundwater Level and Date Measured Borehole Bockfill Well Comp	Auger 520D etion	Logged By       Bryan Campbell         Drill Bit       10 inch         Drilling       Contractor         RSI Drilling       Sampling         Method(s)       Direct-Push Sample         Location       1630 Park Street, Ala	r Checke Total D of Bore Surface Hamme Data meda, California	epth hole 25 fee Elevation	n Campbell et bgs
a       a       a       a       b       Neat Cement Grout         b       Silly Sand: Fine sand, weak, brown, low plastic fines, moist.       a       b       Blank, Schedule 40 PVC, 24         b       Color change to olive.       a       b       b       b       b         c       a       b       c       c       c       c       c         c       a       b       c       c       c       c       c       c         c       a       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c	Depth, feet Sample PID Reading (ppm)	USCS Symbol USCS Symbol Graphic Log	MATERIAL DESCRIPTION Asphalt Gravel with Sand: Gravel up to 3 cm olive weak and	N	Well Log	Remarks - Well Box
20 20 20 20 20 4 5 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5	- - - - - - - - - - - - - - - - - - -		<ul> <li>Graver man outline of an of a proop of one of the order, and dry.</li> <li>Silty Sand: Fine sand, weak, brown, low plastic fines, i</li> <li>✓ Color change to olive.</li> </ul>	moist		- Neat Cement Grout - Blank, Schedule 40 PVC, 2-inc
20 4 3 Sand 5 Creen with 0.020 Slot, 5 Chedule 40 PVC, 2-inch 8-inch Borehole 5 1 6 4 7 5 feet bgs 7 7 8	150		<ul> <li>✓ Color change to brown.</li> <li>✓ Saturated.</li> </ul>	-		- Bentonite Chips
	20- - - - - - - - - - - - - - - - - - -		Bottom of Boring at 25 feet bgs			- #3 Sand - Screen with 0.020 Slot, Schedule 40 PVC, 2-inch -8-inch Borehole

#### [Well Log on Left.tp Project: Alameda, California s.bgs Project Location: 1630 Park Street, Alameda, California Project Number: 298931

Logs

## Log of Boring DPE-1

931		umber	. 230	331							
ogs\298	Date(s) Drilled 11/1	5/11				Logged By Bryan Campbell		Checked	By I	Brya	n Campbell
oring L	Drilling Method Hol	low Stem	n Auge	r		Drill Bit Size/Type <b>10 inch</b>		Total Dep of Boreho	oth ole 1	l6 fee	et bgs
Istall∖B	Drill Rig Type Geo	oprobe 6	620D			Drilling Contractor RSI Drilling		Surface E	Eleva	ation	
Well Ir	Groundwater and Date Me	Level asured				Sampling Method(s) Direct-Push Sampler	r	Hammer Data			
- Rem	Borehole Backfill	ell Comp	letion			Location 1630 Park Street, Ala	meda, Califor	nia			
ial version of BorinGS - visit www.gookinsoftware.com for purchase information: X:PROJECTS/CHARACTERIZATION & REMEDIATIONDUE DIL298931 PH II (Buestad Foley St) Alameda - AAI(D) -	10- - - - - - - - - - - - - - - - - - -	aldung aldung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung	Asphalt _ SP         	Graphic Log	Asphalt         Sand: Fine sand, fines, moist.         Silty Sand: Fine s         ✓ Color change t         Bottom of Boring	MATERIAL DESCRIPTION minor gravel up to 1 cm, weak, angul and, brown, weak, low plasticity fines to olive. to brown. at 16 feet bgs	l lar gravel, nonpla	astic			Remarks • Well Box • Neat Cement Grout • Blank, Schedule 40 PVC, 4-inch • Bentonite Chips • #2/12 Sand • Screen with 0.010 Slot, Schedule 40 PVC, 4-inch • 10-inch borehole
Printed with a											Plate

Depth, feet	Sample	PID Reading (ppm)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION		Well Log	Remarks
-	-		Asphalt _ SP _ 		Asphalt Sand: Fine sand, minor gravel up to 1 cm, weak, angular gravel, nonplastic fines, moist.			- Well Box - Neat Cement Grout
- 5		32 2600	  - SM <sup>-</sup>		Silty Sand: Fine sand, brown, weak, low plasticity fines, moist.			Blank, Schedule 40 PVC, 4-inch
- - 10		2500	 		✓ Color change to olive.			#2/12 Sand Screen with 0.010 Slot,
- - - 15		73 3 62			✓ Color change to brown.			Schedule 40 PVC, 4-inch
-	-				Bottom of Boring at 16 feet bgs			
<b>20</b> - -	-					-		
- 25	-		 			-		
- - 30—	-					-		
								Plate

## Log of Boring DPE-2

Project	Nu	mber	: 298	8931				Sneet	1 Of 1	
Date(s) Drilled 11/	/15/	1				Logged By Bryan Campbell	Checkec	ed By Bryan Campbell		
Drilling Method Hollow Stem Auger						Drill Bit Size/Type <b>10 inch</b>	Total De of Boreh	<sup>pth</sup> ole 16 fee	et bgs	
Drill Rig Type Geoprobe 6620D						Drilling Contractor RSI Drilling	Surface	Elevation		
Groundwate and Date Me	er Le easu	vel red				Sampling Method(s) Direct-Push Sampler	Hammer Data			
Borehole Backfill	/ell	Compl	etion			Location 1630 Park Street, Alar	neda, California			
400 0-	Deptin, leet Sample	PID Reading (ppm)	USCS Symbol Concrete	Graphic Log	Concrete	MATERIAL DESCRIPTION		Well Log	Remarks	
	-		_SM_		Silty Sand: Fine s	and, weak, brown, nonplastic fines, m	oist.		- Well Box	
5-	-	3 16	 				- - -		- Neat Cement Grout - Blank, Schedule 40 PVC, 4-inch	
10-		1800			<sup>↓</sup> Color change t	o olive.	- - - -		- Bentonite Chips - #2/12 Sand - Screen with 0.010 Slot, Schedule 40 PVC, 4-inch	

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7

7

15

20

25

30

V

Color change to brown.

Bottom of Boring at 16 feet bgs

10-inch Borehole

## Log of Boring DPE-3

FIDJECTIN	umber.	29093					
Date(s) Drilled 11/14	/11			Logged By Bryan Campbell	C	Checked By Brya	n Campbell
Drilling Method Hollo	w Stem	Auger		Drill Bit Size/Type 10 inch	T	Total Depth of Borehole 16 fe	et bgs
Drill Rig	orobe 66	20D		Drilling Contractor RSI Drilling	s	Surface Elevation	
Groundwater L	evel sured			Sampling Method(s) Direct-Push Sampler	, F	Hammer Data	
Borehole Backfill Wel	I Comple	etion		Location 1630 Park Street, Alar	neda, California	a	
Printed with a trial version of BorinGS - visit www.gookinsoftware.com for purchase information: X:PROJECTS/CHARACTERIZATION & REMEDIATIONDUE DILv298931 PH II (Buestad Foley St) Alameda - AA(U)	eldmes 154 × 154 × 1415 × 3366 × 13 × 15	Graphic Log	<ul> <li>Asphalt Gravel with Sand: dry.</li> <li>Visqueen plast Silty Sand: Fine s</li> <li>✓ Color change t</li> <li>✓ Color change t</li> <li>Bottom of Boring</li> </ul>	MATERIAL DESCRIPTION Creater of the second structure o	lar, nonplastic fine		Remarks -Well Box Neat Cement Grout Blank, Schedule 40 PVC, 4-inch Bentonite Chips #2/12 Sand Screen with 0.010 Slot, Schedule 40 PVC, 4-inch 10-inch Borehole 10-inch Borehole

Depth, feet	Sample	PID Reading (ppm)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	Remarks
-	-		Asphalt _GW _ 		Asphalt Gravel with Sand: Gravel up to 3 cm, olive, weak, angular, nonplastic fines, dry.		- Well Box - Neat Cement Grout
5		154	_SM_ 		Visqueen plastic sheeting noted.     Silty Sand: Fine sand, weak, brown, low plastic fines, moist.  ✓ Color change to olive		Bentonite Chips
- 10		336	 		-		#2/12 Sand Screen with 0.010 Slot, Schedule 40 PVC, 4-inch
15		15			✓ Color change to brown.		·10-inch Borehole
- - - - - -	-		  		Bottom of Boring at 16 feet bgs	-	
- 25 - -	-					-	
30							
							Plate

## Log of Boring AEI-20

Date(s) Drilled January 17, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell			
Drilling Method Direct Push	Drill Bit Size/Type <b>2 inch</b>	Total Depth of Borehole 15 feet bgs			
Drill Rig Type Limited Access	Drilling Contractor ECA	Approximate Surface Elevation			
Groundwater Level and Date Measured 11.3 feet ATD	Sampling Method(s) Direct-Push Sampler Well Permit. W2012-0024				
Borehole Backfill Neat Cement	Location 1630 Park Street, Alameda, California				

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	,			Asphalt		Conrete and Fill		
	_			SM		Silty sand, mottled reddish brown, coarse grained, brittle.		
_ 5		$\times$	AEI-20-3.5	SP		Poorly graded, fine grained sand, light brown, moderately loose.	<1	
	-			SW		Medium to coarse grained sand, yellowish red, moderately loose.		
- - - 10	- -	$\times$	AEI-20-7.5	SM		Silty sand, (20% silt), mottled greenish grey and light grey, moderately soft and loose, hydrocarbon odors.	78.1	
_	_	$\times$	AEI-20-11	0.5		(ATD) \	104.3	
-	_	$\times$	AEI-20-15	52		Fine grained sand, yellowish brown, moist to wet, compact.	26.7	
- 15  - - - - - - - - - - - - - - - - -	-		<u>7121 20 10</u>			Bottom of Boring at 15 feet bgs. Groundwater sample collected.		
20								
								Figure

## Log of Boring AEI-21

Date(s) Drilled January 17, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell		
Drilling Method Direct Push	Drill Bit Size/Type <b>2 inch</b>	Total Depth of Borehole <b>14 feet bgs</b>		
Drill Rig Type Limited Access	Drilling Contractor ECA	Approximate Surface Elevation		
Groundwater Level and Date Measured <b>10.7 feet ATD</b>	Sampling Method(s) Direct-Push Sampler Well Permit. W2012-0024			
Borehole Backfill Neat Cement	Location 1630 Park Street, Alameda, California			

	Elevation, reet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
• 20.t		,			Asphalt		Conrete and Fill		
El geoprobe	_	_			SM		_ Silty sand, dark brown and mottled red, hard		
EI-28.bgs [AF	_	_	$\times$	AEI-21-3	SM		Becomes yellowish brown, fine grained, cohesive, friable.	<1	
AEI-20 to A	- - 5	- 5			SM		Becomes fine to medium grained sand.		
3oring Logs/		_							
Alameda - JAS\t	_	_	$\times$	AEI-21-7				<1	
stad (298931)	- 10		$\times$	AEI-21-9	SM		Silty sand (20% silt), greyish green, non-plastic. 	32.9	
Bue	_	+	$\times$	AEI-21-11				61.5	
ED REMEDIATION	-	_	$\times$	AEI-21-14	SP		Sand, yellowish brown, wet, hard, friable, cohesive.	17.9	
ADVANC	- 15	5					Bottom of Boring at 14 feet bgs. Groundwater Sample Collected.		
EDIATION	_	_				-			
ON & REM	_	-				-			
TERIZATI	_	_							
S/CHARAC	- 20	)				-			
X:\PROJECT					I			I	Figure

## Log of Boring AEI-22

Date(s) Drilled January 17, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell	
Drilling Method Direct Push	Drill Bit Size/Type <b>2 inch</b>	Total Depth of Borehole 15 feet bgs	
Drill Rig Type Limited Access	Drilling Contractor ECA	Approximate Surface Elevation	
Groundwater Level and Date Measured <b>10.9 feet ATD</b>	Sampling Method(s) Direct-Push Sampler Well Permit. W2012-0024		
Borehole Backfill Neat Cement	Location 1630 Park Street, Alameda, California		

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Conrete and Fill		
	-	-		SM		Silty sand, dark brown and mottled reddish brown, hard, slightly friable.		
-	- 5		AEI-22-4	SM		Silty sand, dark yellowish brown, fine to medium grained, moist, loose, friable.	<1	
	_							
		$\mid$	AEI-22-7	SM		Cilly and vellowich red fire grained and mederately laces	<1	
-	-			OW				
-	- 10—		AEI-22-9	SM		Silty sand (20% silt), greenish grey, fine grained sand, non-plastic, wet.	9.4	
_	-	×	AEI-22-11			(ATD) <u>₹</u>	13.8	
_	-		AEI-22-14	SM		Silty sand, light yellowish brown, non-plastic.	5.4	
_	15—	-			<u> 1414 (195</u> 7	Bottom of Boring at 15 feet bgs. Groundwater Sample Collected.		
-	- - 20—	-						
	_							Figure

## Log of Boring AEI-23

Date(s) Drilled January 17, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell	
Drilling	Drill Bit	Total Depth	
Method Direct Push	Size/Type <b>2 inch</b>	of Borehole 14.5 feet bgs	
Drill Rig	Drilling	Approximate	
Type Limited Access	Contractor ECA	Surface Elevation	
Groundwater Level	Sampling	Well	
and Date Measured <b>10.09 feet ATD</b>	Method(s) <b>Direct-Push Sampler</b>	Permit. <b>W2012-0024</b>	
Borehole Backfill Neat Cement	Location 1630 Park Street, Alameda, California		



## Log of Boring AEI-24

Date(s) Drilled January 17, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell	
Drilling	Drill Bit	Total Depth	
Method Direct Push	Size/Type <b>2 inch</b>	of Borehole <b>16 feet bgs</b>	
Drill Rig	Drilling	Approximate	
Type Limited Access	Contractor ECA	Surface Elevation	
Groundwater Level	Sampling	Well	
and Date Measured 11.4 feet ATD	Method(s) <b>Direct-Push Sampler</b>	Permit. <b>W2012-0024</b>	
Borehole Backfill Neat Cement	Location 1630 Park Street, Alameda, California		

[0	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
20.tp	٦	0			Asphalt		Conrete and Fill		
8.bgs [AEI geoprobe		-	-		SM		_ Sandy silt, black, friable, dry, trace subangular fine gravel. Non-plastic		
EI-28				AFI-24-3 5				<1	
EI-20 to A	_	5		71E1 24 0.0	SM		Silty sand, reddish yellowish brown, non-plastic, moist, slightly friable.		
S\Boring Logs\A		-							
) Alameda - JA\$	-	-		AEI-24-7				9.8	
ION\Buestad (298931	_	10— -		AEI-24-10.5	SM		Silty sand, light olive brown, moist, moderately loose. 	19.4	
VANCED REMEDIAT	_	-	×	AEI-24-13	SW		Sand with trace gravel, reddish, yellowish brown, fine to medium grained, wet.	<1	
ATIONAD	_	15						-	
CTS/CHARACTERIZATION & REMEDIA	-	- - - 20	-				Bottom of Boring at 16 feet bgs. Groundwater Sample Collected.	-	
X:\PROJEC									Figure

## Log of Boring AEI-25

Date(s) Drilled January 17, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell	
Drilling	Drill Bit	Total Depth	
Method Direct Push	Size/Type <b>2 inch</b>	of Borehole 15 feet bgs	
Drill Rig	Drilling	Approximate	
Type Limited Access	Contractor ECA	Surface Elevation	
Groundwater Level	Sampling	Well	
and Date Measured <b>10.8 feet ATD</b>	Method(s) <b>Direct-Push Sampler</b>	Permit. <b>W2012-0024</b>	
Borehole Backfill Neat Cement	Location 1630 Park Street, Alameda, California		

-	Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
20.tp	٦	0—			Asphalt		Conrete and Fill		
-28.bgs [AEI geoprobe	_	-	-		SM		Sandy silt, black mottled with red/orange, slightly friable, dry, cohesive.		
AS\Boring Logs\AEI-20 to AEI-	_	- 5		AEI-25-4	SM		Silty sand, reddish yellowish brown, moist	<1	
۲- a			$\boxtimes$	AEI-25-7.5				<1	
:MEDIATION/Buestad (298931) Alamec		- 10— -		AEI-25-10	SP		Fine to medium grained sand, yellowish brown, moist, wet at 12 feet.	23.2	
ADVANCED RE	_	- 15—	X	AEI-25-14	SM		Silty sand, reddish yellow, fine to medium grained, non-plastic, wet, expansive.	<1	-
TS/CHARACTERIZATION & REMEDIATION		- - 20	-			-	Boltom of Boring at 15 reet bgs. Groundwater Sample Collected.		
X:\PROJEC									Figure

## Log of Boring AEI-26

Date(s) Drilled January 17, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell	
Drilling	Drill Bit	Total Depth	
Method Direct Push	Size/Type <b>2 inch</b>	of Borehole <b>14 feet bgs</b>	
Drill Rig	Drilling	Approximate	
Type Limited Access	Contractor ECA	Surface Elevation	
Groundwater Level	Sampling	Well	
and Date Measured 11.8 feet ATD	Method(s) <b>Direct-Push Sampler</b>	Permit. <b>W2012-0024</b>	
Borehole Backfill Neat Cement	Location 1630 Park Street, Alameda, California		



## Log of Boring AEI-27

Date(s) Drilled January 17, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell	
Drilling	Drill Bit	Total Depth	
Method Direct Push	Size/Type <b>2 inch</b>	of Borehole 15 feet bgs	
Drill Rig	Drilling	Approximate	
Type Limited Access	Contractor ECA	Surface Elevation	
Groundwater Level	Sampling	Well	
and Date Measured 9.7 feet ATD	Method(s) <b>Direct-Push Sampler</b>	Permit. <b>W2012-0024</b>	
Borehole Backfill Neat Cement	Location 1630 Park Street, Alameda, California		



## Log of Boring AEI-28

Date(s) Drilled January 17, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell	
Drilling	Drill Bit	Total Depth	
Method Direct Push	Size/Type <b>2 inch</b>	of Borehole <b>16 feet bgs</b>	
Drill Rig	Drilling	Approximate	
Type Limited Access	Contractor ECA	Surface Elevation	
Groundwater Level	Sampling	Well	
and Date Measured <b>10.61 feet ATD</b>	Method(s) <b>Direct-Push Sampler</b>	Permit. <b>W2012-0024</b>	
Borehole Backfill Neat Cement	Location 1630 Park Street, Alameda, California		



## Log of Boring AS-1

Definition         11/1/1/11         Logged By Bryan Campbell         Checked By Bryan Campbell           Definition         StarsPripe         10 inch         For Definition	Project: Alamec Project Location Project Number	la, Califo n: 1630 : 29893′	ornia Park Street, Alameda, California	Log	of Bo Sheet	<b>oring AS-1</b> 1 of 1		
understand     understand <th>Date(s) Drilled 11/14/11 Drilling Method Hollow Stem Drill Rig Type Geoprobe 64 Groundwater Level and Date Measured Borehole Bockfill Well Comp</th> <th>Auger 520D etion</th> <th>Logged By       Bryan Campbell         Drill Bit       10 inch         Drilling       Contractor         RSI Drilling       Sampling         Method(s)       Direct-Push Sample         Location       1630 Park Street, Ala</th> <th colspan="2">Logged By Bryan Campbell       Check         Drill Bit Size/Type       10 inch       Total I of Born         Drilling Contractor       RSI Drilling       Surfac         Sampling Method(s)       Direct-Push Sampler       Hamm Data         Location       1630 Park Street, Alameda, California</th> <th colspan="3">ted By <b>Bryan Campbell</b> Depth Phole <b>25 feet bgs</b> Ce Elevation Depth Dep</th>	Date(s) Drilled 11/14/11 Drilling Method Hollow Stem Drill Rig Type Geoprobe 64 Groundwater Level and Date Measured Borehole Bockfill Well Comp	Auger 520D etion	Logged By       Bryan Campbell         Drill Bit       10 inch         Drilling       Contractor         RSI Drilling       Sampling         Method(s)       Direct-Push Sample         Location       1630 Park Street, Ala	Logged By Bryan Campbell       Check         Drill Bit Size/Type       10 inch       Total I of Born         Drilling Contractor       RSI Drilling       Surfac         Sampling Method(s)       Direct-Push Sampler       Hamm Data         Location       1630 Park Street, Alameda, California		ted By <b>Bryan Campbell</b> Depth Phole <b>25 feet bgs</b> Ce Elevation Depth Dep		
a       a       a       a       b       Neat Cement Grout         b       Silly Sand: Fine sand, weak, brown, low plastic fines, moist.       a       b       Blank, Schedule 40 PVC, 24         b       Color change to olive.       a       b       b       b       b         c       a       b       c       c       c       c       c         c       a       b       c       c       c       c       c       c         c       a       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c       c	Depth, feet Sample PID Reading (ppm)	USCS Symbol USCS Symbol Graphic Log	MATERIAL DESCRIPTION Asphalt Gravel with Sand: Gravel up to 3 cm olive weak and	N	Well Log	Remarks - Well Box		
20 20 20 20 20 4 5 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5	- - - - - - - - - - - - - - - - - - -		<ul> <li>Graver man outline. Only of o only, only, only, and dry.</li> <li>Silty Sand: Fine sand, weak, brown, low plastic fines, i</li> <li>✓ Color change to olive.</li> </ul>	moist		- Neat Cement Grout - Blank, Schedule 40 PVC, 2-inc		
20 4 3 Sand 5 Creen with 0.020 Slot, 5 Chedule 40 PVC, 2-inch 8-inch Borehole 5 1 6 4 7 5 feet bgs 7 7 8	150		<ul> <li>✓ Color change to brown.</li> <li>✓ Saturated.</li> </ul>	-		- Bentonite Chips		
	20- - - - - - - - - - - - - - - - - - -		Bottom of Boring at 25 feet bgs			- #3 Sand - Screen with 0.020 Slot, Schedule 40 PVC, 2-inch -8-inch Borehole		

#### [Well Log on Left.tp Project: Alameda, California s.bgs Project Location: 1630 Park Street, Alameda, California Project Number: 298931

Logs

## Log of Boring DPE-1

931		umber	. 230	331									
ogs\298	Date(s) Drilled 11/1	5/11				Logged By Bryan Campbell		Checked	By I	Brya	n Campbell		
oring L	Drilling Method Hol	low Stem	n Auge	r		Drill Bit Size/Type <b>10 inch</b>		Total Dep of Boreho	oth ole 1	l6 fee	et bgs		
Istall∖B	Drill Rig Type Geo	oprobe 6	620D			Drilling Contractor RSI Drilling	Surface E	urface Elevation					
Well Ir	Groundwater and Date Me	Level asured				Sampling Method(s) Direct-Push Sampler Data				ner			
- Rem	Borehole Backfill	ell Comp	letion			Location 1630 Park Street, Ala	meda, Califor	nia					
ial version of BorinGS - visit www.gookinsoftware.com for purchase information: X:PROJECTS/CHARACTERIZATION & REMEDIATIONDUE DIL298931 PH II (Buestad Foley St) Alameda - AAI(D) -	10- - - - - - - - - - - - - - - - - - -	aldung aldung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung algung	Asphalt _ SP        	Graphic Log	Asphalt         Sand: Fine sand, fines, moist.         Silty Sand: Fine s         ✓ Color change t         Bottom of Boring	MATERIAL DESCRIPTION minor gravel up to 1 cm, weak, angul and, brown, weak, low plasticity fines to olive. to brown. at 16 feet bgs	l lar gravel, nonpla	astic			Remarks - Well Box - Neat Cement Grout - Blank, Schedule 40 PVC, 4-inch - Bentonite Chips - #2/12 Sand - Screen with 0.010 Slot, Schedule 40 PVC, 4-inch - 10-inch borehole		
Printed with a											Plate		

Depth, feet	Sample	PID Reading (ppm)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION		Well Log	Remarks
	-		Asphalt _ SP _ 		Asphalt Sand: Fine sand, minor gravel up to 1 cm, weak, angular gravel, nonplastic fines, moist.			- Well Box - Neat Cement Grout
- 5 -		32 2600	  - SM <sup>-</sup>		Silty Sand: Fine sand, brown, weak, low plasticity fines, moist.			Blank, Schedule 40 PVC, 4-inch
- - 10		2500	 		✓ Color change to olive.			#2/12 Sand Screen with 0.010 Slot,
- - - 15		73 3 62			✓ Color change to brown.			Schedule 40 PVC, 4-inch
-	-				Bottom of Boring at 16 feet bgs			
<b>20</b>	-				-	-		
- 25	-		 		-	-		
- - 30—	-					-		
								Plate

## Log of Boring DPE-2

Project	Nu	mber	: 298	8931			Sneet	1 Of 1				
Date(s) Drilled 11	/15/	11				Logged By Bryan Campbell	Checked	ed By Bryan Campbell				
Drilling Method Ho	ollo	v Stem	Auge	er		Drill Bit Total Dep Size/Type 10 inch of Boreho			<sup>epth</sup> hole 16 feet bgs			
Drill Rig Type G	еор	robe 60	620D			Drilling Contractor RSI Drilling	RSI Drilling Surface Elevation					
Groundwate and Date M	er Le leasi	vel ired				Sampling Method(s) Direct-Push Sampler	Hammer Data					
Borehole Backfill	Vell	Compl	letion			Location 1630 Park Street, Alar	neda, California					
0	Depth, feet	PID Reading (ppm)	Concrete	Graphic Log	Concrete	MATERIAL DESCRIPTION		Well Log	Remarks			
	-		_SM_		Silty Sand: Fine s	and, weak, brown, nonplastic fines, m		- Well Box				
5		≤ 16					- - 		- Neat Cement Grout - Blank, Schedule 40 PVC, 4-inch			
10		1800			✓ Color change t	o olive.	- - - -		- #2/12 Sand - Screen with 0.010 Slot, Schedule 40 PVC, 4-inch			

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V

Color change to brown.

Bottom of Boring at 16 feet bgs

10-inch Borehole

## Log of Boring DPE-3

FIOJECLI	umber	. 29095						
Date(s) Drilled 11/1	4/11			Logged By Bryan Campbell	hecked By Brya	d By Bryan Campbell		
Drilling Method Hol	low Sten	n Auger		Drill Bit Size/Type 10 inch	Drill Bit Size/Type 10 inch Total Depth of Borehole 16 fe			
Drill Rig	oprobe 6	620D		Drilling Contractor RSI Drilling				
Groundwater	Level asured			Sampling Method(s) Direct-Push Sampler	H: D	lammer lata		
Borehole Backfill	ell Comp	letion		Location 1630 Park Street, Alar	meda, California	1		
Printed with a trial version of BorinGS - visit www.gookinsoftware.com for purchase information: X:PROJECTS/CHARACTERIZATION & REMEDIATION/DUE DIL/298931 PH II (Buestad Foley St) Alameda - AA() - 0	eldues Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa Santa S	Asphalt 	Asphalt Gravel with Sand: dry. ✓Visqueen plast Silty Sand: Fine s ✓Color change t Bottom of Boring	MATERIAL DESCRIPTION Creater of the second s	lar, nonplastic fines		Remarks - Well Box - Neat Cement Grout - Blank, Schedule 40 PVC, 4-inch - Bentonite Chips - #2/12 Sand - Screen with 0.010 Slot, Schedule 40 PVC, 4-inch - 10-inch Borehole - 10-inch Borehole - 10-Plate	

Depth, feet	Sample	PID Reading (ppm)	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	Remarks
-	-		Asphalt _GW _ 		Asphalt Gravel with Sand: Gravel up to 3 cm, olive, weak, angular, nonplastic fines, dry.		-Well Box Neat Cement Grout
5		154	_SM_ 		Visqueen plastic sheeting noted.     Silty Sand: Fine sand, weak, brown, low plastic fines, moist.  ✓ Color change to olive		Bentonite Chips
- 10		336	 		-		#2/12 Sand Screen with 0.010 Slot, Schedule 40 PVC, 4-inch
15		15			✓ Color change to brown.		10-inch Borehole
- - - - - -	-		  		Bottom of Boring at 16 feet bgs	-	
- 25							
30							
							Plate

## Log of Boring DPE-10

Date(s) Drilled January 20, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell		
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 10 inch	Total Depth of Borehole 17 feet bgs		
Drill Rig Type MARL 10T	Drilling Contractor Gregg Drilling	Approximate Surface Elevation		
Groundwater Level 8.32 feet measured on 1/23/12	Sampling Method(s)	Hammer Data W2012-0055		
Borehole Backfill Well Completion	Location 1630 Park Street, Alameda, California	-		

	Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
og.tpl		0 —					Asphalt		Asphalt and Fill	
ring L	-	-							⊢ Well Not Logged. –	
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1.bgs	_	-								
DPE-1	_	5								
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\$DPE	_	_								
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Boring	-	-								
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tad (2	_	-								
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VEDIA		_							Bottom of Boring at 17 feet bgs	
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VIION	-	-								
AEDIA	-	-								
& REA	-	-								
		25 —								
RIZAT	-	-								
ACTE	-	-								
CHAR	-	-								
CTS/C	-	-								
ROJE		30 —			1		L	1		
Ξl										

## Log of Boring DPE-9

Date(s) Drilled January 20, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell		
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 10 inch	Total Depth of Borehole 18 feet bgs		
Drill Rig Type MARL 10T	Drilling Contractor Gregg Drilling	Approximate Surface Elevation		
Groundwater Level 8.16 feet measured on 1/23/12	Sampling Method(s)	Hammer Data W2012-0055		
Borehole Backfill Well Completion	Location 1630 Park Street, Alameda, California			

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
						Asphalt		Asphalt and Fill	
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_	15 —								
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-	-							Bottom of Boring at 18 feet bgs	
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l									
## Log of Boring DPE-8

Date(s) Drilled January 20, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 10 inch	Total Depth of Borehole 18 feet bgs
Drill Rig Type MARL 10T	Drilling Contractor Gregg Drilling	Approximate Surface Elevation
Groundwater Level 8.21 feet measured on 1/23/12	Sampling Method(s)	Hammer Data W2012-0055
Borehole Backfill Well Completion	Location 1630 Park Street, Alameda, California	

Elevation (feet)	, Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
	0 —					Asphalt		Asphalt and Fill	
	-							<ul> <li>Well Not Logged.</li> <li></li> </ul>	
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l									

#### Log of Boring DPE-7

Sheet 1 of 1

Date(s) Drilled January 19, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 10 inch	Total Depth of Borehole 18 feet bgs
Drill Rig Type MARL 5T	Drilling Contractor Gregg Drilling	Approximate Surface Elevation
Groundwater Level 14 feet ATD 14 feet ATD	Sampling Method(s) Direct-Push Sampler	Hammer Data W2012-0055
Borehole Backfill Well Completion	Location 1630 Park Street, Alameda, California	



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## Log of Boring DPE-6

Date(s) Drilled January 19, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 10 inch	Total Depth of Borehole 18 feet bgs
Drill Rig Type MARL 5T	Drilling Contractor Gregg Drilling	Approximate Surface Elevation
Groundwater Level 8.59 feet measured on 1/23/12	Sampling Method(s) Direct-Push Sampler	Hammer Data W2012-0055
Borehole Backfill Well Completion	Location 1630 Park Street, Alameda, California	

Elevation (feet)	<ul> <li>Depth (feet)</li> </ul>	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log		REMARKS AND OTHER TESTS
-		-				Concrete		Concrete and Fill No recovery.	
-		-							
-						SP		Fine grained sand, borwn (7.5YR 4/4)	
-		$\times$	DPE-6-7			3111		- moderate plasticity, firable.	
-		-				SM		Sand with 30% silt, greyish green (5G 4/2), moderately loose, y noist, hydrocarbon odor.	
-			DPE-6-10						
-			DPE-6-1					Y Yellowish brown TUYR 5/6 	
-	15		DPE-6-14			SM		Silty sand, yellowish brown, no plasticity, saturated, loose.	
-									
-								Bottom of Boring at 18 feet bgs	
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## Log of Boring DPE-5

Date(s) Drilled January 20, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 10 inch	Total Depth of Borehole 18 feet bgs
Drill Rig Type MARL 5T	Drilling Contractor Gregg Drilling	Approximate Surface Elevation
Groundwater Level 8.85 feet measured on 1/23/12	Sampling Method(s) Direct-Push Sampler	Hammer Data W2012-0055
Borehole Backfill Well Completion	Location 1630 Park Street, Alameda, California	

Elevation (feet)	, Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
_						Concrete SM		Concrete and Fill Sandy silt black/nale brown	
		-							
-						SM		Silty sand, brown (7.5YR 4/4), moderately loose, 40% silt.	
_	10 —		DFE-3-0			SIM		Sand with slit (30%), very dark greyish brown (3G 3/2), – moderately loose, very moist to wet, hydrocarbon odor. —	
-			DPE-5-11			SM		V Sheen observed 	
- 			DPE-5-14			SM		silty, clayeye sand, yellowish brown, wet, no plasticity. —	
-			DPE-5-18					Bottom of Boring at 18 feet bgs	- - -
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#### Log of Boring DPE-4

Sheet 1 of 1

Date(s) Drilled January 19, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 10 inch	Total Depth of Borehole 17 feet bgs
Drill Rig Type MARL 5T	Drilling Contractor Gregg Drilling	Approximate Surface Elevation
Groundwater Level 9.12 feet measured on 1/23/12	Sampling Method(s) Direct-Push Sampler	Hammer Data W2012-0055
Borehole Backfill Well Completion	Location 1630 Park Street, Alameda, California	



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## Log of Boring DPE-11

Date(s) Drilled January 20, 2012	Logged By Harmony Tomsun	Checked By Bryan Campbell
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 10 inch	Total Depth of Borehole 18 feet bgs
Drill Rig Type MARL 10T	Drilling Contractor Gregg Drilling	Approximate Surface Elevation
Groundwater Level 8.79 feet measured on 1/23/12	Sampling Method(s)	Hammer Data W2012-0055
Borehole Backfill Well Completion	Location 1630 Park Street, Alameda, California	

Elevation (feet)	, Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
	0 —					Asphalt		Asphalt and Fill	
_	-							Well Not Logged.	
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