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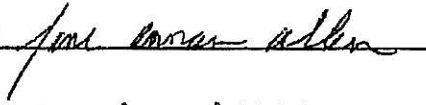
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

SUBJECT: Perjury Statement

To Whom It May Concern:

I declare, under penalty of perjury, that the information and/or recommendations contained in the requested attached reports in your letter dated August 8, 2011 are true and correct to the best of my knowledge.

Signed:



JANE A. ALLEN



AEI Consultants

Environmental & Engineering Services

November 5, 2013

Site Status Update and Case Closure Request

Property Identification:

325 Martin Luther King Jr. Way
Oakland, California

AEI Project No. 277915
ACEH Site: RO0002930

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1.0 INTRODUCTION

AEI Consultants (AEI) has prepared this report to document the performance of the hydrogen peroxide infusion program since the Third Quarter 2012 groundwater monitoring event. The report summarizes the 2008 installation and sampling of soil vapor sampling points VS-1 through VS-4 and 2013 installation of soil vapor point VS-5, performance monitoring of selected wells in October and November 2012, January and April of 2013, and a groundwater monitoring event conducted on July 3, 2013 at the above referenced site (Figure 1, Site Location Map). The infusion program and groundwater monitoring are being performed in accordance with the requirements of the Alameda County Environmental Health (ACEH).

2.0 SITE DESCRIPTION AND HISTORY

The subject property is located on the northwestern corner of the intersection of Martin Luther King Jr. Way and 4th Street in a mixed commercial and industrial area of Oakland. The property measures approximately 100 feet along Martin Luther King and approximately 150 feet along 4th Street with the property building covering essentially 100% of the site. The building is currently vacant, but was previously occupied by Pucci Enterprises as warehouse space and cold storage freezers.

A Phase I Environmental Site Assessment (ESA) of the property dated November 1, 1993 identified a 10,000-gallon former gasoline underground storage tank (UST) abandoned in place below the northeast corner of the building. The gasoline UST was used to provide fuel for the Pucci Enterprises truck fleet.

2.1 Tank Closure

On October 20, 1993, the tank was abandoned in place by pumping remaining sludge out of the tank, steam cleaning the tank, and filling the tank with concrete slurry. At the time of the UST closure, it was believed that the tank could not be removed because of its proximity to the footing of the 671 4th Street building. The available records contain no documentation of sampling around the tank at the time of the tank closure. After tank closure, the eastern portion of the building (325 Martin Luther King) was constructed.

2.2 2005 AEI Investigation

In May 2005, AEI performed a Phase II Subsurface Investigation. Soil borings SB-1 and SB-3 encountered refusal at a depth of 4 feet below the ground surface (bgs), at the top of the concrete filled UST. Soil borings SB-2 and SB-4 were advanced into the groundwater. Total Petroleum Hydrocarbons as gasoline (TPH-g), as diesel (TPH-d), and benzene were reported in groundwater from boring SB-2 at concentrations up to 780 micrograms per liter ($\mu\text{g/L}$), 420 $\mu\text{g/L}$, and 53 $\mu\text{g/L}$, respectively.

2.3 2005 Terra Firma Investigation

In September 2005, Terra Firma collected groundwater samples from four (4) soil borings (labeled 50901-1 to 50901-4). Analysis of the groundwater samples reported the highest concentrations of hydrocarbons in soil boring 50901-3 to the south of the UST, where TPH-g, TPH-d, and benzene were reported at concentrations of 20,000 µg/L, 3600 µg/L, and 990 µg/L, respectively.

2.4 2006 Ceres Investigation

In June 2006, Ceres Associates (Ceres) advanced five soil borings (SB5 through SB9). The highest concentrations of hydrocarbons in the soil were reported in boring SB-7 (located southeast of the UST) where TPH-g, TPH-d, and benzene were reported in sample SB-7-10 at concentrations of 20,000 mg/kg, 3,300 mg/kg, 200 milligrams per kilogram (mg/kg), respectively. Analysis of groundwater samples from SB7 reported TPH-g, TPH-d, and benzene at concentrations of 110,000 µg/l, 110,000 µg/l, and 3,300 µg/l, respectively. Concentrations of TPH-g in the other soil borings ranged from ND <50 µg/l (SB5-GW) to 610 µg/l (SB8-GW).

2.5 2006 LRM Consulting Workplan

LRM Consulting prepared release notification documentation and a workplan for the ACEH in August 2006. The workplan included additional file and data base research into possible additional source locations (dispenser, piping, offsite releases, etc) and installing three (3) 2-inch diameter monitoring wells a screened interval of 5 to 20 feet bgs.

2.6 2007 AEI Investigation

Following ACEH comments relating to the work plan and previous investigations, AEI was retained to prepare a comprehensive workplan. The *Site Characterization Workplan*, dated March 31, 2007, outlined the scope of work for installation of 12 additional soil borings and three groundwater monitoring wells to further characterize the release.

In May of 2007, AEI performed a soil and groundwater investigation which included the drilling of additional twelve (12) soil borings at the property. Significant concentrations of TPH-g, TPH-d, and benzene in the soil were reported only in monitoring well MW-3 (MW-3-10), located down gradient of abandoned UST, at concentrations of 1,500 mg/kg, 240 mg/kg, and 6.0 mg/kg, respectively. Low concentrations (<210 µg/l) of TPH were reported down gradient of the abandoned UST in soil boring SB-10, SB-12, SB-13, SB-16, SB-17, SB-18, and SB-19.

Data from these investigations shows that the dissolved hydrocarbon plume is limited to the eastern most portion of 325 Martin Luther King Jr. Way, immediately down gradient of the abandoned in place UST. On August 10, 2007, AEI installed three (3) groundwater monitoring wells (MW-1 thru MW-3) down gradient of the abandoned in place UST. Significant concentrations of TPH-g, TPH-d and benzene were reported only in well MW-3 at concentrations of 24,000 µg/l, 1,200 µg/l, and 2,600 µg/l, respectively.

Site maps showing the locations of soil borings advanced and monitoring wells installed by AEI and well construction details are contained in AEI's *Soil and Groundwater Investigation Report*, dated September 21, 2007.

2.7 Soil Vapor Probe Installation

As requested by the ACEH, to evaluate potential soil vapor intrusion to within the building, four twinned (implants at subslab and 5 feet bgs) permanent vapor sampling probes were installed on June 4, 2008. The summary of installation and sampling activities was inadvertently omitted from earlier reports. The locations of the permanent subslab and soil vapor probe locations are presented on Figures 2 and 3. Copies of the drilling permits are attached in Appendix A.

2.7.1 Subslab Vapor Probe Construction - 2008

On June 4, 2008, AEI installed four (4) permanent subslab vapor probes (VS-1-Subslab through VS-4-Subslab).

In each location, a 1.5-inch diameter hole was cored through the concrete slab using a large rotary hammer drill equipped with a carbide-tipped concrete coring bit. The permanent subslab vapor probes were constructed out of stainless steel male and female Swagelok connectors and short (4 to 6 inch long) sections of 0.035-inch type 316 stainless steel tubing. The probes were constructed so that the stainless steel tubing extended 1 to 2-inches below the bottom of the slab. After the probe was inserted, 2/16 Monterey sand was placed around the probe tip followed by a 1-inch layer of granular bentonite. The bentonite was hydrated to form a seal and holdback the grout. The remaining space was filled to approximately 0.5-inches below the top of the slab using a fast-drying Portland Type I/II cement grout with a 1.5-inch removable cap at the surface.

2.7.2 Soil Vapor Probe Construction - 2008

On June 4, 2008, AEI installed four (4) permanent soil vapor probes (VS-1 through VS-4) using hand-held direct push equipment producing 1.25-inch boreholes immediately adjacent to the permanent subslab vapor probes.

In each location, a 3" inch hole was cored through the concrete foundation. 1.25-inch rods were advanced to the target depth of 5.5 feet bgs and removed. The soil vapor probes were constructed using the open borehole method. Each of the soil gas probes were constructed using a 3-inch long stainless steel implant with 0.0057-inch mesh openings threaded into an expendable anchor point, a precut section of 0.035-inch type 316 stainless steel tubing stainless steel tubing, and 0.25-inch male and female Swagelok tubing connectors and plugs. The soil vapor implants were centered at a depth of approximately 5 feet bgs within a sand pack consisting of approximately 12-inches of fine-grained (#2/16) Monterey sand. The remainder of the borehole above the sand pack was sealed to a depth of approximately 12-inches bgs with hydrated bentonite chips. The remaining space was filled to approximately 0.5-inches below the top of the slab using a fast-drying Portland Type I/II cement grout. Copies of the soil vapor logs are included in Appendix B, Boring Logs.

2.7.3 Soil Vapor Sampling - 2008

On June 28 and September 21, 2008 soil vapor points VS-1 Subslab – VS-4 subslab and VS-1 – VS-4 were sampled. A laboratory sampling manifold was attached to the each sampling probe and then a 1-liter sampling bottle and a 6 liter purge canister were attached to the manifold. A vacuum tightness test was performed using the purge canister to place a vacuum on the sampling train. The pressure was noted and observed for changes for one-minute. No changes were noted, indicating that the sampling trains were free of leaks. A leak check was performed by applying isopropyl alcohol to a paper towel which was placed around the floor penetration and the connection between the manifold and top of the sampling probe. The vapor point was purged for one minute using the 6-liter laboratory supplied purge canister, and a sample was collected through a laboratory-supplied regulator.

The soil gas samples were collected in 1-liter summa canisters. Each canister was individually checked, tested and certified by the laboratory for air tightness and proper vacuum prior to shipping. Prior to sampling, a vacuum gauge was used to measure and record the initial summa canister vacuum pressure. Once sampling was complete, each summa canister was sealed with a slight vacuum.

The subslab and soil vapor samples were analyzed for TPH-g, methyl tertiary butyl ether, benzene, toluene, ethylbenzene, xylenes (MBTEX), and 1,2-dobromoethane (EDB).

No TPH-g, MBTEX, or EDB were reported at or above standard reporting limits in either the subslab or soil vapor probe samples collected in 2008. The results of the vapor sampling are summarized on Table 5.

2.8 Chemical Oxidation Pilot Test

A *Corrective Action Pilot Test Workplan*, dated April 7, 2008, was prepared for the ACEH. The workplan proposed five injection points around monitoring well MW-3 using a RegenOx™ solution. The workplan was approved by the ACEH in a letter dated May 13, 2008. On July 17 and 18, 2008, 720 lbs. of RegenOx™ was injected in five locations (IP-1 through IP-5) at spacing approximately five feet away from well MW-3.

Following the pilot test, groundwater samples collected from well MW-3 on August 4, 2008 reported an increase in TPH-g from pre-pilot concentration from 20,000 µg/L to 110,000 µg/L. Follow up sampling on August 20, 2008 reported TPH-g at a concentration of 120,000 µg/L. This increase was the result of release of hydrocarbons adsorbed to clay, silt and sand grains in the smear zone (between 9 - 11 feet bgs).

This significant increase in TPH-g concentration indicated that the residual source area around the abandoned in place UST is significantly greater than had been anticipated and that several rounds of injection would be required to remediate the site. Based on the relative high cost of multiple direct push infusions using RegenOx™, installation of permanent injection points and alternate remedial approaches were evaluated. AEI determined that H₂O₂ infusion through permanently installed wells was a lower cost approach to remediation. A *Hydrogen Peroxide*

Infusion Pilot Test Workplan, dated August 12, 2009, was completed for the site and approved in a letter from the ACEH dated August 21, 2009.

2.9 Hydrogen Peroxide Infusion

In December of 2009, a 2,400 gallon poly tank was placed on the site and manifolded to wells IW-1, IW-2 and IW-3. Between December 29, 2009, and January 29, 2010, 8,000 gallons of 0.5% H₂O₂ was infused primarily into injection wells IW-2 and IW-3.

On February 8 and 24, 2010 following the infusion of 8,000 gallons of 0.5% H₂O₂ solution, wells MW-3, IW-2, and IW-3 were sampled to determine the effects of the H₂O₂ infusion. TPH-g in MW-3 decreased from 59,000 µg/L on October 30, 2009 to 16,000 µg/L on February 24, 2010. TPH-g in IW-2 decreased from 15,000 µg/L on October 30, 2009 to 3,500 µg/L on February 24, 2010. IW-3 decreased from 77,000 µg/L on November 23, 2009 to 36,000 µg/L on February 24, 2010.

Between March 16, 2010 and May 12, 2010, an additional 9,400 gallons of 0.5% H₂O₂ were infused into wells IW-2 and IW-3. Between May 24, 2010 and June 29, 2010, 4,900 gallons of 1.25% H₂O₂ were infused primarily into well IW-3.

Progress monitoring sampling was performed on May 24, July 19, and August 5, 2010. The results of the progress sampling through July 19, 2010 is summarized in Table 3 and in the *Hydrogen Peroxide Infusion Report* dated July 30, 2010. Results from the August 5, 2010 sampling event reported TPH-g in wells MW-3, and IW-1 at concentrations of 350 µg/L and 4,300 µg/L, respectively.

The third quarter 2010 monitoring event on September 9, 2010 reported TPH-g in wells MW-3, and IW-1 at concentrations of 1,200 µg/L and 22,000 µg/L, respectively.

Following the Third Quarter 2010 semi-annual monitoring event on September 9, 2010 hydrogen peroxide infusion into well IW-3 was resumed. Between September 21, 2010 and December 29, 2010 an additional 18,000 gallons of 0.5 % hydrogen peroxide was infused in well IW-3.

2.10 Post Infusion Monitoring

The regularly scheduled First Quarter 2011 semiannual monitoring event was performed on March 24, 2011. No TPH-g or BTEX was reported in wells MW-1, MW-2, IW-1, or IW-2 at or below standard laboratory reporting limits.

TPH-g was reported in wells MW-3 and IW-3 at concentrations of 140 µg/L and 390 µg/L respectively.

The second semiannual monitoring event was performed on August 9, 2011. No TPH-g or BTEX was reported in wells MW-1, MW-2, IW-1, or IW-2 at or below standard laboratory reporting limits.

TPH-g and benzene concentrations in well MW-3 increased from concentrations of 590 µg/L and 38 µg/L, respectively on August 9, 2011 to 4,900 µg/L and 1,400 µg/L, respectively on December 14, 2011. The concentration of TPH-d increased from 200 µg/L to 1,000 µg/L.

TPH-g concentration in well IW-3 increased from 9,600 µg/L on August 9, 2011 to 36,000 µg/L and on December 14, 2011. Benzene concentration in well IW-2 increased from 2,400 µg/L on August 9, 2011 to 4,600 µg/L and on December 14, 2011.

2.11 Installation of Infusion Wells IW-4 and IW-5

On November 29, 2011, AEI installed two additional infusion wells (IW-4 and IW-5) on the northeast side of the abandoned in place UST. The locations of the wells are shown on Figure 2. Well completion details are summarized on Table 1.

During the December 14, 2011 groundwater monitoring event TPH-g and benzene concentrations in IW-4 were reported at concentrations of 95,000 µg/L and 13,000 µg/L, respectively. TPH-g and benzene concentrations in IW-5 were reported at concentrations of 250 µg/L and 11 µg/L, respectively.

AEI recommended additional H₂O₂ infusion following the recent installation of additional up gradient infusion wells (IW-4, IW-5).

2.12 Second Hydrogen Peroxide Infusion

Infusion into well IW-4 was initiated on January 12, 2012. In January 2012, a 2400 gallon poly tank was placed on the site and manifolded directly to wells IW-3, IW-4, and IW-5. Between January 2012, and May 2012, approximately 12,000 gallons of 1% H₂O₂ was infused into the wells, primarily into injection well IW-4. After the first week of infusion, only well IW-4 was directly manifolded to the tank and casings of wells IW-1, IW-2, IW-3, and IW-5 were filled with H₂O₂ during the weekly system checks. Average infusion is estimated to have been 0.1 gallon per minute.

2.13 Second and Third Quarter 2012 performance monitoring

On July 27, August 27, and September 21, 2012, monitoring wells MW-3, IW-3 and IW-4 were gauged and sampled, as part of performance monitoring of the hydrogen peroxide infusion program.

TPH-g increased in MW-3 from a concentration of 51 µg/L in July to a concentration of 91 µg/L in September, 2012.

TPH-g increased in IW-3 from a concentration of 1,100 µg/L in July to a concentration of 4,300 µg/L in September, 2012.

TPH-g increased in IW-4 from a concentration of 2,900 µg/L in July to a concentration of 4,500 µg/L in September, 2012.

The complete results of the September 2012 quarterly monitoring event are summarized in Table 3.

2.14 Fourth Quarter 2012 And First Quarter 2013 performance monitoring

Monitoring of wells MW-3, IW-3, and IW-4 were sampled on October 24, November 20, 2012, and January 8, 2013 as part of performance monitoring of the hydrogen peroxide infusion program.

2.14.1 October 24, 2012

TPH-g and MBTEX concentrations in well MW-3 increased to concentrations of 510 µg/L, 32 µg/L, 100 µg/L, 3.2 µg/L, 3.7 µg/L, and 10 µg/L, respectively.

TPH-g and MBTEX concentrations in well IW-3 increased to concentrations of 4,400 µg/L, 51 µg/L, 540 µg/L, 880 µg/L, 26 µg/L, 730 µg/L, respectively.

TPH-g and MBTEX concentrations in well IW-4 increased to concentrations of 21,000 µg/L, ND<250 µg/L, 2,000 µg/L, 4,000 µg/L, 350 µg/L, and 2,100 µg/L, respectively.

The results of the October 24, 2012 progress monitoring event are summarized in Table.

2.14.2 November 20, 2012

TPH-g and MBTEX concentrations in well MW-3 increased to concentrations of 850 µg/L, 9.2 µg/L, 290 µg/L, 8.2 µg/L, 8.2 µg/L, and 23 µg/L, respectively.

TPH-g and MBTEX concentrations in well IW-3 increased to concentrations of 6,400 µg/L, <50 µg/L, 550 µg/L, 1,000 µg/L, 34 µg/L, 940 µg/L, respectively.

TPH-g and MBTEX concentrations in well IW-4 decreased to concentrations of 8,700 µg/L, ND<100 µg/L, 850 µg/L, 1,900 µg/L, 140 µg/L, and 910 µg/L, respectively.

The results of the November 20, 2012 progress monitoring event are summarized in Table 3.

2.14.3 January 8, 2013

TPH-g and MBTEX concentrations in well MW-3 decreased to concentrations of 390 µg/L, <5.0 µg/L, 24 µg/L, 1.5 µg/L, <5.0 µg/L, and 17 µg/L, respectively.

TPH-g and MBTEX concentrations in well IW-3 increased to concentrations of 13,000 µg/L, <250 µg/L, 580 µg/L, 1,100 µg/L, 81 µg/L, 660 µg/L, respectively.

TPH-g and MBTEX concentrations in well IW-4 decreased to concentrations of 6,500 µg/L, ND<90 µg/L, 580 µg/L, 1,100 µg/L, 81 µg/L, and 660 µg/L, respectively.

The results of the January 8, 2013 progress monitoring event are summarized in Table 3 and Figure 8.

3.0 ACTIVITIES SINCE JANUARY, 2013 PERFORMANCE MONITORING

3.1 April 4, 2013 Performance Monitoring

On April 4, 2013, a performance monitoring event was performed which included groundwater monitoring wells MW-3, IW-3, and IW-4.

Prior to purging and sampling the wells, the well caps were removed from each well. After allowing a minimum of 15 minutes for the water level in each well to reach equilibrium with atmospheric pressure, the depth to water in each well was measured with an electronic meter to a precision of ± 0.01 feet. Each well was then purged with a peristaltic pump with the bottom of the drop tube placed at approximately 10 feet bgs under a low flow protocol. Each well was purged until the groundwater parameters of temperature, pH, conductivity, dissolved oxygen (DO), oxygen reduction potential (ORP) and visual clarity stabilized.

Each water sample was collected into hydrochloric acid (HCl) preserved one liter amber bottle and three (3) 40-milliliter (ml) volatile organic analysis vials (VOAs) using the peristaltic pump. All samples were labeled with at minimum, project number, sample number, time, date, and sampler's name.

The samples were entered on a chain-of-custody form and placed on water ice in a pre-cooled ice chest pending same day transportation under chain of custody protocols to McCampbell Analytical, Inc. of Pittsburg, California (Department of Health Services Certification # 1644). The samples were analyzed for TPH-g and MBTEX using methods SW8021B/8015Bm.

3.2 Installation of Shallow Soil Vapor probe VS-5 – 2013

On June 26, 2013, AEI installed shallow soil vapor probe VS-5 under ACPWA well permit W2013-0432 and under the oversight of Steve Miller. A 4-inch hole was cored through the concrete foundation. The boring was advanced using a 3.5-inch diameter hand auger. After reaching the target depth of 5.5 feet bgs, the soil vapor probe was constructed using the open borehole method. The soil gas probe was constructed using a 3-inch long stainless steel implant with 0.0057-inch mesh openings threaded into an expendable anchor point, a precut section of 0.035-inch type 316 stainless steel tubing stainless steel tubing, and 0.25-inch male and female Swagelok tubing connectors and plugs. The soil vapor implants were centered at a depth of approximately 5-feet bgs within a sand pack consisting of approximately 12-inches of fine-grained (#2/16) Monterey sand. The remainder of the borehole above the sand pack was sealed to a depth of approximately 12-inches bgs with hydrated bentonite chips. The remaining space was filled to approximately 0.5-inches below the top of the slab using a fast-drying Portland Type I/II cement grout.

3.3 Third Quarter 2013 Monitoring Event

3.3.1 Summary of Groundwater Sampling Activities

On July 3, 2013, a monitoring event was performed which included all groundwater monitoring wells (MW-1 through MW-3) and infusion wells IW-1 through IW-5) at the site.

Prior to purging and sampling the wells, the well caps were removed from each well. After allowing a minimum of 15 minutes for the water level in each well to reach equilibrium with atmospheric pressure, the depth to water in each well was measured with an electronic meter to a precision of ± 0.01 feet. Each well was then purged with a peristaltic pump with the bottom of the drop tube placed at approximately 10 feet bgs under a low flow protocol. Each well was purged until the groundwater parameters of temperature, pH, conductivity, dissolved oxygen (DO), oxygen reduction potential (ORP) and visual clarity stabilized.

Each water sample was collected into hydrochloric acid (HCl) preserved one liter amber bottle and three (3) 40-milliliter (ml) volatile organic analysis vials (VOAs) using the peristaltic pump. All samples were labeled with at minimum, project number, sample number, time, date, and sampler's name.

The samples were entered on a chain-of-custody form and placed on water ice in a pre-cooled ice chest pending same day transportation under chain of custody protocols to McCampbell Analytical, Inc. of Pittsburg, California (Department of Health Services Certification # 1644). The samples were analyzed for TPH-g and MBTEX using methods SW8021B/8015Bm, for TPH-d by method SW8015B, and for fuel oxygenates and lead scavengers by method SW8260B.

3.3.2 Summary of Soil Vapor Sampling Activities

On July 3, 2013 soil vapor points (5 feet bgs) VS-1 – VS-5 were sampled. A laboratory sampling manifold was attached to the each sampling probe and then a 1-liter sampling bottle and a 6 liter purge canister were attached to the manifold. A vacuum tightness test was performed using the purge canister to place a vacuum on the sampling train. The pressure was noted and observed for changes for one-minute. No changes were noted, indicating that the sampling trains were free of leaks. A leak check was performed by applying isopropyl alcohol to a paper towel which was placed around the floor penetration and the connection between the manifold and top of the sampling probe. The vapor point was purged for one minute using the 6-liter laboratory supplied purge canister, and a sample was collected through a laboratory-supplied regulator.

The soil gas samples were collected in 1-liter summa canisters. Each canister was individually checked, tested and certified by the laboratory for air tightness and proper vacuum prior to shipping. Prior to sampling, a vacuum gauge was used to measure and record the initial summa canister vacuum pressure. Once sampling was complete, each summa canister was sealed with a slight vacuum.

The soil vapor samples were analyzed for TPH-g and VOCs by method TO15. No TPH-g or VOCs were reported in samples VS-1, VS-3, or VS-5. Ethylbenzene and xylenes were reported

in the vapor sample from VS-2 at concentrations of 45 $\mu\text{g}/\text{M}^3$ and 290 respectively. 1,2-dichloroethane was reported in the vapor sample from VS-4 at a concentration of 20 $\mu\text{g}/\text{M}^3$. The results of the vapor sampling are summarized on Table 5.

4.2 Analytical Results

4.2.1 April 3, 2013 Performance Monitoring

TPH-g and MBTEX concentrations in well MW-3 increased to concentrations of 6,400 $\mu\text{g}/\text{L}$, <150 $\mu\text{g}/\text{L}$, 2400 $\mu\text{g}/\text{L}$, 37 $\mu\text{g}/\text{L}$, 120 $\mu\text{g}/\text{L}$, and 92 $\mu\text{g}/\text{L}$, respectively.

TPH-g and MBTEX concentrations in well IW-3 increased to concentrations of 16,000 $\mu\text{g}/\text{L}$ <500 $\mu\text{g}/\text{L}$, 2,700 $\mu\text{g}/\text{L}$, 1,100 $\mu\text{g}/\text{L}$, 200 $\mu\text{g}/\text{L}$, and 2,100 $\mu\text{g}/\text{L}$, respectively.

TPH-g and MBTEX concentrations in well IW-4 decreased to concentrations of 16,000 $\mu\text{g}/\text{L}$ ND<500 $\mu\text{g}/\text{L}$, 1,900 $\mu\text{g}/\text{L}$, 2,300 $\mu\text{g}/\text{L}$, 240 $\mu\text{g}/\text{L}$, and 1,660 $\mu\text{g}/\text{L}$, respectively.

The results of the April 3, 2013 progress monitoring event are summarized in Table 3.

4.2.2 Third Quarter 2013 Monitoring Event

No TPH-g, TPH-d, BTEX were reported in the groundwater samples from wells MW-1, MW-2, IW-1, or IW-5 at or above standard laboratory reporting limits.

TPH-g and ethylbenzene concentrations in well MW-3 increased to concentrations of 7,100 $\mu\text{g}/\text{L}$ and 170 $\mu\text{g}/\text{L}$, respectively. Benzene, toluene and xylenes concentrations decreased slightly to 2,200 $\mu\text{g}/\text{L}$, 35 $\mu\text{g}/\text{L}$, 72 $\mu\text{g}/\text{L}$, respectively.

TPH-g and MBTEX concentrations in well IW-2 increased to concentrations of 3,200 $\mu\text{g}/\text{L}$ <25 $\mu\text{g}/\text{L}$, 59 $\mu\text{g}/\text{L}$, 6.0 $\mu\text{g}/\text{L}$, 55 $\mu\text{g}/\text{L}$, 360 $\mu\text{g}/\text{L}$, respectively.

TPH-g and MBTEX concentrations in well IW-3 increased to concentrations of 24,000 $\mu\text{g}/\text{L}$ <500 $\mu\text{g}/\text{L}$, 3,200 $\mu\text{g}/\text{L}$, 2,500 $\mu\text{g}/\text{L}$, 230 $\mu\text{g}/\text{L}$, 3,300 $\mu\text{g}/\text{L}$, respectively.

TPH-g and MBTEX concentrations in well IW-4 decreased to concentrations of 38,000 $\mu\text{g}/\text{L}$ ND<500 $\mu\text{g}/\text{L}$, 4,700 $\mu\text{g}/\text{L}$, 7,000 $\mu\text{g}/\text{L}$, 620 $\mu\text{g}/\text{L}$, and 1,660 $\mu\text{g}/\text{L}$, respectively.

5.0 SUMMARY

Hydrocarbon concentrations in wells MW-3, IW-2, IW-3, and IW-4 have rebounded following the last infusion event. Current concentrations are one third or less than their original concentrations indicating a significant reduction in the source area concentration. It appears that some residual hydrocarbons source is present up gradient of well IW-4 and down gradient of borings SB-10 and SB-10.

Current dissolved Oxygen concentrations (DO) range from 1.65 mg/l in MW-1, MW-2, and IW-2, down gradient of the former UST to 2.37 mg/l in well MW-5. Historically DO concentrations up

gradient well IW-1 have been around 2.0 mg/L indicating that oxygen concentrations in the groundwater are high enough to sustain natural biodegradation of hydrocarbons in the groundwater. It is expected that current concentrations of DO in groundwater moving onto the site will allow natural bio-attenuation to reduce hydrocarbon concentrations to target levels.

The results of groundwater monitoring are summarized in Tables 2 through Table 4. The results of soil vapor sampling are shown on Table 5.

For the reasons listed below, AEI believes the hydrocarbon concentrations at the site have reached the point where the site should be considered for site closure under the current low risk closure guidelines:

- No free product is present at the site.
- Hydrocarbon concentrations in the groundwater have been reduced to the point where natural attenuation can continue to reduce hydrocarbon concentrations to target concentrations.
- Concentrations of volatile organic compounds (VOCs) are below regional water quality control board (RWQCB) commercial/industrial ESLs for evaluation of potential vapor intrusions from groundwater to indoor air.

6.0 LTCP CHECKLIST

AEI has reviewed the data from the site with regard to the low threat closure policy checklist. The summary of the review is attached as Appendix G. Based on the criteria outlined in the LTCP, the site meets the criteria for closure and AEI requests that the site be granted closure.

7.0 REPORT LIMITATIONS AND SIGNATURES

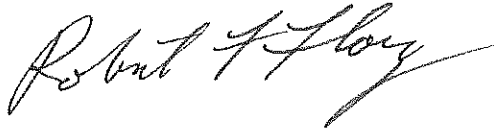
This report presents a summary of work completed by AEI, including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide requested information, but it cannot be assumed that they are entirely representative of all areas not sampled. All conclusions and recommendations are based on these analyses and observations. Conclusions beyond those stated and reported herein should not be inferred from this document.

These services were performed in accordance with generally accepted practices in the environmental engineering and construction field that existed at the time and location of the work. If you have any questions regarding this report, we can be reached at (925) 746-6000.

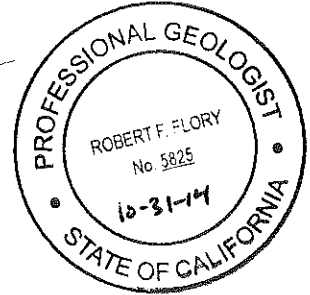
Sincerely,
AEI Consultants



Adrian M. Angel, GIT
Project Geologist



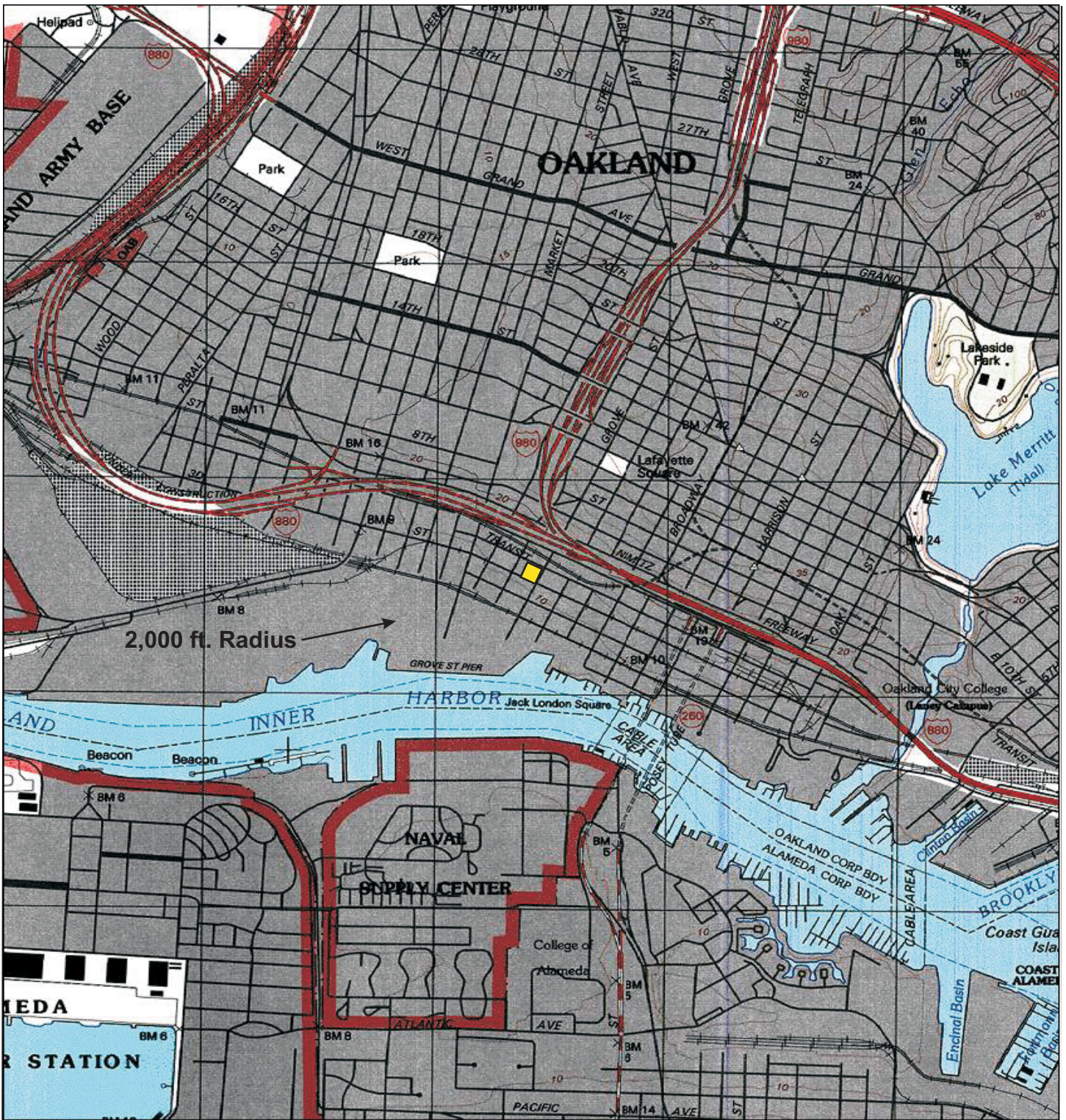
Robert F. Flory, PG
Senior Geologist



Distribution:


Jane and Kimball Allen 2 Lone Tree Way Mill Valley, CA 94549	2 hard copies
Mr. Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502	electronic
GeoTracker	electronic


FIGURES



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

LEGEND

 N

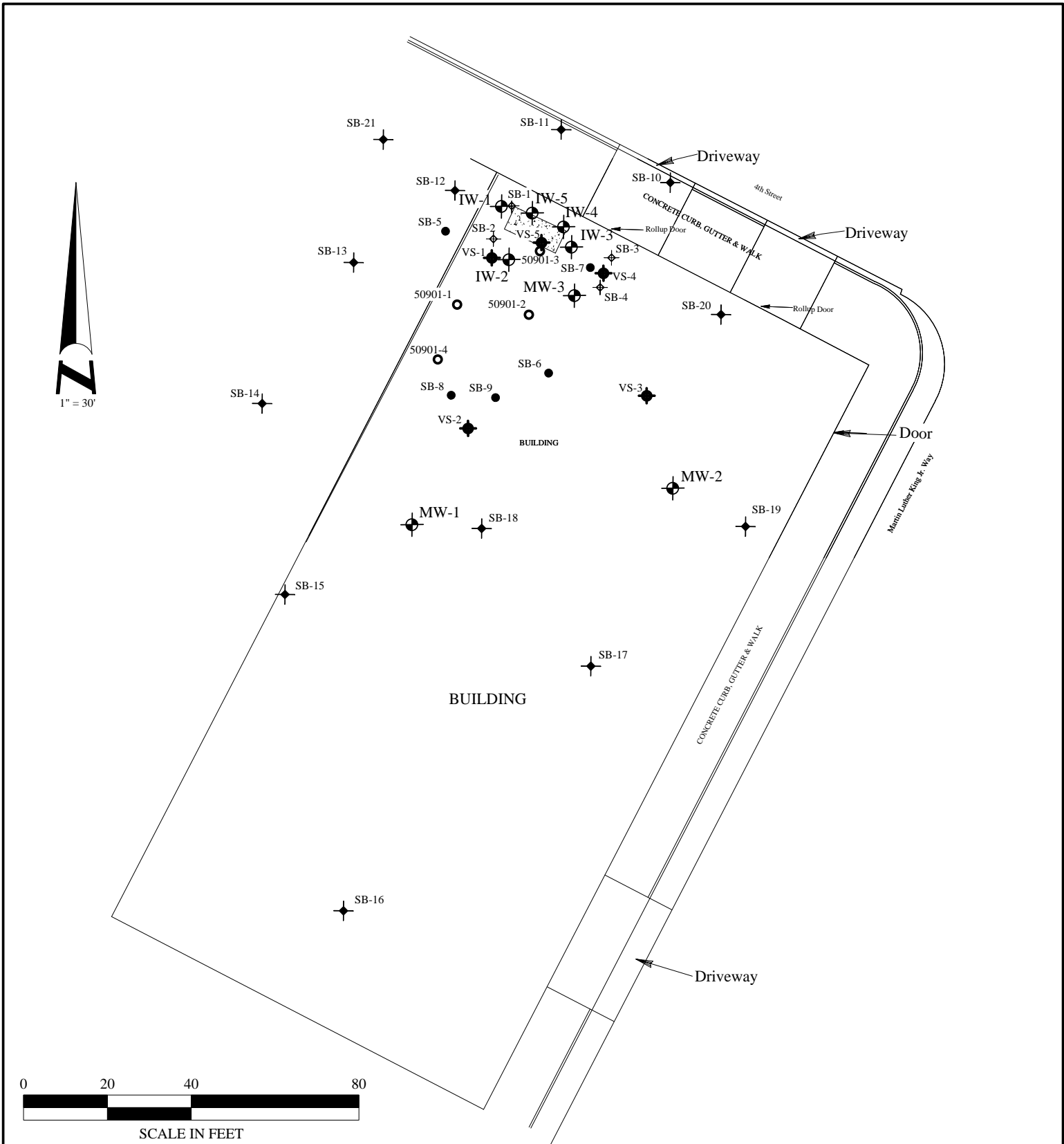
 SITE LOCATION

AEI CONSULTANTS
 2500 Camino Diablo, Walnut Creek, CA 94597

SITE LOCATION MAP

325 Martin Luther King Jr. Way
 Oakland, CA 94607

FIGURE 1
 Job No: 277915



AEI CONSULTANTS

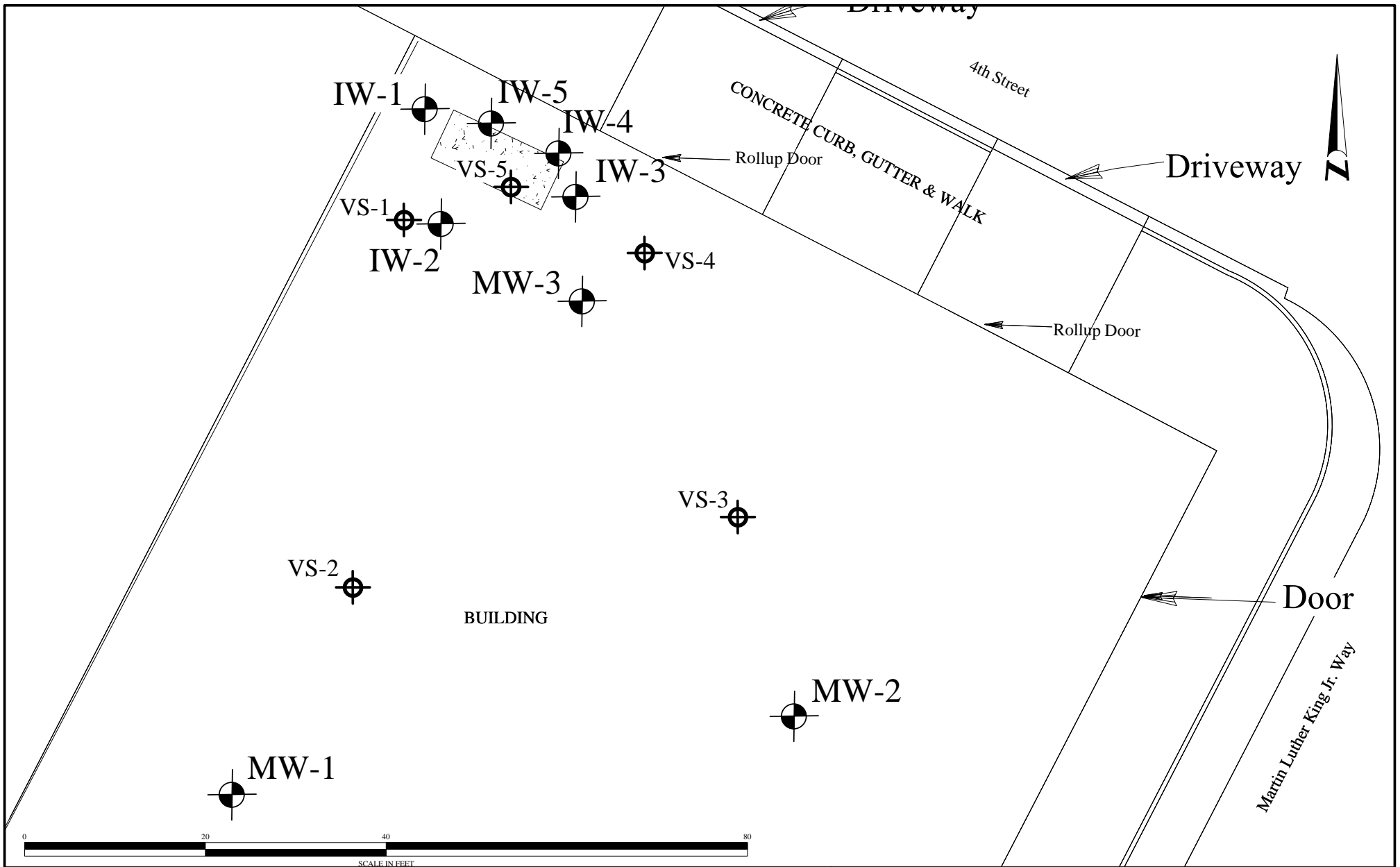
AEI CONSULTANTS
 2500 Camino Diablo, Walnut Creek, CA







Site Plan

325 Martin Luther King Jr. Way
 Oakland, California

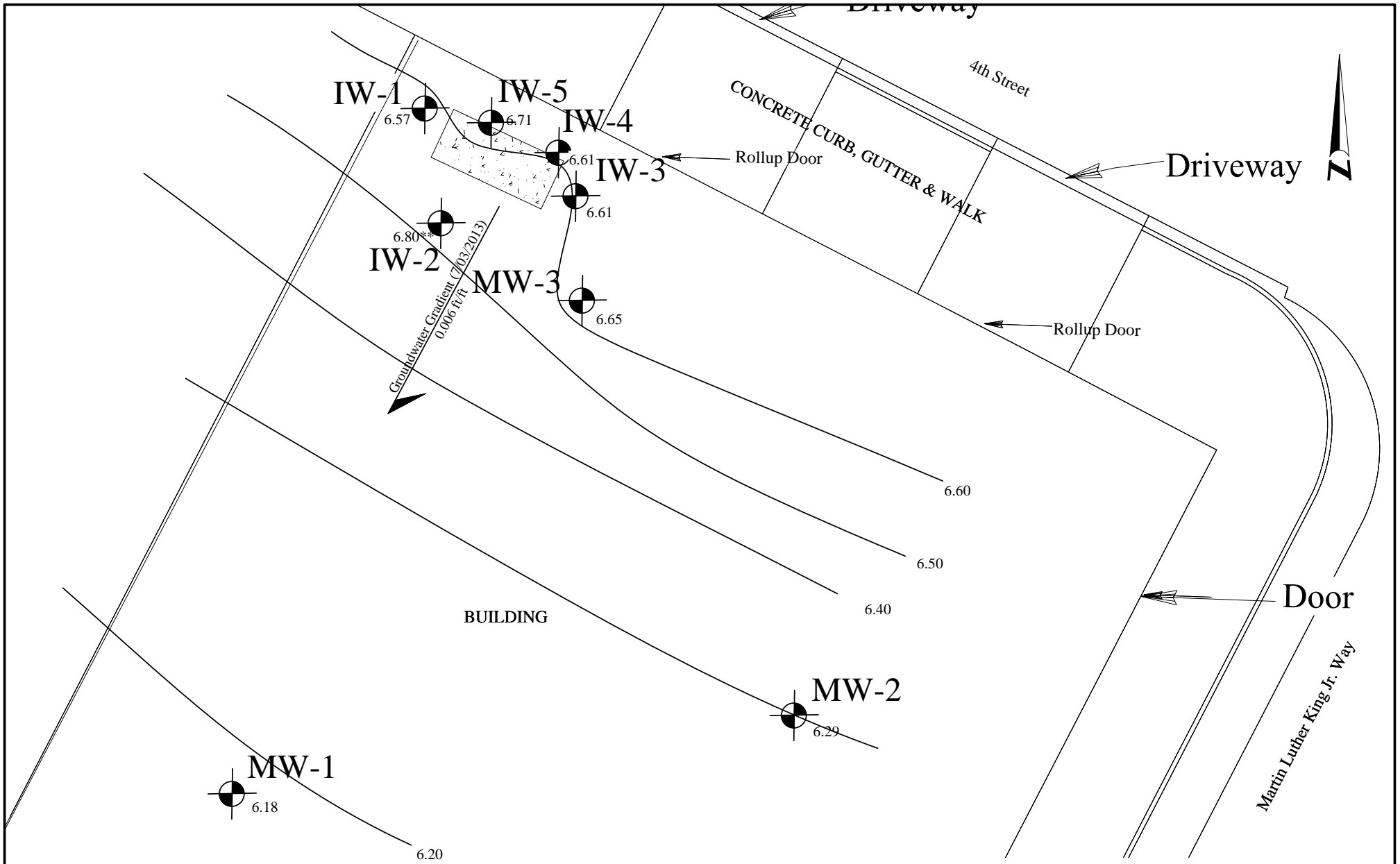
FIGURE 2
 AEI Project # 277915


- 2" Monitoring / Infusion Well
- Soil boring - AEI 2005
- Soil boring - Terra Firma 2005
- Soil boring - Ceres 2006
- Soil boring - AEI 2007
- Soil Vapor Point
- Abandoned in place UST




<ul style="list-style-type: none">  2" Monitoring / Infusion Well  Soil boring - AEI 2005  Soil boring - Terra Firma 2005  Soil boring - Ceres 2006  Soil boring - AEI 2007 	<ul style="list-style-type: none">  Abandoned in place UST 	<p>Drafted by RFF 3/4/2010 from Morrow 0116-034 MAM Revised by RFF 8/25/2013</p>
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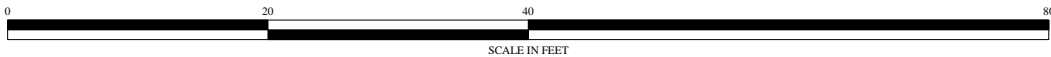
<p>AEI CONSULTANTS 2500 Camino Diablo, Walnut Creek, CA</p>	
<p>Detail Site Plan</p>	
<p>325 Martin Luther King Jr. Way Oakland, California</p>	<p>FIGURE 3 AEI Project # 277915</p>



 2" Monitoring / Infusion Well

6.80** Elevation not used in contouring

 Abandoned in place UST



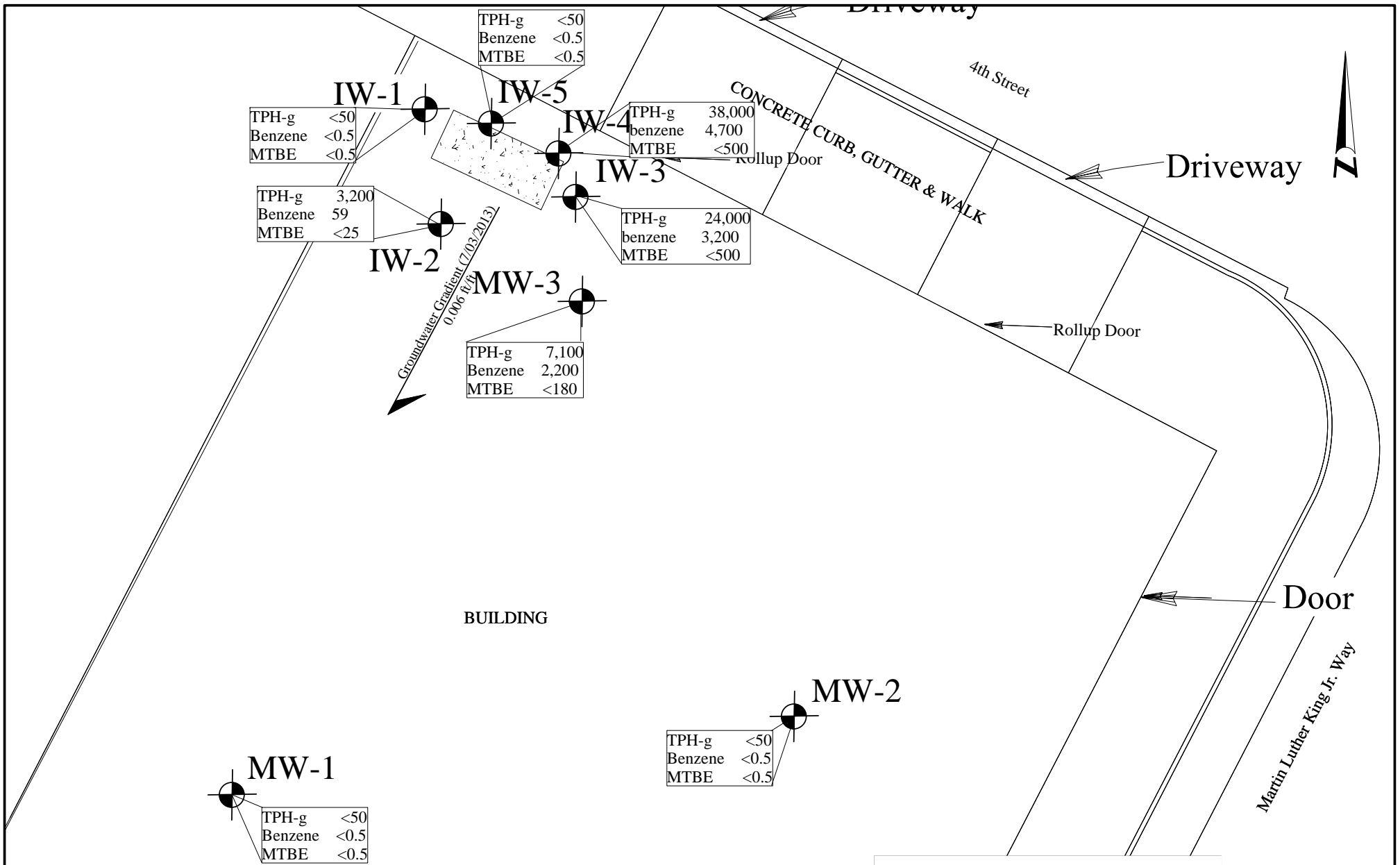
AEI CONSULTANTS

2500 Camino Diablo, Walnut Creek, CA

Groundwater Gradient (7/03/2013)

325 Martin Luther King Jr. Way
Oakland, California

FIGURE 4
AEI Project # 277915



2" Monitoring / Infusion Well

Abandoned in place UST



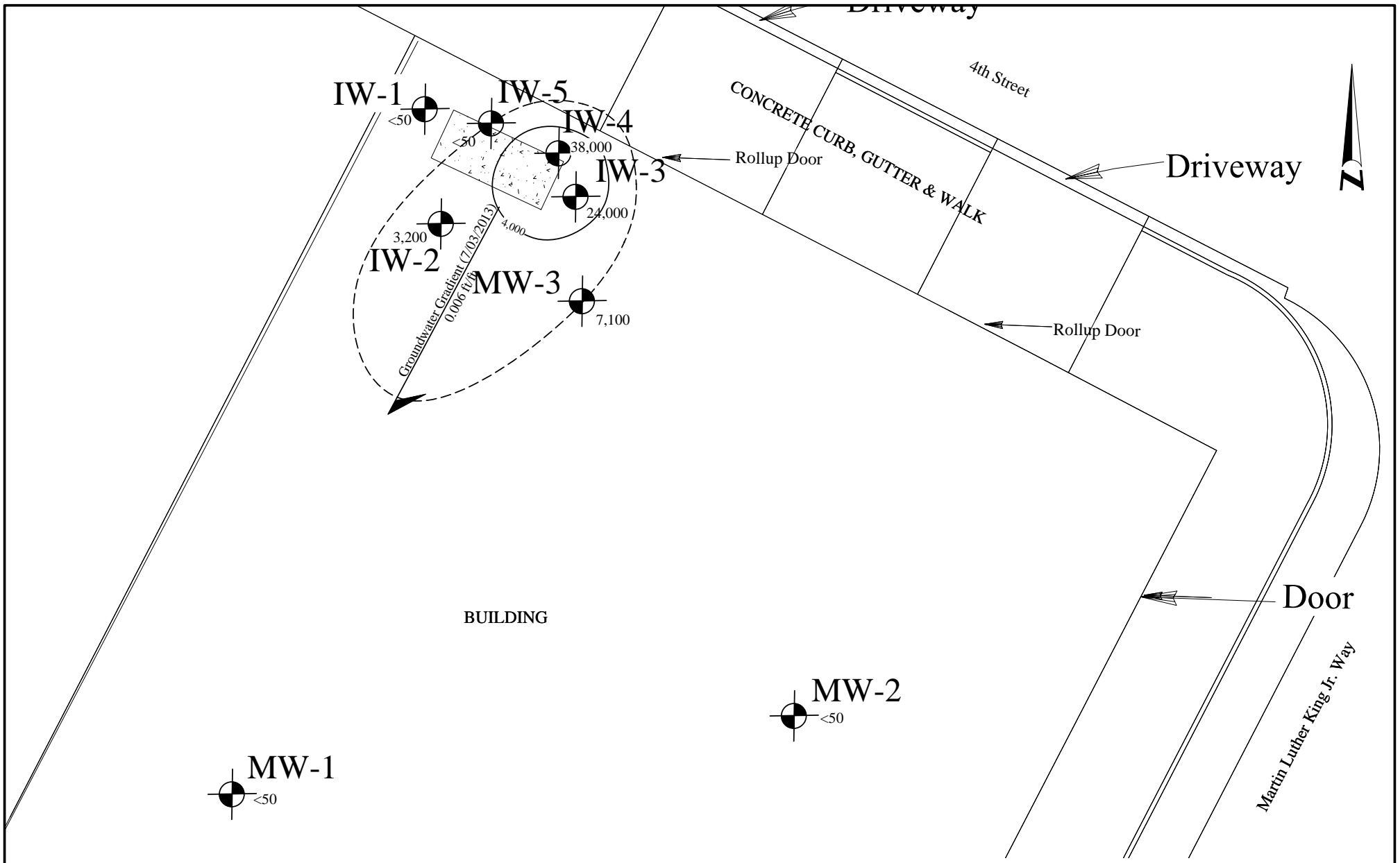
AEI CONSULTANTS

2500 Camino Diablo, Walnut Creek, CA

Groundwater Analytical Data (7/03/2013)

325 Martin Luther King Jr. Way
Oakland, California

FIGURE 5
AEI Project # 277915



⊕ 2" Monitoring / Infusion Well

▨ Abandoned in place UST



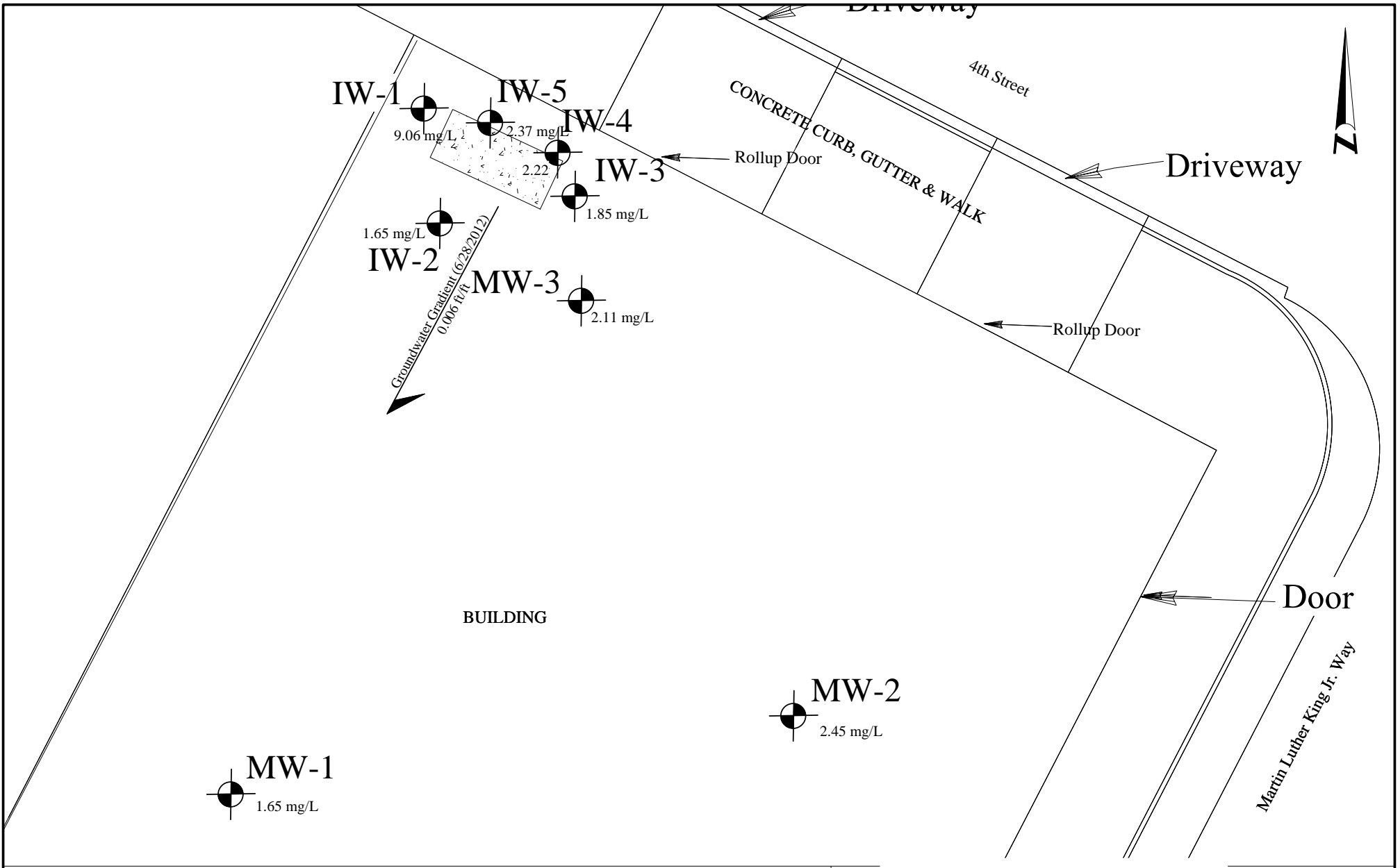
AEI CONSULTANTS

2500 Camino Diablo, Walnut Creek, CA

TPH-g Isoconcentration Map (7/03/2013)

325 Martin Luther King Jr. Way
Oakland, California

FIGURE 6
AEI Project # 277915



2" Monitoring / Infusion Well

Abandoned in place UST



AEI CONSULTANTS

2500 Camino Diablo, Walnut Creek, CA

Dissolved Oxygen Concentrations (7/03/2013)

325 Martin Luther King Jr. Way
Oakland, California

FIGURE 7
AEI Project # 277915

TABLES

Table 1 - Well Construction Details

Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA

Well ID	Date Installed	Top of Casing Elevation (ft amsl)	Well Box Elevation (ft amsl)	Well Depth (ft)	Slotted Casing (ft)	Slot Size (in)	Sand Interval (ft)	Sand Size	Bentonite Interval (ft)	Grout Interval (ft)
MW-1	08/10/07	14.87*	15.34	18	8 - 18	0.010	7 - 18	# 2/12	7 - 8	0.75 - 7
MW-2	08/10/07	15.27	15.52	17	7 - 17	0.010	6 - 17	# 2/12	6 - 7	0.75 - 6
MW-3	08/10/07	15.11*	15.57	18	8 - 18	0.010	7 - 18	# 2/12	7 - 8	0.75 - 7
IW-1	10/13/09	15.20**	15.61	15	5 - 15	0.010	4 - 15	2/12	3 - 4	0.5 - 3
IW-2	10/13/09	15.04**	15.63	15	5 - 15	0.010	4 - 15	2/12	3 - 4	0.5 - 3
IW-3	10/13/09	15.29**	15.60	15	5 - 15	0.010	4 - 15	2/12	3 - 4	0.5 - 3
IW-4	12/01/11	14.74	15.66	15	5 - 15	0.010	4 - 15	2/12	3 - 4	1 - 3
IW-5	12/01/11	14.54	15.64	15	5 - 15	0.010	4 - 15	2/12	3 - 4	0.5 - 3

Notes:

ft amsl = feet above mean sea level

14.87* = Casing elevation changes, 02/09/2010

15.29** = Casing elevation changes, 12/06/2012

Table 2 - Groundwater Elevation Data
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA

Well ID (Screen Interval)	Date Collected	Well Elevation (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)
MW-1 (8 - 18)	8/21/2007	14.92	8.38	6.54	----
	11/21/2007	14.92	8.37	6.55	0.01
	2/26/2008	14.92	7.98	6.94	0.39
	6/18/2008	14.92	8.41	6.51	-0.43
	9/19/2008	14.92	8.56	6.36	-0.15
	12/29/2008	14.92	8.66	6.26	-0.10
	3/17/2009	14.92	7.84	7.08	0.82
	6/15/2009	14.92	8.31	6.61	-0.47
	9/18/2009	14.92	8.59	6.33	-0.28
	3/16/2010*	14.87	7.80	7.07	----
	9/9/2010	14.87	8.75	6.12	-0.95
	3/24/2011	14.87	7.66	7.21	1.09
	12/14/2011	14.87	8.85	6.02	-1.19
	6/28/2012	14.87	8.41	6.46	0.44
	9/21/2012	14.87	8.72	6.15	-0.31
	7/3/2013	14.87	8.69	6.18	0.03
MW-2 (7 - 17)	8/21/2007	15.27	8.78	6.49	----
	11/21/2007	15.27	8.72	6.55	0.06
	2/26/2008	15.27	8.37	6.90	0.35
	6/18/2008	15.27	8.82	6.45	-0.45
	9/19/2008	15.27	8.92	6.35	-0.10
	12/29/2008	15.27	8.87	6.40	0.05
	3/17/2009	15.27	8.27	7.00	0.60
	6/15/2009	15.27	8.71	6.56	-0.44
	9/18/2009	15.27	8.98	6.29	-0.27
	3/16/2010	15.27	8.19	7.08	0.79
	9/9/2010	15.27	9.04	6.23	-0.85
	3/24/2011	15.27	7.89	7.38	1.15
	12/14/2011	15.27	9.17	6.10	-1.28
	6/28/2012	15.27	8.80	6.47	0.37
	9/21/2012	15.27	9.02	6.25	-0.22
	7/3/2013	15.27	8.98	6.29	0.04
MW-3 (8 - 18)	8/21/2007	15.26	8.59	6.67	----
	11/21/2007	15.26	8.55	6.71	0.04
	2/26/2008	15.26	8.11	7.15	0.44
	6/18/2008	15.26	8.62	6.64	-0.51
	8/4/2008	15.26	8.65	6.61	-0.03
	8/20/2008	15.26	8.68	6.58	-0.03
	9/19/2008	15.26	8.74	6.52	-0.06
	12/29/2008	15.26	8.67	6.59	0.07
	3/17/2009	15.26	7.96	7.30	0.71
	6/15/2009	15.26	8.47	6.79	-0.51
	9/18/2009	15.26	8.78	6.48	-0.31
	10/30/2009	15.26	8.62	6.64	-0.15
	3/16/2010	15.11	7.57	7.54	----
	7/19/2010	15.11	8.53	6.58	-0.96

Table 2 - Groundwater Elevation Data
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA

Well ID (Screen Interval)	Date Collected	Well Elevation (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)
MW-3 continued	9/9/2010	15.11	8.73	6.38	-0.20
	3/24/2011	15.11	7.35	7.76	1.38
	12/14/2011	15.11	8.78	6.33	-1.43
	6/28/2012	15.11	8.41	6.79	0.37
	9/21/2012	15.11	8.61	6.59	-0.20
	7/3/2013***	15.11	8.55	6.65	0.06
IW-1 (5-15)	10/30/2009	15.23	8.53	6.70	----
	3/16/2010	15.23	7.68	7.55	0.85
	9/9/2010	15.23	8.72	6.51	-1.04
	3/24/2011	15.23	7.36	7.87	1.36
	12/14/2011	15.20**	8.85	6.35	-1.49
	6/28/2012	15.20	8.41	6.79	0.44
	9/21/2012	15.20	8.66	6.54	-0.25
	7/3/2013	15.20	8.63	6.57	0.03
IW-2 (5-15)	10/30/2009	15.06	8.37	6.69	----
	3/16/2010	15.06	7.57	7.49	0.80
	7/19/2010	15.06	8.29	6.77	-0.72
	9/9/2010	15.06	8.62	6.44	-0.33
	3/24/2011	15.06	7.26	7.80	1.36
	12/14/2011	15.04**	8.72	6.32	-1.46
	6/28/2012	15.29	8.45	6.84	0.27
	9/21/2012	15.29	8.54	6.75	-0.09
7/3/2013	15.29	8.49	6.80	0.05	
IW-3 (5-15)	10/30/2009	15.30	8.68	6.62	----
	3/16/2010	15.30	7.82	7.48	0.86
	7/19/2010	15.30	8.51	6.79	-0.69
	9/9/2010	15.30	8.83	6.47	-0.32
	3/24/2011	15.30	7.44	7.86	1.39
	12/14/2011	15.29**	8.91	6.38	-1.47
	6/28/2012	15.29	8.45	6.84	0.46
	9/21/2012	15.29	8.75	6.54	-0.30
7/3/2013	15.29	8.68	6.61	0.07	
IW-4 (5-15)	12/14/2011	14.74	8.38	6.36	----
	6/28/2012	14.74	7.92	6.82	0.46
	9/21/2012	14.74	8.22	6.52	-0.30
	7/3/2013	14.74	8.13	6.61	0.09
IW-5 (5-15)	12/14/2011	14.54	8.18	6.36	----
	6/28/2012	14.54	7.72	6.82	0.46
	9/21/2012	14.54	8.01	6.53	-0.29
	7/3/2013	14.54	7.83	6.71	0.18

Notes

14.87* = Casing elevation changes, 02/09/10
15.29** = Casing elevation changes, 12/14/2011
*** = Data from full monitoring events only

**Table 2A - Groundwater Elevation Data
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA**

Event #	Date	Average Water Table Elevation (ft amsl)	Change from Previous Episode (ft)	Flow Direction (gradient) (ft/ft)
1	8/21/2007	6.57	NA	S (0.003)
2	11/21/2007	6.60	0.04	S (0.005)
3	2/26/2008	7.00	0.39	S (0.005)
4	6/18/2008	6.53	-0.46	SSE (0.004)
5	9/19/2008	6.41	-0.12	S (0.003)
6	12/29/2008	6.42	0.01	SSW (0.005)
7	3/17/2009	7.13	0.71	SW (0.006)
8	6/15/2009	6.65	-0.47	SW 0.004)
9	9/18/2009	6.37	-0.29	SW (0.006)
10**	3/16/2010	7.24	----	SW (0.006)
11	9/9/2010	6.36	----	SW (0.005)
12	3/24/2011	7.65	1.29	SW (0.009)
13	12/14/2011	6.28	-1.37	SW (0.009)
14	6/28/2012	6.73	0.45	SW (0.002)
15	9/21/2012	6.48	-0.24	SW (0.002)
16	7/3/2013	6.55	0.07	SW (0.006)

ft amsl = feet above mean sea level

All water level depths are measured from the top of casing

** Average calculated for all wells with 2/9/10 re-survey elevations

*** Average calculated for all wells with 12/14/2011 re-survey elevations

**Table 3 - Groundwater Analytical Data
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA**

Sample ID	Date	Depth to Water	TPHg	TPHd	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes		
			Method 8015			Method 8021B					
			µg/L								
MW-1	8/21/2007	8.38	<50	<50	15	<0.5	<0.5	<0.5	<0.5		
	11/21/2007	8.37	<50	<50	12	<0.5	<0.5	<0.5	<0.5		
	2/26/2008	7.98	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	6/18/2008	8.41	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	9/19/2008	8.56	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	12/29/2008	8.66	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	3/17/2009	7.84	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	6/15/2009	8.31	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	9/18/2009	8.59	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	3/16/2010	7.80	<50	-	-	<0.5	<0.5	<0.5	<0.5		
	9/9/2010	7.75	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	3/24/2011	7.66	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	12/14/2011	8.85	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	6/28/2012	8.41	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	9/21/2012	8.72	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	7/3/2013	8.69	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
MW-2	8/21/2007	8.78	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5		
	11/21/2007	8.72	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5		
	2/26/2008	8.37	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	6/18/2008	53.00	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	9/19/2008	8.92	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	12/29/2008	8.87	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	3/17/2009	8.27	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	6/15/2009	8.71	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	9/18/2009	8.98	<50	<50	-	<0.5	<0.5	<0.5	<0.5		
	3/16/2010	8.19	<50	-	-	<0.5	<0.5	<0.5	<0.5		
	9/9/2010	9.04	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	3/24/2011	7.89	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	12/14/2011	9.17	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	6/28/2012	8.80	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	9/21/2012	9.02	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	7/3/2013	8.98	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
MW-3	8/21/2007	8.59	24,000	2,100	<180	2,600	3,500	450	2,400		
	11/21/2007	8.55	36,000	3,800	<500	4,900	1,200	230	2,700		
	2/26/2008	8.11	31,000	5,400	-	4,200	1,900	590	2,200		
	6/18/2008	8.62	20,000	3,000	-	2,900	1,100	390	990		
	8/4/2008	8.65	110,000	27,000	-	5,900	9,000	76	8,100		
	8/20/2008	8.68	120,000	6,500	-	8,900	18,000	930	12,000		
	9/19/2008	8.74	64,000	4,500	-	6,200	9,200	660	6,600		
	12/29/2008	8.67	130,000	7,900	-	11,000	19,000	1,800	11,000		
	3/17/2009	7.96	83,000	8,000	-	7,400	10,000	1,100	8,500		
	6/15/2009	8.47	67,000	21,000	-	11,000	9,100	1,200	6,80		
	9/18/2009	8.78	58,000	16,000	-	11,000	7,000	1,400	4,700		

**Table 3 - Groundwater Analytical Data
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA**

Sample ID	Date	Depth to Water	TPHg	TPHd	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	
			Method 8015		Method 8021B					
			µg/L							
MW-3 continued	10/30/2009	6.64	59,000	-	-	10,000	7,100	1,200	3,900	
	2/8/2010	7.74	13,000	-	<50	840	1,500	120	1,700	
	2/24/2010	8.03	16,000	-	<50	1,200	1,700	200	1,900	
	3/16/2010	7.75	34,000	-	<250	3,000	4,100	580	4,100	
	4/15/2010	-	-	-	-	-	-	-	-	
	5/24/2010	-	11,000	-	<250	910	1,600	120	2,400	
	7/19/2010	8.33	270	-	<5.0	2.7	2.9	<0.5	4.8	
	8/5/2010	8.35	350	-	<5.0	15	6.3	4	46	
	9/9/2010	8.67	1,200	360	-	57	8.3	18	160	
	12/29/2010	-	130	-	<5.0	0.79	1.2	<0.5	3.1	
	2/7/2011	-	<50	-	<5.0	2.3	1.0	<0.5	6.4	
	3/24/2011	7.35	140	<50	<5.0	4.9	6.7	0.6	19	
	8/9/2011	-	590	200	<5.0	38	2.3	<0.5	60	
	12/14/2011	8.78	4,900	1,000	<120	1,400	28	54	250	
	6/28/2012	8.30	<50	-	<5.0	<0.5	<0.5	<0.5	0.86	
	7/27/2012	8.48	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	8/27/2012	8.59	51	<50	<5.0	2.4	<0.5	<0.5	4.9	
	9/21/2012	8.61	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5	
	10/24/2012	-	510	-	32	100	3.2	3.7	10	
	11/20/2012	-	850	-	9.2	290	8.2	11.0	23	
1/8/2013	-	390	-	<5.0	24	1.5	<5.0	17		
4/3/2013	-	6,400	-	<150	2400	37	120	92		
7/3/2013	8.55	7,100	-	ND<180	2,200	35	170	72		
IW-1	10/30/2009	8.53	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	3/16/2010	7.68	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5	
	9/9/2010	8.73	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	3/24/2011	7.36	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	12/14/2011	8.85	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	6/28/2012	8.41	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	9/21/2012	8.66	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	7/3/2013	8.63	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
IW-2	10/30/2009	8.37	15,000	-	-	1,100	2,100	630	2,400	
	2/8/2010	7.70	630	-	<5.0	4.4	17	3.7	78	
	2/24/2010	-	3,500	-	<50	22	220	57	590	
	3/16/2010	7.57	20,000	-	<100	320	2,100	450	4,000	
	4/15/2010	-	-	-	-	-	-	-	-	
	5/24/2010	-	190	-	<5.0	0.82	6.9	1.0	20	
	7/19/2010	8.29	600	-	<5.0	5.8	43	5.3	110	
	8/5/2010	8.39	340	-	<5.0	1.8	14	2.7	74	
	9/9/2010	8.62	5,100	660	-	59	330	57.0	1,100	
	12/29/2010	-	<50	-	<5.0	<0.5	<0.5	<0.5	0.62	

**Table 3 - Groundwater Analytical Data
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA**

Sample ID	Date	Depth to Water	TPHg	TPHd	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	
			Method 8015		Method 8021B					
			µg/L							
IW-2 continued	2/7/2011	-	<50	<50	<5.0	<0.5	<0.5	<0.5	0.98	
	3/24/2011	7.26	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5	
	8/9/2011	-	1,700	-	<10	40	2.5	1.9	270	
	12/14/2011	8.72	2,900	710	<50	110	5.9	29	430	
	6/28/2012	8.28	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	9/21/2012	8.54	91	<50	<5.0	0.89	<0.5	<0.5	7.5	
	7/3/2013	8.49	3,200	-	<25	59	6.0	55	360	
IW-3	10/30/2009	8.68	61,000	-	<1,000	10,000	14,000	1,400	9,800	
	11/5/2009	8.60	64,000	-	<150	4,000	7,500	1,100	1,100	
	11/23/2009	-	77,000	-	<250	6,700	11,000	430	11,000	
	2/8/2010	7.74	18,000	-	<50	790	910	38	2,600	
	2/24/2010	-	36,000	-	<250	2,400	4,300	320	460	
	3/16/2010	7.82	44,000	-	<500	3,200	6,000	650	5,400	
	4/15/2010	-	-	-	-	-	-	-	-	
	5/24/2010	-	4,300	-	<60	170	430	19	680	
	7/19/2010	8.51	4,100	-	<50	190	450	28	440	
	8/5/2010	8.56	5,400	-	<50	360	780	62	730	
	9/9/2010	8.83	22,000	3,230	-	1,800	3,900	310	3,300	
	12/29/2010	-	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	2/7/2011	-	2,700	870	<50	180	330	18	360	
	3/24/2011	7.44	390	290	<5.0	3.7	7.4	2.4	53	
	8/9/2011	-	9,600	800	<250	2400	940	150	1,300	
	12/14/2011	8.91	36,000	4,200	<450	4,600	2,700	300	4,000	
	3/27/2012	-	390	-	<5.0	8.8	11	1.3	58	
	6/28/2012	8.45	91	-	<5.0	1.1	1.6	<0.5	3.7	
	7/27/2012	8.6	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5	
	8/27/2012	8.72	1,100	-	<45	100	160	5.1	150	
	9/21/2012	8.75	4,300	360	<50	460	580	32	560	
	10/24/2012	-	4,400	-	51	540	880	26	730	
	11/20/2012	-	6,400	-	<50	550	1000	34	940	
1/8/2013	-	13,000	-	<250	580	1100	81	660		
4/3/2013	-	16,000	-	<500	2,700	1,100	200	2,100		
7/3/2013	8.68	24,000	-	<500	3,200	2,500	230	3,600		

**Table 3 - Groundwater Analytical Data
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA**

Sample ID	Date	Depth to Water	TPHg	TPHd	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes		
			Method 8015			Method 8021B					
			µg/L								
IW-4	12/14/2011	8.38	95,000	5,600	<1,000	13,000	13,000	1,200	7,400		
	3/27/2012	-	1,700	-	<5.0	64	150	29	160		
	6/28/2012	7.92	1,400	-	<5.0	49	190	29	140		
	7/27/2012	8.03	270	-	<5.0	2.0	4.3	1.5	3.4		
	8/27/2012	8.16	2,900	-	<50	230	520	46	260		
	9/21/2012	8.22	4,500	150	<50	350	820	64	370		
	10/24/2012	-	21,000	-	ND<250	2,000	4,000	350	2,100		
	11/20/2012	-	8,700	-	<100	850	1,900	140	910		
	1/8/2013	-	6,500	-	<90	580	1,100	81	660		
	4/3/2013	-	16,000	-	<500	1,900	2,300	240	1,600		
7/3/2013	8.13	38,000	-	<500	4,700	7,000	620	3,300			
IW-5	12/14/2011	8.18	250	190	<5.0	11	0.56	<0.5	8.0		
	6/28/2012	7.72	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
	9/21/2012	8.01	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5		
	7/3/2013	7.83	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5		
GW ESL (NDW) Gross Contamination			2,500	2,500	1,800	2,000	400	300	5,300		
GW ESL (NDW) Aquatic Habitat			210	210	1,800	46	130	43	100		

Notes:

TPHg = total petroleum hydrocarbons as gasoline (C6-C12)

TPHd = total petroleum hydrocarbons as diesel (C10-C23)

Benzene, toluene, ethylbenzene, and xylenes using EPA Method 8021B

MTBE = methyl-tertiary butyl ether

mg/L= micrograms per liter

ND<50 = non detect at respective reporting limit

Table 4 - Groundwater Analytical Data - Fuel Additives
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA

Sample ID	Date	TAME	TBA	EDB	1,2-DCA	DIPE	ETBE	MTBE
		mg/L						
MW-1	08/21/07	<0.5	<5.0	<0.5	5.2	<0.5	<0.5	18
	11/21/07	-	-	-	-	-	-	-
	02/26/08	-	-	<0.5	6.9	-	-	16
	06/18/08	-	-	<0.5	5.4	-	-	15
	09/19/08	-	-	<0.5	6.8	-	-	4.2
	12/29/08	-	-	<0.5	6.8	-	-	0.62
	03/17/09	-	-	<0.5	4.6	-	-	11
	06/15/09	-	-	<0.5	5.8	-	-	8.1
	09/18/09	-	-	<0.5	5.2	-	-	0.7
	03/24/11	<0.5	<2.0	<0.5	9.3	<0.5	<0.5	1.9
	06/28/12	<0.5	<2.0	<0.5	7.0	<0.5	<0.5	0.73
	09/21/12	<0.5	<2.0	<0.5	13	<0.5	<0.5	1.2
	07/03/13	<0.5	4.5	<0.5	21	<0.5	<0.5	0.78
	MW-2	08/21/07	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5
11/21/07		-	-	-	-	-	-	-
02/26/08		-	-	<0.5	<0.5	-	-	<0.5
06/18/08		-	-	<0.5	<0.5	-	-	<0.5
09/19/08		-	-	<0.5	<0.5	-	-	<0.5
12/29/08		-	-	<0.5	<0.5	-	-	<0.5
03/17/09		-	-	<0.5	<0.5	-	-	<0.5
06/15/09		-	-	<0.5	<0.5	-	-	<0.5
09/18/09		-	-	<0.5	<0.5	-	-	<0.5
03/24/11		<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
06/28/12		<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
09/21/12		<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
07/03/13		<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3		08/21/07	<5.0	<50	34	140	<5.0	<5.0
	11/21/07	-	-	-	-	-	-	-
	02/26/08	-	-	31	220	-	-	<12
	06/18/08	-	-	21	190	-	-	<5.0
	08/04/08	-	-	220	410	-	-	<50
	08/20/08	-	-	330	410	-	-	<50
	09/19/08	-	-	160	320	-	-	<17
	12/29/08	-	-	200	440	-	-	<50
	03/17/09	-	-	98	370	-	-	<25
	06/15/09	-	-	87	490	-	-	<50
	09/18/09	-	-	110	500	-	-	<17
	10/30/09	-	-	96	470	-	-	<50
	02/08/10	-	-	42	42	-	-	<50
	03/16/10	<25	430	110	130	<25	<25	<25
	03/24/11	<0.5	10	2.2	0.61	<5.0	<5.0	<5.0
	06/28/12	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
	09/21/12	<0.5	<2.0	1.1	4.4	<0.5	<0.5	<0.5
07/03/13	<5.0	<20	<5.0	120	<5.0	<5.0	<5.0	

Table 4 - Groundwater Analytical Data - Fuel Additives
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA

Sample ID	Date	TAME	TBA	EDB	1,2-DCA	DIPE	ETBE	MTBE
		mg/L						
IW-1	10/30/09	-	-	<0.5	<0.5	-	-	<0.5
	03/16/10	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
	03/24/11	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
	06/28/12	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
	09/21/12	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
	07/03/13	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
IW-2	10/30/09	-	-	13	51	-	-	<10
	02/08/10	-	-	5.1	3.9	-	-	
	03/16/10	<10	70	20	15	<10	<10	<10
	03/24/11	<0.5	5.2	<0.5	<0.5	<0.5	<0.5	<0.5
	06/28/12	<0.5	2.5	1.3	<0.5	<0.5	<0.5	<0.5
	09/21/12	<1.7	33	<1.7	29	<1.7	<1.7	<1.7
IW-3	10/30/09	-	-	220	480	-	-	<10
	02/08/10	-	-	94	82	-	-	
	03/16/10	<25	120	230	220	<25	<25	<25
	03/24/11	<0.5	47	22	13	<0.5	<0.5	<0.5
	03/27/12	<0.5	13	8.2	4.5	<0.5	<0.5	<0.5
	06/28/12	<0.5	4.2	2.4	1.5	<0.5	<0.5	<0.5
	09/21/12	<2.5	52	2.4	51	<2.5	<2.5	<2.5
	07/03/13	<5.0	<20	31	170	<5.0	<5.0	<5.0
IW-4	03/27/12	<0.5	9.7	8.4	4.0	<0.5	<0.5	<0.5
	06/28/12	<0.5	4.7	2.3	0.62	<0.5	<0.5	<0.5
	09/21/12	<1.2	19	48	30	<1.2	<1.2	<1.2
	07/03/13	<5.0	<20	87	150	<5.0	<5.0	<5.0
IW-5	06/28/12	<0.5	2.0	<0.5	<0.5	<0.5	<0.5	<0.5
	09/21/12	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5
	07/03/13	<0.5	<2.0	<0.5	1.5	<0.5	<0.5	<0.5
GW ESL (NDW) GC	-	54,000	50,000	50,000	-	-	1,800	
GW ESL (NDW) AH	-	18,000	150	200	-	-	1,800	
DW - Ceiling Value	-	50,000	50,000	50,000	-	-	5	
DW -VI	-	use soil gas	150	150	-	-	24,000	
DW Toxicity	-	12	0.05	0.5	-	-	13	

Notes: TAME - tert-amyl methyl ether
mg/L= micrograms per liter TBA - tert-butyl alcohol
ND<50 = non detect at respective reporting DIPE - diisopropyl ether
MTBE - methyl tertiary butyl ether ETBE - ethyl tert-butyl ether

TABLE 5: SOIL GAS SAMPLE ANALYTICAL DATA
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA

Probe/ Sample ID	Date Collected	Sample Depth (ft bgs)	TPH-g	Benzene	EDB	1,2-DCA	Ethyl benzene	MTBE	Toluene	Xylenes	Isopropyl Alcohol**
			µg/m ³								
			T03/T015	Method TO-15							
VS-1	7/14/2008	Subslab	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	8/4/2008	Subslab	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
VS-1	7/14/2008	5	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	8/4/2008	5	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	7/3/2013	5	<1800	<6.5	<16	<8.2	<8.8	<7.3	<7.7	<27	ND
VS-2	7/14/2008	Subslab	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	8/4/2008	Subslab	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
VS-2	7/14/2008	5	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	8/4/2008	5	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	7/3/2013	5	<1800	<6.5	<16	<8.2	45	<7.3	<7.7	290	ND
VS-3	7/14/2008	Subslab	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	8/4/2008	Subslab	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
VS-3	7/14/2008	5	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	8/4/2008	5	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	7/3/2013	5	<1800	<6.5	<16	<8.2	<8.8	<7.3	<7.7	<27	ND
VS-4	7/14/2008	Subslab	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	8/4/2008	Subslab	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
VS-4	7/14/2008	5	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	8/4/2008	5	<1800	<6.5	<16	NA	<8.8	<7.3	<7.7	<27	ND
	7/3/2013	5	<1800	<6.5	<16	20	<8.8	<7.3	<7.7	<27	ND
VS-5	7/3/2013	5	<1800	<6.5	<16	<8.2	<8.8	<7.3	<7.7	<27	ND
ESLs			1,200,000	42	170	580	4,900	49,000	1,300,000	440,000	----

Notes:

BOLD = value above reporting limit.

BOLD RED = value exceed ESL

Isopropyl alcohol (2-Propanol) is the tracer/leak check compound

* = Isopropyl Alcohol reporting limit 7/14/2008, 8/4/2008 ND<10 µg/L, 7/03/2013 ND<50 mg/m³

ft bgs = feet below ground surface

µg/m³ = micrograms per cubic meter

TPH-g = total petroleum hydrocarbons as gasoline, 7/14/2008, 8/4/2008 by T03, 7/03/2013 by T015

MTBE = methyl tertiary-butyl ether

EDB = 1,2-Dibromoethane

1,2-DCA = 1,2-dichloroethane

ESLs = SF Bay RWQCB Environmental Screening Levels for shallow soil gas, commercial/industrial land use, Table E-2, May 2013

APPENDIX A

Drilling Permits

Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 05/28/2008 By jamesy

Permit Numbers: W2008-0302 to W2008-0305
Permits Valid from 06/11/2008 to 06/11/2008

Application Id: 1212000325230
Site Location: 325 Martin Luther King Jr Way
Project Start Date: 06/11/2008
Requested Inspection: 06/11/2008
Scheduled Inspection: 06/11/2008 at 2:00 PM (Contact your inspector, Vicky Hamlin at (510) 670-5443, to confirm.)

City of Project Site: Oakland
Completion Date: 06/11/2008

Applicant: AEI Consultants - Adrian Angel
3880 South Bascom Avenue, #112, San Jose, CA 95124
Property Owner: Kimball and Jane Allen
2 Lone Tree Avenue, Mill Valley, CA 94941
Client: ** same as Property Owner **
Contact: Adrian Angel

Phone: 408-559-7600
Phone: 415-383-2689
Phone: 408-559-7600
Cell: 831-331-3547

Receipt Number: WR2008-0183	Total Due:	\$1200.00
Payer Name : Peter McIntyre	Total Amount Paid:	\$1200.00
	Paid By: VISA	PAID IN FULL

Works Requesting Permits:

Well Construction-Vapor Monitoring Well-Vapor Monitoring Well - 4 Wells
Driller: Environmental Control Associates (ECA) - Lic #: 695970 - Method: DP

Work Total: \$1200.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2008-0302	05/28/2008	09/09/2008	VS-1	2.75 in.	0.75 in.	4.00 ft	5.50 ft
W2008-0303	05/28/2008	09/09/2008	VS-2	2.75 in.	0.75 in.	4.00 ft	5.50 ft
W2008-0304	05/28/2008	09/09/2008	VS-3	2.75 in.	0.75 in.	4.00 ft	5.50 ft
W2008-0305	05/28/2008	09/09/2008	VS-4	2.75 in.	0.75 in.	4.00 ft	5.50 ft

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours

Alameda County Public Works Agency - Water Resources Well Permit

prior to drilling.

5. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

6. Minimum surface seal thickness is two inches of cement grout placed by tremie

7. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

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

Well Construction-Vapor Monitoring Well-Vapor Monitoring Well - 0 Wells

Driller: Environmental Control Associates (ECA) - Lic #: 695970 - Method: DP

Work Total: ** \$0.00

**** Cancelled Work. Total amount adjusted. ****

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
* Cancelled *			VS-2	2.75 in.	0.75 in.	4.00 ft	5.50 ft

Well Construction-Vapor Monitoring Well-Vapor Monitoring Well - 0 Wells

Driller: Environmental Control Associates (ECA) - Lic #: 695970 - Method: DP

Work Total: ** \$0.00

**** Cancelled Work. Total amount adjusted. ****

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
* Cancelled *			VS-3	2.75 in.	0.75 in.	4.00 ft	5.50 ft

Well Construction-Vapor Monitoring Well-Vapor Monitoring Well - 0 Wells

Driller: Environmental Control Associates (ECA) - Lic #: 695970 - Method: DP

Work Total: ** \$0.00

**** Cancelled Work. Total amount adjusted. ****

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
* Cancelled *			VS-4	2.75 in.	0.75 in.	4.00 ft	5.50 ft

Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 06/11/2013 By jamesy

Permit Numbers: W2013-0432
Permits Valid from 06/19/2013 to 06/19/2013

Application Id: 1370468342383
Site Location: 325 Martin Luther King Jr. Way

City of Project Site:Oakland

Project Start Date: 06/19/2013
Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Completion Date:06/19/2013

Applicant: AEI Consultants - Robert Flory
2500 Camino Diablo, Walnut Creek, CA 94597

Phone: 925-746-6000 x1122

Property Owner: Jane Allen
2 Lone Tree Avenue, Mill Valley, CA 94941

Phone: --

Client: ** same as Property Owner **
Contact: Robert Flory

Phone: 925-746-6000 x1122
Cell: 925-457-7517

Receipt Number: WR2013-0207 Total Due: \$265.00
Payer Name : Robert F. Flory Total Amount Paid: \$265.00
Paid By: MC PAID IN FULL

Works Requesting Permits:

Well Construction-Vapor monitoring well-Vapor monitoring well - 1 Wells
Driller: Environmental Control Associates - Lic #: 695970 - Method: Hand

Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2013-0432	06/11/2013	09/17/2013	VS-5	2.25 in.	0.25 in.	4.00 ft	5.50 ft

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
2. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days, including permit number and site map.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

Alameda County Public Works Agency - Water Resources Well Permit

5. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
6. No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.
7. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
8. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
9. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
11. Vapor monitoring wells above water level constructed with tubing maybe be backfilled with pancake-batter consistency bentonite. Minimum surface seal thickness is two inches of cement grout around well box.

Vapor monitoring wells above water level constructed with pvc pipe shall have a minimum seal depth (Neat Cement Seal) of 2 feet below ground surface (BGS). Minimum surface seal thickness is two inches of cement grout around well box. All other conditions for monitoring well construction shall apply.


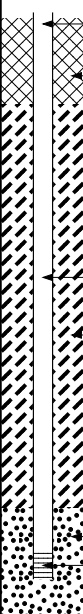
APPENDIX B

Vapor Point Boring Logs

Project: Allen Property
Project Location: 325 Martin Luther King Jr. Way
Project Number: 277915

Log of Boring VS-1
Sheet 1 of 1

Date(s) Drilled June 4, 2008	Logged By Adrian Angel	Checked By Robert Flory
Drilling Method Solid Stem Auger	Drill Bit Size/Type 1.5 inch	Total Depth of Borehole 5.5 feet bgs
Drill Rig Type rotohammer	Drilling Contractor AEI Consultants	Approximate Surface Elevation
Groundwater Level and Date Measured Not Encountered ATD	Sampling Method(s) None	Hammer Data
Borehole Backfill	Location	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
	0							Concrete			
						SM		Clayey Silty Sand, dark brown, moderately firm, dry			
	5							Bottom of Boring at 5.5 feet bgs			
	10										

K:\Allen_SGWI\277915\Oakland - AA\G_GWM_Events - Reports\2013\VS_well_logs\VS_wells_bgs\2-Boring_Log_(2 lab).tpt

Project: Allen Property
Project Location: 325 Martin Luther King Jr. Way
Project Number: 277915

Log of Boring VS-2

Sheet 1 of 1

Date(s) Drilled June 4, 2008	Logged By Adrian Angel	Checked By Robert Flory
Drilling Method Solid Stem Auger	Drill Bit Size/Type 1.5 inch	Total Depth of Borehole 5.5 feet bgs
Drill Rig Type rotohammer	Drilling Contractor AEI Consultants	Approximate Surface Elevation
Groundwater Level and Date Measured Not Encountered ATD	Sampling Method(s) None	Hammer Data
Borehole Backfill	Location	



Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
	0							Concrete			
						SM		Clayey Silty Sand, dark brown, moderately firm, dry			0.25-inch male swagelock fitting with 0.25-inch swagecock cap Neat cement grout 0.25-inch ID stainless steel tubing Hydrated bentonite chips 2/12 Monterey Sand 3-inch long stainless steel 0.0057-inch mesh implant
	5							Bottom of Boring at 5.5 feet bgs			
	10										

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Project: Allen Property
Project Location: 325 Martin Luther King Jr. Way
Project Number: 277915

Log of Boring VS-3
Sheet 1 of 1

Date(s) Drilled June 4, 2008	Logged By Adrian Angel	Checked By Robert Flory
Drilling Method Solid Stem Auger	Drill Bit Size/Type 1.5 inch	Total Depth of Borehole 5.5 feet bgs
Drill Rig Type rotohammer	Drilling Contractor AEI Consultants	Approximate Surface Elevation
Groundwater Level and Date Measured Not Encountered ATD	Sampling Method(s) None	Hammer Data
Borehole Backfill	Location	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
	0							Concrete			
						SM		Silty Sand, medium brown, poorly graded, very slightly moist			
	5							Bottom of Boring at 5.5 feet bgs			
	10										

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Project: Allen Property
Project Location: 325 Martin Luther King Jr. Way
Project Number: 277915

Log of Boring SV-4

Sheet 1 of 1

Date(s) Drilled June 4, 2008	Logged By Adrian Angel	Checked By Robert Flory
Drilling Method Solid Stem Auger	Drill Bit Size/Type 1.5 inch	Total Depth of Borehole 5.5 feet bgs
Drill Rig Type rotohammer	Drilling Contractor AEI Consultants	Approximate Surface Elevation
Groundwater Level and Date Measured Not Encountered ATD	Sampling Method(s) None	Hammer Data
Borehole Backfill	Location	


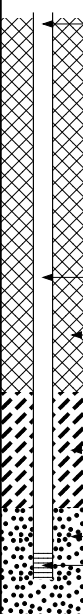
Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
	0							Concrete			
						SM		Silty Sand, light brown, clayey, silt - fine grained, subrounded, medium dense			0.25-inch male swagelock fitting with 0.25-inch swagecock cap Neat cement grout 0.25-inch ID stainless steel tubing Hydrated bentonite chips 2/12 Monterey Sand 3-inch long stainless steel 0.0057-inch mesh implant
	5							Bottom of Boring at 5.5 feet bgs			
	10										

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Project: Allen Property
Project Location: 325 Martin Luther King Jr. Way
Project Number: 277915

Log of Boring VS-5
Sheet 1 of 1

Date(s) Drilled July 2, 2013	Logged By John Slgg	Checked By Robert Flory
Drilling Method Bucket Auger	Drill Bit Size/Type 3.5 inch	Total Depth of Borehole 5.5 feet bgs
Drill Rig Type Hand Auger	Drilling Contractor AEI Consultants	Approximate Surface Elevation
Groundwater Level and Date Measured Not Encountered ATD	Sampling Method(s) None	Hammer Data
Borehole Backfill	Location	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	Sampling Resistance, blows/ft	Relative Consistency	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0								Concrete			
						SM		Silty Sand, light brown, clayey, silt - fine grained, subrounded, medium dense			0.25-inch male swagelock fitting with 0.25-inch swagecock cap
	5							Bottom of Boring at 5.5 feet bgs			
10											

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APPENDIX C

2008 Soil Vapor Sampling



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
		Date Received: 07/16/08
	Client Contact: Adrian Angel	Date Reported: 07/22/08
	Client P.O.:	Date Completed: 07/22/08

WorkOrder: 0807382

July 23, 2008

Dear Adrian:

Enclosed within are:

- 1) The results of the **9** analyzed samples from your project: **#277915; Allen,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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

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

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

0807382

McCAMPBELL ANALYTICAL INC. 1534 Willow Pass Road Pittsburg, CA 94565-1701 www.mai@mccampbell.com Telephone: (925) 252-9262 Fax: (925) 252-9269				CHAIN OF CUSTODY RECORD					
Report To: <u>Adrian Angel</u> Bill To: <u>Same</u>				TURN AROUND TIME		<input type="checkbox"/> RUSH 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAY <input type="checkbox"/> EDF Required? Coelt (Normal) No Write On (DW) No			
Company: <u>AEI Consultants</u> <u>2500 Camino Diablo</u> <u>Walnut Creek, CA 94597</u>				Pressurized By		Date		Pressurization Gas	
E-Mail: <u>aangel@aEICONSULTANTS.COM</u>								N2 He	
Tel: <u>(925) 283-6000</u> Fax: <u>(925) 283-6121</u>									
Project #: <u>277915</u> Project Name: <u>Allen</u>									
Project Location: <u>325 Martin Luther King Jr. Way, Oakland, CA</u>									
Sampler Signature: <u>[Signature]</u>				Notes: <u>please analyze all canisters for:</u> *					
Field Sample ID (Location)	Collection		Canister SN#	Sampler Kit SN#	Analysis Requested	Canister Pressure/Vacuum			
	Date	Time				Initial	Final	Receipt	Final (psi)
<u>VS-1-Deep</u>	<u>7/11/08</u>	<u>2:00P</u>			<u>TPH-g by TO-3, MBTEX+2-propanol+ethylene dibromide</u>	<u>-30</u>	<u>-5</u>		
<u>VS-2-Deep</u>		<u>2:40P</u>			<u>by TO-15</u>	<u>-30</u>	<u>-5</u>		
<u>VS-3-Deep</u>		<u>1:00P</u>				<u>-30</u>	<u>-5</u>		
<u>VS-3-Deep-Dup</u>		<u>1:30P</u>				<u>-30</u>	<u>-5</u>		
<u>VS-4-Deep</u>		<u>3:00P</u>				<u>-30</u>	<u>-5</u>		
<u>VS-1-Shallow</u>		<u>12:00P</u>							
<u>VS-2-Shallow</u>		<u>12:35P</u>							
<u>VS-3-Shallow</u>		<u>3:25P</u>							
<u>VS-4-Shallow</u>		<u>4:10P</u>							
Relinquished By: <u>[Signature]</u>	Date: <u>7/11/08</u>	Time: <u>3:00P</u>	Received By: <u>[Signature]</u>		Temp (°C): _____ Work Order #: _____				
Relinquished By:	Date:	Time:	Received By:		Condition: _____				
Relinquished By:	Date:	Time:	Received By:		Custody Seals Intact? Yes _____ No _____ None _____				
Relinquished By:	Date:	Time:	Received By:		Shipped Via: _____				

Jul. 15. 2008 12:41PM mccampbell

No. 9272 P. 2/2

McC Campbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0807382

ClientCode: AEL

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Adrian Angel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(408) 559-7600 FAX (408) 559-7601

Email: aangel@aeiconsultants.com
cc:
PO:
ProjectNo: #277915; Allen

Bill to:

Denise Mockel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
dmockel@aeiconsultants.com

Requested TAT: 5 days

Date Received: 07/16/2008

Date Printed: 07/16/2008

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0807382-001	VS-1-Deep	Soil Vapor	7/14/2008 14:00	<input type="checkbox"/>	A	A											
0807382-002	VS-2-Deep	Soil Vapor	7/14/2008 14:40	<input type="checkbox"/>		A											
0807382-003	VS-3-Deep	Soil Vapor	7/14/2008 13:00	<input type="checkbox"/>		A											
0807382-004	VS-3-Deep-Dup	Soil Vapor	7/14/2008 13:30	<input type="checkbox"/>		A											
0807382-005	VS-4-Deep	Soil Vapor	7/14/2008 15:00	<input type="checkbox"/>		A											
0807382-006	VS-1-Shallow	Soil Vapor	7/14/2008 12:00	<input type="checkbox"/>		A											
0807382-007	VS-2-Shallow	Soil Vapor	7/14/2008 12:35	<input type="checkbox"/>		A											
0807382-008	VS-3-Shallow	Soil Vapor	7/14/2008 15:25	<input type="checkbox"/>		A											
0807382-009	VS-4-Shallow	Soil Vapor	7/14/2008 16:10	<input type="checkbox"/>		A											

Test Legend:

1	PREF REPORT	2	TO3_SOILGAS	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A contain testgroup.

Prepared by: Melissa Valles

Comments:

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



Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **07/16/08 3:50:49 PM**

Project Name: **#277915; Allen**

Checklist completed and reviewed by: **Melissa Valles**

WorkOrder N°: **0807382** Matrix Soil Vapor

Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No
- Container/Temp Blank temperature Cooler Temp: NA
- Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
- Sample labels checked for correct preservation? Yes No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes No NA

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

Client contacted:

Date contacted:

Contacted by:

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
		Date Received: 07/16/08
	Client Contact: Adrian Angel	Date Extracted: 07/18/08-07/23/08
	Client P.O.:	Date Analyzed 07/18/08-07/23/08

Leak Check Compound*

Extraction method TO15

Analytical methods TO15

Work Order: 0807382

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Isopropyl Alcohol	DF	% SS
001A	VS-1-Deep	SoilVapor	11.83	23.6	ND	1	N/A
002A	VS-2-Deep	SoilVapor	12.12	24.18	ND	1	N/A
003A	VS-3-Deep	SoilVapor	12.75	25.38	ND	1	N/A
004A	VS-3-Deep-Dup	SoilVapor	12.52	25.04	ND	1	N/A
005A	VS-4-Deep	SoilVapor	11.96	23.83	ND	1	N/A
006A	VS-1-Shallow	SoilVapor	11.86	23.72	ND	1	N/A
007A	VS-2-Shallow	SoilVapor	11.76	23.46	ND	1	N/A
008A	VS-3-Shallow	SoilVapor	11.51	23.02	ND	1	N/A
009A	VS-4-Shallow	SoilVapor	11.65	23.2	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	SoilVapor	psia	psia	10	µg/L

* leak check compound is reported in µg/L.

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

The IPA reference is:

DTSC, Advisory-Active Soil Gas Investigations, January 28, 2003, page 10, section 2.4.2

"Tracer compounds, such as ...isopropanol..., may be used as leak check compounds, if a detection limit of 10 ug/L or less can be achieved."
This implies that 10ug/L is the cut off definition for a leak, which equals 10,000 ug/m3.
The other low IPA hits may be due to extremely small leaks or may be naturally occurring in soil gas, particularly at biologically active sites.



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
		Date Received: 07/16/08
	Client Contact: Adrian Angel	Date Extracted: 07/18/08-07/23/08
	Client P.O.:	Date Analyzed 07/18/08-07/23/08

Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$ *

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0807382

Lab ID	0807382-001A	0807382-002A	0807382-003A	0807382-004A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2	Soil Vapor	W
Client ID	VS-1-Deep	VS-2-Deep	VS-3-Deep	VS-3-Deep-Dup			
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor			
Initial Pressure (psia)	11.83	12.12	12.75	12.52			
Final Pressure (psia)	23.6	24.18	25.38	25.04			
DF	1	1	1	1			

Compound	Concentration				$\mu\text{g}/\text{m}^3$	ug/L
Benzene	ND	ND	ND	ND	6.5	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	16	NA
Ethylbenzene	ND	ND	ND	ND	8.8	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	7.3	NA
Toluene	ND	ND	ND	ND	7.7	NA
Xylenes	ND	ND	ND	ND	27	NA

Surrogate Recoveries (%)

%SS1:	91	92	92	92	
%SS2:	100	101	102	102	
%SS3:	91	93	92	93	

Comments

*vapor samples are reported in $\mu\text{g}/\text{m}^3$.

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

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



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
		Date Received: 07/16/08
	Client Contact: Adrian Angel	Date Extracted: 07/18/08-07/23/08
	Client P.O.:	Date Analyzed 07/18/08-07/23/08

Volatile Organic Compounds in µg/m³*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0807382

Lab ID	0807382-005A	0807382-006A	0807382-007A	0807382-008A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-4-Deep	VS-1-Shallow	VS-2-Shallow	VS-3-Shallow	
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor	
Initial Pressure (psia)	11.96	11.86	11.76	11.51	
Final Pressure (psia)	23.83	23.72	23.46	23.02	
DF	1	1	1	1	

Compound	Concentration				µg/m ³	ug/L
Benzene	ND	ND	ND	ND	6.5	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	16	NA
Ethylbenzene	ND	ND	ND	ND	8.8	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	7.3	NA
Toluene	ND	ND	ND	ND	7.7	NA
Xylenes	ND	ND	ND	ND	27	NA

Surrogate Recoveries (%)

%SS1:	92	100	94	94
%SS2:	102	106	102	102
%SS3:	93	99	94	94

Comments

*vapor samples are reported in µg/m³.

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

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



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
		Date Received: 07/16/08
	Client Contact: Adrian Angel	Date Extracted: 07/18/08-07/23/08
	Client P.O.:	Date Analyzed 07/18/08-07/23/08

Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$ *

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0807382

Lab ID	0807382-009A				Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-4-Shallow				
Matrix	Soil Vapor				
Initial Pressure (psia)	11.65				
Final Pressure (psia)	23.2				
DF	1				

Compound	Concentration				$\mu\text{g}/\text{m}^3$	ug/L
Benzene	ND				6.5	NA
1,2-Dibromoethane (EDB)	ND				16	NA
Ethylbenzene	ND				8.8	NA
Methyl-t-butyl ether (MTBE)	ND				7.3	NA
Toluene	ND				7.7	NA
Xylenes	ND				27	NA

Surrogate Recoveries (%)

%SS1:	100			
%SS2:	108			
%SS3:	99			

Comments

*vapor samples are reported in $\mu\text{g}/\text{m}^3$.

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

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



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
		Date Received: 07/16/08
	Client Contact: Adrian Angel	Date Extracted: 07/18/08-07/23/08
	Client P.O.:	Date Analyzed 07/18/08-07/23/08

Volatile Organic Compounds in nL/L*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0807382

Lab ID	0807382-001A	0807382-002A	0807382-003A	0807382-004A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-1-Deep	VS-2-Deep	VS-3-Deep	VS-3-Deep-Dup	
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor	
Initial Pressure (psia)	11.83	12.12	12.75	12.52	
Final Pressure (psia)	23.6	24.18	25.38	25.04	
DF	1	1	1	1	

Compound	Concentration				nL/L	ug/L
Benzene	ND	ND	ND	ND	2.0	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	2.0	NA
Ethylbenzene	ND	ND	ND	ND	2.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	2.0	NA
Toluene	ND	ND	ND	ND	2.0	NA
Xylenes	ND	ND	ND	ND	6.0	NA

Surrogate Recoveries (%)

%SS1:	91	92	92	92
%SS2:	100	101	102	102
%SS3:	91	93	92	93

Comments

*vapor samples are reported in nL/L.

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

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



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
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	Client P.O.:	Date Analyzed 07/18/08-07/23/08

Volatile Organic Compounds in nL/L*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0807382

Lab ID	0807382-005A	0807382-006A	0807382-007A	0807382-008A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-4-Deep	VS-1-Shallow	VS-2-Shallow	VS-3-Shallow	
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor	
Initial Pressure (psia)	11.96	11.86	11.76	11.51	
Final Pressure (psia)	23.83	23.72	23.46	23.02	
DF	1	1	1	1	

Compound	Concentration				nL/L	ug/L
Benzene	ND	ND	ND	ND	2.0	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	2.0	NA
Ethylbenzene	ND	ND	ND	ND	2.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	2.0	NA
Toluene	ND	ND	ND	ND	2.0	NA
Xylenes	ND	ND	ND	ND	6.0	NA

Surrogate Recoveries (%)

%SS1:	92	100	94	94
%SS2:	102	106	102	102
%SS3:	93	99	94	94

Comments

*vapor samples are reported in nL/L.

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

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



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
		Date Received: 07/16/08
	Client Contact: Adrian Angel	Date Extracted: 07/18/08-07/23/08
	Client P.O.:	Date Analyzed 07/18/08-07/23/08

Volatile Organic Compounds in nL/L*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0807382

Lab ID	0807382-009A				Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-4-Shallow				
Matrix	Soil Vapor				
Initial Pressure (psia)	11.65				
Final Pressure (psia)	23.2				
DF	1				Soil Vapor W

Compound	Concentration				nL/L	ug/L
Benzene	ND				2.0	NA
1,2-Dibromoethane (EDB)	ND				2.0	NA
Ethylbenzene	ND				2.0	NA
Methyl-t-butyl ether (MTBE)	ND				2.0	NA
Toluene	ND				2.0	NA
Xylenes	ND				6.0	NA

Surrogate Recoveries (%)

%SS1:	100			
%SS2:	108			
%SS3:	99			

Comments

*vapor samples are reported in nL/L.

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

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



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
		Date Received: 07/16/08
	Client Contact: Adrian Angel	Date Extracted: 07/21/08
	Client P.O.:	Date Analyzed 07/21/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline in $\mu\text{g}/\text{m}^3$ *

Extraction method TO3

Analytical methods TO3

Work Order: 0807382

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	TPH(g)	DF	% SS
001A	VS-1-Deep	SoilVapor	11.83	23.6	ND	1	N/A
002A	VS-2-Deep	SoilVapor	12.12	24.18	ND	1	N/A
003A	VS-3-Deep	SoilVapor	12.75	25.38	ND	1	N/A
004A	VS-3-Deep-Dup	SoilVapor	12.52	25.04	ND	1	N/A
005A	VS-4-Deep	SoilVapor	11.96	23.83	ND	1	N/A
006A	VS-1-Shallow	SoilVapor	11.86	23.72	ND	1	N/A
007A	VS-2-Shallow	SoilVapor	11.76	23.46	ND	1	N/A
008A	VS-3-Shallow	SoilVapor	11.51	23.02	ND	1	N/A
009A	VS-4-Shallow	SoilVapor	11.65	23.2	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	SoilVapor	psia	psia	1800	$\mu\text{g}/\text{m}^3$

*soil vapor samples are reported in $\mu\text{g}/\text{m}^3$.

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

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



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/14/08
		Date Received: 07/16/08
	Client Contact: Adrian Angel	Date Extracted: 07/21/08
	Client P.O.:	Date Analyzed 07/21/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline in nL/L*

Extraction method TO3

Analytical methods TO3

Work Order: 0807382

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	TPH(g)	DF	% SS
001A	VS-1-Deep	SoilVapor	11.83	23.6	ND	1	N/A
002A	VS-2-Deep	SoilVapor	12.12	24.18	ND	1	N/A
003A	VS-3-Deep	SoilVapor	12.75	25.38	ND	1	N/A
004A	VS-3-Deep-Dup	SoilVapor	12.52	25.04	ND	1	N/A
005A	VS-4-Deep	SoilVapor	11.96	23.83	ND	1	N/A
006A	VS-1-Shallow	SoilVapor	11.86	23.72	ND	1	N/A
007A	VS-2-Shallow	SoilVapor	11.76	23.46	ND	1	N/A
008A	VS-3-Shallow	SoilVapor	11.51	23.02	ND	1	N/A
009A	VS-4-Shallow	SoilVapor	11.65	23.2	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	SoilVapor	psia	psia	500	nL/L

*soil vapor samples are reported in nL/L.

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

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



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #270308; Allen	Date Sampled: 08/04/08
		Date Received: 08/06/08
	Client Contact: Adrian Angel	Date Reported: 08/14/08
	Client P.O.:	Date Completed: 08/14/08

WorkOrder: 0808156

August 14, 2008

Dear Adrian:

Enclosed within are:

- 1) The results of the **9** analyzed samples from your project: **#270308; Allen,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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

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

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

0808156

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

Report To: *Adrian Angel* Bill To: *Same*
 Company: *AEI Consultants*
2500 Camino Diablo
Walnut Creek, CA E-Mail: *aangel@aeiconsultants.com*
 Tele: (925) 273-6000 Fax: (925) 283-6121
 Project #: *270308* Project Name: *Allen*
 Project Location: *325 MCK Oakland CA*
 Sampler Signature: *[Signature]*

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

EDF Required? *yes* Coelt (Normal) No Write On (DW) No *PDF please*

RUSH 24 HR 48 HR 72 HR 5 DAY

Date		Pressure/Vacuum	
By	Date	psi	psi

Notes:

Field Sample ID (Location)	Collection		Canister SN#	Sampler Kit SN#
	Date	Time		
<i>VS-1- Shallow-Dup</i>	<i>8/4/08</i>	<i>1:00P</i>		
<i>VS-1- Shallow</i>		<i>12:45P</i>		
<i>VS-2- Shallow</i>		<i>11:10A</i>		
<i>VS-3- Shallow</i>		<i>3:15P</i>		
<i>VS-4- Shallow</i>		<i>2:10P</i>		
<i>VS-1- Deep</i>		<i>1:45P</i>		
<i>VS-2- Deep</i>		<i>10:30A</i>		
<i>VS-3- Deep</i>		<i>3:30P</i>		
<i>VS-4- Deep</i>		<i>2:30P</i>		

Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum			
			Initial	Final	Receipt	Final (psi)
<i>TPH-g (TO3)+MBTEX</i>			<i>-30</i>	<i>-5</i>		
<i>+ Isopropyl alcohol (TO15)</i>			<i>-30</i>	<i>-5</i>		
<i>for all canisters read 8/6/08</i>			<i>-30</i>	<i>-5</i>		

Relinquished By: *[Signature]* Date: *8/4/08* Time: *2:30P* Received By: *Donk Cast*

Relinquished By: *Donk Cast* Date: *8/6/08* Time: *1640* Received By: *Joe Valle*

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

Temp (°C): *N/A* Work Order #: *0808156*

Condition: _____

Custody Seals Intact?: Yes _____ No _____ None _____

Shipped Via: _____

McC Campbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0808156

ClientCode: AEL

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:	Adrian Angel	Email: aangel@aeiconsultants.com	Bill to:	Denise Mockel	Requested TAT: 5 days
	AEI Consultants	cc:		AEI Consultants	Date Received: 08/06/2008
	2500 Camino Diablo, Ste. #200	PO:		2500 Camino Diablo, Ste. #200	Date Printed: 08/06/2008
	Walnut Creek, CA 94597	ProjectNo: #270308; Allen		Walnut Creek, CA 94597	
	(408) 559-7600 FAX (408) 559-7601			dmockel@aeiconsultants.com	

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0808156-001	VS-1-Shallow-Dup	Soil Vapor	8/4/2008 13:00	<input type="checkbox"/>	A	A										
0808156-002	VS-1-Shallow	Soil Vapor	8/4/2008 12:45	<input type="checkbox"/>		A										
0808156-003	VS-2-Shallow	Soil Vapor	8/4/2008 11:10	<input type="checkbox"/>		A										
0808156-004	VS-3-Shallow	Soil Vapor	8/4/2008 15:15	<input type="checkbox"/>		A										
0808156-005	VS-4-Shallow	Soil Vapor	8/4/2008 14:10	<input type="checkbox"/>		A										
0808156-006	VS-1-Deep	Soil Vapor	8/4/2008 13:45	<input type="checkbox"/>		A										
0808156-007	VS-2-Deep	Soil Vapor	8/4/2008 10:30	<input type="checkbox"/>		A										
0808156-008	VS-3-Deep	Soil Vapor	8/4/2008 15:30	<input type="checkbox"/>		A										
0808156-009	VS-4-Deep	Soil Vapor	8/4/2008 14:30	<input type="checkbox"/>		A										

Test Legend:

1	PREF REPORT	2	TO3_SOILGAS	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A contain testgroup.

Prepared by: Melissa Valles

Comments:

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



Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **8/6/08 5:52:24 PM**

Project Name: **#270308; Allen**

Checklist completed and reviewed by: **Melissa Valles**

WorkOrder N°: **0808156** Matrix Soil Vapor

Carrier: Derik Cartan (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No
- Container/Temp Blank temperature Cooler Temp: NA
- Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
- Sample labels checked for correct preservation? Yes No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes No NA
- Samples Received on Ice? Yes No

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

Client contacted:

Date contacted:

Contacted by:

Comments:



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #270308; Allen	Date Sampled: 08/04/08
		Date Received: 08/06/08
	Client Contact: Adrian Angel	Date Extracted: 08/07/08-08/13/08
	Client P.O.:	Date Analyzed: 08/07/08-08/13/08

Leak Check Compound*

Extraction method: TO15

Analytical methods: TO15

Work Order: 0808156

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Isopropyl Alcohol	DF	% SS
001A	VS-1-Shallow-Dup	Soil Vapor	11.85	23.65	ND	1	N/A
002A	VS-1-Shallow	Soil Vapor	11.85	23.56	ND	1	N/A
003A	VS-2-Shallow	Soil Vapor	12.38	24.66	ND	1	N/A
004A	VS-3-Shallow	Soil Vapor	11.6	23.14	ND	1	N/A
005A	VS-4-Shallow	Soil Vapor	12.14	24.2	ND	1	N/A
006A	VS-1-Deep	Soil Vapor	12.36	24.64	ND	4	N/A
007A	VS-2-Deep	Soil Vapor	11.85	23.6	ND	1	N/A
008A	VS-3-Deep	Soil Vapor	12.15	24.2	ND	1	N/A
009A	VS-4-Deep	Soil Vapor	11.96	23.9	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	Soil Vapor	psia	psia	10	µg/L

* leak check compound is reported in µg/L.

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

The IPA reference is:

DTSC, Advisory-Active Soil Gas Investigations, January 28, 2003, page 10, section 2.4.2

"Tracer compounds, such as ...isopropanol..., may be used as leak check compounds, if a detection limit of 10 µg/L or less can be achieved." This implies that 10µg/L is the cut off definition for a leak, which equals 10,000 µg/m3.

The other low IPA hits may be due to extremely small leaks or may be naturally occurring in soil gas, particularly at biologically active sites.

 Angela Rydelius, Lab Manager



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		Date Received: 08/06/08
	Client Contact: Adrian Angel	Date Extracted: 08/07/08-08/13/08
	Client P.O.:	Date Analyzed 08/07/08-08/13/08

Leak Check Compound*

Extraction method TO15

Analytical methods TO15

Work Order: 0808156

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Isopropyl Alcohol	DF	% SS
001A	VS-1-Shallow-Dup	Soil Vapor	11.85	23.65	ND	1	N/A
002A	VS-1-Shallow	Soil Vapor	11.85	23.56	ND	1	N/A
003A	VS-2-Shallow	Soil Vapor	12.38	24.66	ND	1	N/A
004A	VS-3-Shallow	Soil Vapor	11.6	23.14	ND	1	N/A
005A	VS-4-Shallow	Soil Vapor	12.14	24.2	ND	1	N/A
006A	VS-1-Deep	Soil Vapor	12.36	24.64	ND	4	N/A
007A	VS-2-Deep	Soil Vapor	11.85	23.6	ND	1	N/A
008A	VS-3-Deep	Soil Vapor	12.15	24.2	ND	1	N/A
009A	VS-4-Deep	Soil Vapor	11.96	23.9	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	Soil Vapor	psia	psia	10	µg/L

* leak check compound is reported in µg/L.

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

The IPA reference is:

DTSC, Advisory-Active Soil Gas Investigations, January 28, 2003, page 10, section 2.4.2

"Tracer compounds, such as ...isopropanol..., may be used as leak check compounds, if a detection limit of 10 ug/L or less can be achieved."
This implies that 10ug/L is the cut off definition for a leak, which equals 10,000 ug/m3.
The other low IPA hits may be due to extremely small leaks or may be naturally occurring in soil gas, particularly at biologically active sites.

 Angela Rydelius, Lab Manager



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #270308; Allen	Date Sampled: 08/04/08
		Date Received: 08/06/08
	Client Contact: Adrian Angel	Date Extracted: 08/07/08-08/08/08
	Client P.O.:	Date Analyzed 08/07/08-08/08/08

Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$ *

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0808156

Lab ID	0808156-001A	0808156-002A	0808156-003A	0808156-004A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-1-Shallow-Dup	VS-1-Shallow	VS-2-Shallow	VS-3-Shallow	
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor	
Initial Pressure (psia)	11.85	11.85	12.38	11.6	
Final Pressure (psia)	23.65	23.56	24.66	23.14	
DF	1	1	1	1	

Soil Vapor

W

Compound	Concentration				$\mu\text{g}/\text{m}^3$	ug/L
Benzene	ND	ND	ND	ND	6.5	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	16	NA
Ethylbenzene	ND	ND	ND	ND	8.8	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	7.3	NA
Toluene	ND	ND	ND	ND	7.7	NA
Xylenes	ND	ND	ND	ND	27	NA

Surrogate Recoveries (%)

%SS1:	97	103	102	101
%SS2:	98	103	103	103
%SS3:	102	110	108	108

Comments

*vapor samples are reported in $\mu\text{g}/\text{m}^3$.

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

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



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	Client P.O.:	Date Analyzed 08/07/08-08/08/08

Volatile Organic Compounds in µg/m³*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0808156

Lab ID	0808156-005A	0808156-006A	0808156-007A	0808156-008A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-4-Shallow	VS-1-Deep	VS-2-Deep	VS-3-Deep	
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor	
Initial Pressure (psia)	12.14	12.36	11.85	12.15	
Final Pressure (psia)	24.2	24.64	23.6	24.2	
DF	1	1	1	1	

Soil Vapor W

Compound	Concentration				µg/m ³	ug/L
Benzene	ND	ND	ND	ND	6.5	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	16	NA
Ethylbenzene	ND	ND	ND	ND	8.8	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	7.3	NA
Toluene	ND	ND	ND	ND	7.7	NA
Xylenes	ND	ND	ND	ND	27	NA

Surrogate Recoveries (%)

%SS1:	100	98	98	98
%SS2:	100	98	101	100
%SS3:	105	103	105	104

Comments

*vapor samples are reported in µg/m³.

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

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



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Volatile Organic Compounds in $\mu\text{g}/\text{m}^3$ *

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0808156

Lab ID	0808156-009A				Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-4-Deep				
Matrix	Soil Vapor				
Initial Pressure (psia)	11.96				
Final Pressure (psia)	23.9				
DF	1				

Soil Vapor W

Compound	Concentration				$\mu\text{g}/\text{m}^3$	ug/L
Benzene	ND				6.5	NA
1,2-Dibromoethane (EDB)	ND				16	NA
Ethylbenzene	ND				8.8	NA
Methyl-t-butyl ether (MTBE)	ND				7.3	NA
Toluene	ND				7.7	NA
Xylenes	ND				27	NA

Surrogate Recoveries (%)

%SS1:	98			
%SS2:	100			
%SS3:	105			

Comments

*vapor samples are reported in $\mu\text{g}/\text{m}^3$.

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

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



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Volatile Organic Compounds in nL/L*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0808156

Lab ID	0808156-001A	0808156-002A	0808156-003A	0808156-004A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-1-Shallow-Dup	VS-1-Shallow	VS-2-Shallow	VS-3-Shallow	
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor	
Initial Pressure (psia)	11.85	11.85	12.38	11.6	
Final Pressure (psia)	23.65	23.56	24.66	23.14	
DF	1	1	1	1	

Soil Vapor W

Compound	Concentration				nL/L	ug/L
Benzene	ND	ND	ND	ND	2.0	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	2.0	NA
Ethylbenzene	ND	ND	ND	ND	2.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	2.0	NA
Toluene	ND	ND	ND	ND	2.0	NA
Xylenes	ND	ND	ND	ND	6.0	NA

Surrogate Recoveries (%)

%SS1:	97	103	102	101
%SS2:	98	103	103	103
%SS3:	102	110	108	108

Comments

*vapor samples are reported in nL/L.

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

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



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Volatile Organic Compounds in nL/L*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0808156

Lab ID	0808156-005A	0808156-006A	0808156-007A	0808156-008A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-4-Shallow	VS-1-Deep	VS-2-Deep	VS-3-Deep	
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor	
Initial Pressure (psia)	12.14	12.36	11.85	12.15	
Final Pressure (psia)	24.2	24.64	23.6	24.2	
DF	1	1	1	1	

Soil Vapor W

Compound	Concentration				nL/L	ug/L
Benzene	ND	ND	ND	ND	2.0	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	2.0	NA
Ethylbenzene	ND	ND	ND	ND	2.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	2.0	NA
Toluene	ND	ND	ND	ND	2.0	NA
Xylenes	ND	ND	ND	ND	6.0	NA

Surrogate Recoveries (%)

%SS1:	100	98	98	98
%SS2:	100	98	101	100
%SS3:	105	103	105	104

Comments

*vapor samples are reported in nL/L.

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

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



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	Client Contact: Adrian Angel	Date Extracted: 08/07/08-08/08/08
	Client P.O.:	Date Analyzed 08/07/08-08/08/08

Volatile Organic Compounds in nL/L*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 0808156

Lab ID	0808156-009A				Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-4-Deep				
Matrix	Soil Vapor				
Initial Pressure (psia)	11.96				
Final Pressure (psia)	23.9				
DF	1				

Soil Vapor W

Compound	Concentration				nL/L	ug/L
Benzene	ND				2.0	NA
1,2-Dibromoethane (EDB)	ND				2.0	NA
Ethylbenzene	ND				2.0	NA
Methyl-t-butyl ether (MTBE)	ND				2.0	NA
Toluene	ND				2.0	NA
Xylenes	ND				6.0	NA

Surrogate Recoveries (%)

%SS1:	98			
%SS2:	100			
%SS3:	105			

Comments

*vapor samples are reported in nL/L.

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

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



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		Date Received: 08/06/08
	Client Contact: Adrian Angel	Date Extracted: 08/13/08
	Client P.O.:	Date Analyzed 08/13/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline in $\mu\text{g}/\text{m}^3$ *

Extraction method TO3

Analytical methods TO3

Work Order: 0808156

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	TPH(g)	DF	% SS
001A	VS-1-Shallow-Dup	Soil Vapor	11.85	23.65	ND	1	N/A
002A	VS-1-Shallow	Soil Vapor	11.85	23.66	ND	1	N/A
003A	VS-2-Shallow	Soil Vapor	12.38	24.66	ND	1	N/A
004A	VS-3-Shallow	Soil Vapor	11.6	23.14	ND	1	N/A
005A	VS-4-Shallow	Soil Vapor	12.14	24.2	ND	1	N/A
006A	VS-1-Deep	Soil Vapor	12.36	24.64	ND	1	N/A
007A	VS-2-Deep	Soil Vapor	11.85	23.6	ND	1	N/A
008A	VS-3-Deep	Soil Vapor	12.15	24.2	ND	1	N/A
009A	VS-4-Deep	Soil Vapor	11.96	23.9	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	Soil Vapor	psia	psia	1800	$\mu\text{g}/\text{m}^3$

*soil vapor samples are reported in $\mu\text{g}/\text{m}^3$.

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

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



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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #270308; Allen	Date Sampled: 08/04/08
		Date Received: 08/06/08
	Client Contact: Adrian Angel	Date Extracted: 08/13/08
	Client P.O.:	Date Analyzed 08/13/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline in nL/L*

Extraction method TO3

Analytical methods TO3

Work Order: 0808156

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	TPH(g)	DF	% SS
001A	VS-1-Shallow-Dup	Soil Vapor	11.85	23.65	ND	1	N/A
002A	VS-1-Shallow	Soil Vapor	11.85	23.66	ND	1	N/A
003A	VS-2-Shallow	Soil Vapor	12.38	24.66	ND	1	N/A
004A	VS-3-Shallow	Soil Vapor	11.6	23.14	ND	1	N/A
005A	VS-4-Shallow	Soil Vapor	12.14	24.2	ND	1	N/A
006A	VS-1-Deep	Soil Vapor	12.36	24.64	ND	1	N/A
007A	VS-2-Deep	Soil Vapor	11.85	23.6	ND	1	N/A
008A	VS-3-Deep	Soil Vapor	12.15	24.2	ND	1	N/A
009A	VS-4-Deep	Soil Vapor	11.96	23.9	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	Soil Vapor	psia	psia	500	nL/L

*soil vapor samples are reported in nL/L.

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

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



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soil Vapor

QC Matrix: Soil Vapor

BatchID: 37316

WorkOrder: 0808156

EPA Method TO15		Extraction TO15							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Acetone	N/A	25	N/A	N/A	N/A	80	83.5	4.34	N/A	N/A	70 - 130	30
Acrylonitrile	N/A	25	N/A	N/A	N/A	117	118	0.938	N/A	N/A	70 - 130	30
tert-Amyl methyl ether (TAME)	N/A	25	N/A	N/A	N/A	115	116	0.626	N/A	N/A	70 - 130	30
Benzene	N/A	25	N/A	N/A	N/A	111	111	0	N/A	N/A	70 - 130	30
Benzyl chloride	N/A	25	N/A	N/A	N/A	113	112	1.69	N/A	N/A	70 - 130	30
Bromodichloromethane	N/A	25	N/A	N/A	N/A	119	118	0.764	N/A	N/A	70 - 130	30
Bromoform	N/A	25	N/A	N/A	N/A	102	102	0	N/A	N/A	70 - 130	30
Bromomethane	N/A	25	N/A	N/A	N/A	116	116	0	N/A	N/A	70 - 130	30
2-Butanone (MEK)	N/A	25	N/A	N/A	N/A	113	114	0.137	N/A	N/A	70 - 130	30
t-Butyl alcohol (TBA)	N/A	25	N/A	N/A	N/A	102	106	4.02	N/A	N/A	70 - 130	30
Carbon Disulfide	N/A	25	N/A	N/A	N/A	109	108	0.407	N/A	N/A	70 - 130	30
Carbon Tetrachloride	N/A	25	N/A	N/A	N/A	128	129	0.905	N/A	N/A	70 - 130	30
Chlorobenzene	N/A	25	N/A	N/A	N/A	113	113	0	N/A	N/A	70 - 130	30
Chloroethane	N/A	25	N/A	N/A	N/A	107	106	0.974	N/A	N/A	70 - 130	30
Chloroform	N/A	25	N/A	N/A	N/A	115	116	0.938	N/A	N/A	70 - 130	30
Chloromethane	N/A	25	N/A	N/A	N/A	109	113	4.23	N/A	N/A	70 - 130	30
Cyclohexane	N/A	25	N/A	N/A	N/A	96.7	97.7	1.03	N/A	N/A	70 - 130	30
1,2-Dibromo-3-chloropropane	N/A	25	N/A	N/A	N/A	92.7	92.6	0.173	N/A	N/A	70 - 130	30
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	120	119	0.855	N/A	N/A	70 - 130	30
1,2-Dichlorobenzene	N/A	25	N/A	N/A	N/A	103	103	0	N/A	N/A	70 - 130	30
1,3-Dichlorobenzene	N/A	25	N/A	N/A	N/A	115	114	0.690	N/A	N/A	70 - 130	30
1,4-Dichlorobenzene	N/A	25	N/A	N/A	N/A	115	113	1.81	N/A	N/A	70 - 130	30
Dichlorodifluoromethane	N/A	25	N/A	N/A	N/A	102	104	2.03	N/A	N/A	70 - 130	30
1,1-Dichloroethane	N/A	25	N/A	N/A	N/A	118	120	1.31	N/A	N/A	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	110	112	2.03	N/A	N/A	70 - 130	30
1,1-Dichloroethene	N/A	25	N/A	N/A	N/A	117	118	1.22	N/A	N/A	70 - 130	30
cis-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	119	119	0	N/A	N/A	70 - 130	30
trans-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	124	126	1.42	N/A	N/A	70 - 130	30
1,2-Dichloropropane	N/A	25	N/A	N/A	N/A	108	108	0	N/A	N/A	70 - 130	30
cis-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	128	128	0	N/A	N/A	70 - 130	30
trans-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	122	123	1.02	N/A	N/A	70 - 130	30

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soil Vapor

QC Matrix: Soil Vapor

BatchID: 37316

WorkOrder: 0808156

Analyte	EPA Method TO15 Extraction TO15								Spiked Sample ID: N/A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
1,2-Dichloro-1,1,2,2-tetrafluoroetha	N/A	25	N/A	N/A	N/A	120	128	6.22	N/A	N/A	70 - 130	30
Diisopropyl ether (DIPE)	N/A	25	N/A	N/A	N/A	118	119	0.549	N/A	N/A	70 - 130	30
1,4-Dioxane	N/A	25	N/A	N/A	N/A	86.7	86.2	0.535	N/A	N/A	70 - 130	30
Ethanol	N/A	25	N/A	N/A	N/A	96.1	94.6	1.64	N/A	N/A	70 - 130	30
Ethyl acetate	N/A	25	N/A	N/A	N/A	118	119	0.624	N/A	N/A	70 - 130	30
Ethyl tert-butyl ether (ETBE)	N/A	25	N/A	N/A	N/A	121	122	0.756	N/A	N/A	70 - 130	30
Ethylbenzene	N/A	25	N/A	N/A	N/A	122	122	0	N/A	N/A	70 - 130	30
4-Ethyltoluene	N/A	25	N/A	N/A	N/A	121	123	1.03	N/A	N/A	70 - 130	30
Freon 113	N/A	25	N/A	N/A	N/A	128	129	0.687	N/A	N/A	70 - 130	30
Heptane	N/A	25	N/A	N/A	N/A	111	111	0	N/A	N/A	70 - 130	30
Hexachlorobutadiene	N/A	25	N/A	N/A	N/A	105	104	0.833	N/A	N/A	70 - 130	30
Hexane	N/A	25	N/A	N/A	N/A	120	121	1.05	N/A	N/A	70 - 130	30
2-Hexanone	N/A	25	N/A	N/A	N/A	102	101	0.361	N/A	N/A	70 - 130	30
Isopropyl Alcohol	N/A	25	N/A	N/A	N/A	94.4	99.4	5.09	N/A	N/A	70 - 130	30
4-Methyl-2-pentanone (MIBK)	N/A	25	N/A	N/A	N/A	114	113	0.452	N/A	N/A	70 - 130	30
Methyl-t-butyl ether (MTBE)	N/A	25	N/A	N/A	N/A	128	130	2.17	N/A	N/A	70 - 130	30
Methylene chloride	N/A	25	N/A	N/A	N/A	106	108	1.92	N/A	N/A	70 - 130	30
Naphthalene	N/A	25	N/A	N/A	N/A	83.1	82.8	0.412	N/A	N/A	70 - 130	30
Propene	N/A	25	N/A	N/A	N/A	86.5	85.8	0.747	N/A	N/A	70 - 130	30
Styrene	N/A	25	N/A	N/A	N/A	129	128	0.238	N/A	N/A	70 - 130	30
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	129	129	0	N/A	N/A	70 - 130	30
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	114	114	0	N/A	N/A	70 - 130	30
Tetrachloroethene	N/A	25	N/A	N/A	N/A	100	99.7	0.448	N/A	N/A	70 - 130	30
Tetrahydrofuran	N/A	25	N/A	N/A	N/A	93.7	93.5	0.160	N/A	N/A	70 - 130	30
Toluene	N/A	25	N/A	N/A	N/A	112	112	0	N/A	N/A	70 - 130	30
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	85.7	84.9	0.884	N/A	N/A	70 - 130	30
1,1,1-Trichloroethane	N/A	25	N/A	N/A	N/A	118	119	0.585	N/A	N/A	70 - 130	30
1,1,2-Trichloroethane	N/A	25	N/A	N/A	N/A	112	113	0.791	N/A	N/A	70 - 130	30
Trichloroethene	N/A	25	N/A	N/A	N/A	117	117	0	N/A	N/A	70 - 130	30
Trichlorofluoromethane	N/A	25	N/A	N/A	N/A	111	92.2	18.4	N/A	N/A	70 - 130	30
1,2,4-Trimethylbenzene	N/A	25	N/A	N/A	N/A	116	116	0	N/A	N/A	70 - 130	30

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soil Vapor

QC Matrix: Soil Vapor

BatchID: 37316

WorkOrder: 0808156

Analyte	EPA Method TO15			Extraction TO15					Spiked Sample ID: N/A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
1,3,5-Trimethylbenzene	N/A	25	N/A	N/A	N/A	120	118	2.31	N/A	N/A	70 - 130	30
Vinyl Acetate	N/A	25	N/A	N/A	N/A	115	115	0	N/A	N/A	70 - 130	30
Vinyl Chloride	N/A	25	N/A	N/A	N/A	83.6	99.4	17.2	N/A	N/A	70 - 130	30
Xylenes	N/A	75	N/A	N/A	N/A	125	124	0.581	N/A	N/A	70 - 130	30
%SS1:	N/A	500	N/A	N/A	N/A	120	124	2.52	N/A	N/A	70 - 130	30
%SS2:	N/A	500	N/A	N/A	N/A	119	119	0	N/A	N/A	70 - 130	30
%SS3:	N/A	500	N/A	N/A	N/A	127	125	0.973	N/A	N/A	70 - 130	30

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

BATCH 37316 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808156-001A	08/04/08 1:00 PM	08/07/08	08/07/08 3:36 PM	0808156-002A	08/04/08 12:45 PM	08/07/08	08/07/08 4:21 PM
0808156-003A	08/04/08 11:10 AM	08/07/08	08/07/08 5:07 PM	0808156-004A	08/04/08 3:15 PM	08/07/08	08/07/08 5:53 PM
0808156-005A	08/04/08 2:10 PM	08/08/08	08/08/08 5:18 PM	0808156-006A	08/04/08 1:45 PM	08/13/08	08/13/08 10:24 AM
0808156-007A	08/04/08 10:30 AM	08/08/08	08/08/08 6:54 PM	0808156-008A	08/04/08 3:30 PM	08/08/08	08/08/08 7:35 PM
0808156-009A	08/04/08 2:30 PM	08/08/08	08/08/08 8:17 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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



QC SUMMARY REPORT FOR TO3

W.O. Sample Matrix: Soil Vapor

QC Matrix: Soil Vapor

BatchID: 37439

WorkOrder 0808156

EPA Method TO3		Extraction TO3							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(g)	N/A	1250	N/A	N/A	N/A	101	101	0	N/A	N/A	70 - 130	20

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

BATCH 37439 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0808156-001A	08/04/08 1:00 PM	08/13/08	08/13/08 1:28 PM	0808156-002A	08/04/08 12:45 PM	08/13/08	08/13/08 2:04 PM
0808156-003A	08/04/08 11:10 AM	08/13/08	08/13/08 2:40 PM	0808156-004A	08/04/08 3:15 PM	08/13/08	08/13/08 3:17 PM
0808156-005A	08/04/08 2:10 PM	08/13/08	08/13/08 3:53 PM	0808156-006A	08/04/08 1:45 PM	08/13/08	08/13/08 4:29 PM
0808156-007A	08/04/08 10:30 AM	08/13/08	08/13/08 5:05 PM	0808156-008A	08/04/08 3:30 PM	08/13/08	08/13/08 5:44 PM
0808156-009A	08/04/08 2:30 PM	08/13/08	08/13/08 6:21 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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

APPENDIX D

**April 3, 2013 Progress Monitoring
Laboratory Analytical
and
Chain of Custody Documentation**



Analytical Report

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 04/03/13
		Date Received: 04/04/13
	Client Contact: Robert Flory	Date Reported: 04/09/13
	Client P.O.: #WC084040	Date Completed: 04/08/13

WorkOrder: 1304180

April 10, 2013

Dear Robert:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **#277915; Allen,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

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

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

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

1304180

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565

Telephone: (925) 252-9262

Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR **5 DAY**

EDF Required? Yes No

Email PDF Report: YES

Report To: Robert Flory Bill To: Same
Company: AEI Consultants PO #: WCO083825
2500 Camino Diablo
Walnut Creek, CA 94597 E-Mail: rflory@aeiconsultants.com
Tel: (925) 746-6000 Fax: (925) 946-6099
Project #: 277915 PO: WC084040 Project Name: Allen
Project Location: 325 Martin Luther King Jr. Way
Sampler Signature: *John Sigg*

Analysis Request

Other

Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED								
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO ₃	Other					
+ MW-3		4-3-13	1030	3		X					X	X							
+ IW-3		4-3-13	1100	3		X					X	X							
+ IW-4		4-3-13	1130	3		X					X	X							

MBTEX & TPH as Gas (602/8020 + 8015)	
TPH as Diesel (8015) w/ silica gel cleanup	
Total Petroleum Oil & Grease (5520 E&F/B&F)	
Total Petroleum Hydrocarbons (418.1)	
HVOCs EPA 8260 (8010 list)	
BTEX ONLY (EPA 602 / 8020)	
Pesticides EPA 608 / 8080	
PCBs EPA 608 / 8080	
VOCs EPA 624 / 8260	
EPA 625 / 8270	
PAH's / PNA's by EPA 625 / 8270 / 8310	
CAM-17 Metals	
LUFT 5 Metals	
Lead (7240/7421/239.2/6010)	
Diss Hexachrome (E218.6)	
Arsenic, Barium, Cadmium, Total Chromium, Copper, total Iron, Lead, Selenium (E200.8)	
5 Fuel Additives, EDB, and 1,2-DCA (8260)	
TPH-g (TO-3) + MBTEX (TO-15)	
2-propanol (TO-15)	

Relinquished By: *John Sigg* Date: 4-4-13 Time: 1303 Received By: *Mune v/b*
Relinquished By: Date: Time: Received By:
Relinquished By: Date: Time: Received By:

ICE/t° *3.8*
GOOD CONDITION PRESERVATION APPROPRIATE
HEAD SPACE ABSENT CONTAINERS
DECLORINATED IN LAB _____ PERSERVED IN LAB _____
VOAS O&G METALS OTHER



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1304180

ClientCode: AEL

WaterTrax
 WriteOn
 EDF
 Excel
 EQuIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Robert Flory
 AEI Consultants
 2500 Camino Diablo, Ste.#200
 Walnut Creek, CA 94597
 (408) 559-7600 FAX: (408) 559-7601

Email: rflory@aeiconsultants.com
 cc:
 PO: #WC084040
 ProjectNo: #277915; Allen

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

Requested TAT: 5 days

Date Received: 04/04/2013

Date Printed: 04/05/2013

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1304180-001	MW-3	Water	4/3/2013 10:30	<input type="checkbox"/>	A	A											
1304180-002	IW-3	Water	4/3/2013 11:00	<input type="checkbox"/>	A												
1304180-003	IW-4	Water	4/3/2013 11:30	<input type="checkbox"/>	A												

Test Legend:

1	G-MBTX_W	2	PREFD REPORT	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

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



Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **4/4/2013 1:03:00 PM**
 Project Name: **#277915; Allen** Login Reviewed by: **Maria Venegas**
 WorkOrder N°: **1304180** Matrix: Water Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Container/Temp Blank temperature Cooler Temp: 3.8°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

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

 Comments:



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 76222

WorkOrder: 1304180

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1304181-009A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) [£]	ND	60	98.9	99.4	0.423	97.3	70 - 130	20	70 - 130	
MTBE	ND	10	76.7	76.2	0.609	87.7	70 - 130	20	70 - 130	
Benzene	ND	10	109	110	0.756	98	70 - 130	20	70 - 130	
Toluene	ND	10	112	116	3.41	98.1	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	109	109	0	98.6	70 - 130	20	70 - 130	
Xylenes	ND	30	110	108	1.90	99.3	70 - 130	20	70 - 130	
%SS:	102	10	104	111	5.96	100	70 - 130	20	70 - 130	

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

BATCH 76222 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1304180-001A	04/03/13 10:30 AM	04/06/13	04/06/13 3:03 AM	1304180-001A	04/03/13 10:30 AM	04/09/13	04/09/13 4:40 AM
1304180-002A	04/03/13 11:00 AM	04/06/13	04/06/13 3:32 AM	1304180-003A	04/03/13 11:30 AM	04/06/13	04/06/13 4:02 AM

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

APPENDIX E

**Third Quarter 2013
Field Data Sheets**

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	ALLEN	Date of Sampling:	7/3/2013
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK ▼		
Elevation of Top of Casing (feet above msl)	14.87		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.69		
Water Elevation (feet above msl)	6.18		
Well Volumes Purged	Micropurged with peristaltic pump		
Actual Volume Purged (liters)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size							
Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
0658	1.0	17.89	7.30	1,043	7.44	235.2	
	2.0	17.85	7.15	1,040	2.96	117.1	
	3.0	17.86	7.02	1,035	2.17	165.4	
	4.0	17.89	7.00	1,032	1.80	165.0	
0708	5.0	17.92	7.00	1,030	1.65	164.7	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Purge line @ 10.0 ft b gs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	ALLEN	Date of Sampling:	7/3/2013
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK ▼		
Elevation of Top of Casing (feet above msl)	15.27		
Depth of Well	17.00		
Depth to Water (from top of casing)	8.98		
Water Elevation (feet above msl)	6.29		
Well Volumes Purged	Micropurged with peristaltic pump		
Actual Volume Purged (liters)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size							
Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
0719	1.0	18.24	7.47	1,043	3.35	220.5	
	2.0	18.26	7.27	1,035	2.25	203.3	
	3.0	18.38	7.23	1,034	2.38	194.6	
	4.0	18.42	7.33	1,034	2.41	190.2	
0729	5.0	18.43	7.35	1,037	2.45	186.2	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Purge line @ 10.0 ft b gs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	ALLEN	Date of Sampling:	7/3/2013
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK ▼		
Elevation of Top of Casing (feet above msl)	15.11		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.55		
Water Elevation (feet above msl)	6.56		
Well Volumes Purged	Micropurged with peristaltic pump		
Actual Volume Purged (liters)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size							
Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
0741	1.0	18.04	7.26	1,157	7.70	-37.7	
	2.0	17.96	7.41	1,141	4.05	-39.9	
	3.0	17.95	7.35	1,120	2.88	-30.7	
	4.0	17.96	7.21	1,105	2.33	-21.4	
0851	5.0	17.98	7.10	1,098	2.11	-13.3	slight odor

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Purge line @ 10.0 ft b gs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-1

Project Name:	ALLEN	Date of Sampling:	7/3/2013
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK ▼		
Elevation of Top of Casing (feet above msl)	15.20		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.63		
Water Elevation (feet above msl)	6.57		
Well Volumes Purged	Micropurged with peristaltic pump		
Actual Volume Purged (liters)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size							
Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
0801	1.0	18.12	6.91	766	10.11	147.6	
	2.0	18.09	6.75	768	9.42	147.8	
	3.0	18.07	6.58	768	9.19	151.1	
	4.0	18.04	6.49	770	9.10	155.3	
0811	5.0	18.03	6.39	772	9.06	158.7	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Purge line @ 10.0 ft b gs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-2

Project Name:	ALLEN	Date of Sampling:	7/3/2013
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK ▼		
Elevation of Top of Casing (feet above msl)	15.04		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.49		
Water Elevation (feet above msl)	6.55		
Well Volumes Purged	Micropurged with peristaltic pump		
Actual Volume Purged (liters)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size							
Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
0820	1.0	18.06	6.67	660	11.27	86.2	Cloudy
	2.0	18.05	6.52	651	2.87	90.6	
	3.0	18.05	6.48	646	2.30	95.1	Slight odor
	4.0	18.05	6.34	644	2.00	99.4	Clear
0830	5.0	18.04	6.19	646	1.65	104.9	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Purge line @ 10.0 ft bgs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-3

Project Name:	ALLEN	Date of Sampling:	7/3/2013
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK ▼		
Elevation of Top of Casing (feet above msl)	15.29		
Depth of Well	18.00		
Depth to Water (from top of casing)	8.68		
Water Elevation (feet above msl)	6.61		
Well Volumes Purged	Micropurged with peristaltic pump		
Actual Volume Purged (liters)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size							
Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
0843	1.0	18.39	8.00	430	4.51	21.8	Clear
	2.0	18.39	7.89	421	2.95	26.2	
	3.0	18.40	7.27	412	2.36	32.2	
	4.0	18.41	7.20	408	2.04	36.4	
0853	5.0	18.41	7.18	407	1.85	39.3	Slight odor

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Hydrocarbon odor
Purge line @ 10.0 ft bgs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-4

Project Name:	ALLEN	Date of Sampling:	7/3/2013
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK ▼		
Elevation of Top of Casing (feet above msl)	14.74		
Depth of Well	15.00		
Depth to Water (from top of casing)	8.13		
Water Elevation (feet above msl)	6.61		
Well Volumes Purged	Micropurged with peristaltic pump		
Actual Volume Purged (liters)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size							
Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
0902	1.0	18.48	8.98	313	10.10	5.8	Clear
	2.0	18.44	7.57	300	6.19	17.1	
	3.0	18.42	7.27	290	3.26	23.9	
	4.0	18.41	7.20	286	2.55	30.4	
0912	5.0	18.42	7.18	284	2.22	36.4	Slight odor

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Strong hydrocarbon odor
Purge line @ 10.0 ft b gs

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-5

Project Name:	ALLEN	Date of Sampling:	7/3/2013
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK ▼		
Elevation of Top of Casing (feet above msl)	14.54		
Depth of Well	15.00		
Depth to Water (from top of casing)	7.83		
Water Elevation (feet above msl)	6.71		
Well Volumes Purged	Micropurged with peristaltic pump		
Actual Volume Purged (liters)	5.0		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size							
Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
09.18	1.0	18.37	8.03	430	6.09		
	2.0	18.17	7.90	418	4.02		
	3.0	18.12	7.49	410	3.31		
	4.0	18.10	7.32	406	2.76		
0928	5.0	18.07	7.02	405	2.37		

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Purge line @ 10.0 ft b gs

I.D	Canister	Sampler	START	FINISH	VAC
VS-1	6165	770	0958	1003	30/5
VS-2	A7518	823	1011	1015	29/5
VS-3	6172	684	1021	1024	27/5
VS-4	A7519	768	1030	1036	30/5
VS-5	A7529	814	1043	1048	30/5

Purge w/ canister

Isopropyl Alcohol leak check



McCAMPBELL ANALYTICAL INC.

1534 WILLOW PASS ROAD / PITTSBURG, CA 94565-1701

Website: www.mccampbell.com / Email: main@mccampbell.com

Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Robert Flory Bill To: Sam

Lab Use Only

Company: AEI

Pressurized By

Date

Pressurization Gas

N2

He

2500 Camino Diablo

Walrus Creek 94567 E-Mail: rflory@aericonsultants.com

Tele: (925) 746-6000

Fax: ()

Project #: 277915

Project Name: Allen

Helium Shroud SN#:

Project Location: OAKLAND

Other:

Sampler Signature: John Sigg

Notes:

Isopropyl Alcohol LEAK CHECK

Field Sample ID (Location)	Collection		Canister SN#	Manifold / Sampler Kit SN#	Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum			
	Date	Time						Initial	Final	Receipt	Final (psi)
VS-1	7-3-13	0958	6165	770	TO15 - Flory, MATEX		X	30	5		
VS-2		1011	A7518	823	EDB & DC A		X	29	5		
VS-3		1021	6172	684	"		X	27	5		
VS-4		1030	A7519	768	"		X	30	5		
VS-5		1043	A7529	814	"		X	30	5		

Relinquished By: John Sigg Date: 7-3-13 Time: 1143 Received By: Maura

Temp (°C): _____ Work Order #: _____

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

Equipment Condition: _____

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

Shipped Via: _____

APPENDIX F

**Third Quarter 2013
Laboratory Analytical
and
Chain of Custody Documentation**



Analytical Report

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/03/13
		Date Received: 07/03/13
	Client Contact: Robert Flory	Date Reported: 07/10/13
	Client P.O.: #WC084209	Date Completed: 07/10/13

WorkOrder: 1307103

July 11, 2013

Dear Robert:

Enclosed within are:

- 1) The results of the **8** analyzed samples from your project: **#277915; Allen,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

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

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

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1307103

ClientCode: AEL

WaterTrax
 WriteOn
 EDF
 Excel
 EQuIS
 Email
 HardCopy
 ThirdParty
 J-flag

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

Email: rflory@aeiconsultants.com
 cc:
 PO: #WC084209
 ProjectNo: #277915; Allen

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

Requested TAT: 5 days

Date Received: 07/03/2013

Date Printed: 07/03/2013

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1307103-001	MW-1	Water	7/3/2013 7:08	<input type="checkbox"/>	B	A	A										
1307103-002	MW-2	Water	7/3/2013 7:29	<input type="checkbox"/>	B	A											
1307103-003	MW-3	Water	7/3/2013 7:51	<input type="checkbox"/>	B	A											
1307103-004	IW-1	Water	7/3/2013 8:11	<input type="checkbox"/>	B	A											
1307103-005	IW-2	Water	7/3/2013 8:30	<input type="checkbox"/>	B	A											
1307103-006	IW-3	Water	7/3/2013 8:53	<input type="checkbox"/>	B	A											
1307103-007	IW-4	Water	7/3/2013 9:12	<input type="checkbox"/>	B	A											
1307103-008	IW-5	Water	7/3/2013 9:28	<input type="checkbox"/>	B	A											

Test Legend:

1	5-OXYS+PBSCV_W	2	G-MBTEX_W	3	PREFDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

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



Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **7/3/2013 3:52:07 PM**
 Project Name: **#277915; Allen** LogIn Reviewed by: **Maria Venegas**
 WorkOrder N°: **1307103** Matrix: Water Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Container/Temp Blank temperature Cooler Temp: 2.5°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

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

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/03/13
		Date Received: 07/03/13
	Client Contact: Robert Flory	Date Extracted: 07/06/13-07/09/13
	Client P.O.: #WC084209	Date Analyzed: 07/06/13-07/09/13

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1307103

Lab ID	1307103-001B	1307103-002B	1307103-003B	1307103-004B	Reporting Limit for DF = 1	
Client ID	MW-1	MW-2	MW-3	IW-1		
Matrix	W	W	W	W		
DF	1	1	10	1		

Compound	Concentration				ug/kg	µg/L
	tert-Amyl methyl ether (TAME)	ND	ND	ND<5.0	ND	NA
t-Butyl alcohol (TBA)	4.5	ND	ND<20	ND	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND	ND<5.0	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	21	ND	120	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND<5.0	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND<5.0	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	0.78	ND	ND<5.0	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	108	106	100	99	
-------	-----	-----	-----	----	--

Comments

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

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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



AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/03/13
		Date Received: 07/03/13
	Client Contact: Robert Flory	Date Extracted: 07/06/13-07/09/13
	Client P.O.: #WC084209	Date Analyzed: 07/06/13-07/09/13

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1307103

Lab ID	1307103-005B	1307103-006B	1307103-007B	1307103-008B	Reporting Limit for DF =1	
Client ID	IW-2	IW-3	IW-4	IW-5		
Matrix	W	W	W	W		
DF	3.3	10	10	1		

Compound	Concentration				ug/kg	µg/L
	tert-Amyl methyl ether (TAME)	ND<1.7	ND<5.0	ND<5.0	ND	NA
t-Butyl alcohol (TBA)	33	ND<20	ND<20	ND	NA	2.0
1,2-Dibromoethane (EDB)	ND<1.7	31	87	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	29	170	150	1.5	NA	0.5
Diisopropyl ether (DIPE)	ND<1.7	ND<5.0	ND<5.0	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<1.7	ND<5.0	ND<5.0	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND<1.7	ND<5.0	ND<5.0	ND	NA	0.5

Surrogate Recoveries (%)

%SS1:	103	100	101	104	
-------	-----	-----	-----	-----	--

Comments

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.
 ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor
 # surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/03/13
		Date Received: 07/03/13
	Client Contact: Robert Flory	Date Extracted: 07/04/13-07/09/13
	Client P.O.: #WC084209	Date Analyzed: 07/04/13-07/09/13

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1307103

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	MW-1	W	ND	ND	ND	ND	ND	ND	1	101	
002A	MW-2	W	ND	ND	ND	ND	ND	ND	1	108	
003A	MW-3	W	7100	ND<180	2200	35	170	72	10	127	d1
004A	IW-1	W	ND	ND	ND	ND	ND	ND	1	104	
005A	IW-2	W	3200	ND<25	59	6.0	55	360	5	129	d1
006A	IW-3	W	24,000	ND<500	3200	2500	230	3600	100	103	d1
007A	IW-4	W	38,000	ND<500	4700	7000	620	3300	100	108	d1
008A	IW-5	W	ND	ND	ND	ND	ND	ND	1	109	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

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

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

The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:
 d1) weakly modified or unmodified gasoline is significant



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 79078

WorkOrder: 1307103

EPA Method: SW8260B		Extraction: SW5030B					Spiked Sample ID: 1306813-003C			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
tert-Amyl methyl ether (TAME)	ND	10	110	112	2.53	104	70 - 130	20	70 - 130	
Benzene	ND	10	97.4	97	0.349	91	70 - 130	20	70 - 130	
t-Butyl alcohol (TBA)	ND	40	117	121	3.35	95.6	70 - 130	20	70 - 130	
Chlorobenzene	ND	10	93.1	94.7	1.69	88.5	70 - 130	20	70 - 130	
1,2-Dibromoethane (EDB)	ND	10	110	115	3.85	100	70 - 130	20	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND	10	101	103	1.33	96	70 - 130	20	70 - 130	
Diisopropyl ether (DIPE)	ND	10	108	113	4.42	102	70 - 130	20	70 - 130	
Ethyl tert-butyl ether (ETBE)	ND	10	102	113	9.91	99	70 - 130	20	70 - 130	
Methyl-t-butyl ether (MTBE)	ND	10	103	105	1.82	95.6	70 - 130	20	70 - 130	
Toluene	ND	10	101	102	0.855	95.6	70 - 130	20	70 - 130	
Trichloroethene	ND	10	96.1	96.3	0.152	92.5	70 - 130	20	70 - 130	
%SS1:	96	25	108	106	1.96	96	70 - 130	20	70 - 130	

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

BATCH 79078 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307103-001B	07/03/13 7:08 AM	07/06/13	07/06/13 5:32 AM	1307103-002B	07/03/13 7:29 AM	07/06/13	07/06/13 6:13 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 79124

WorkOrder: 1307103

EPA Method: SW8260B		Extraction: SW5030B					Spiked Sample ID: 1307103-004B			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
tert-Amyl methyl ether (TAME)	ND	10	108	125	14.9	115	70 - 130	20	70 - 130	
Benzene	ND	10	103	108	4.06	100	70 - 130	20	70 - 130	
t-Butyl alcohol (TBA)	ND	40	96.3	132, F1	31, F1	120	70 - 130	20	70 - 130	
Chlorobenzene	ND	10	101	108	6.65	99.2	70 - 130	20	70 - 130	
1,2-Dibromoethane (EDB)	ND	10	109	127	15.2	117	70 - 130	20	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND	10	104	116	10.6	106	70 - 130	20	70 - 130	
Diisopropyl ether (DIPE)	ND	10	113	123	8.53	111	70 - 130	20	70 - 130	
Ethyl tert-butyl ether (ETBE)	ND	10	102	113	10.3	112	70 - 130	20	70 - 130	
Methyl-t-butyl ether (MTBE)	ND	10	98.2	115	15.5	106	70 - 130	20	70 - 130	
Toluene	ND	10	107	110	2.88	103	70 - 130	20	70 - 130	
Trichloroethene	ND	10	103	109	4.83	100	70 - 130	20	70 - 130	
%SS1:	99	25	104	106	2.11	105	70 - 130	20	70 - 130	

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

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

BATCH 79124 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307103-004B	07/03/13 8:11 AM	07/06/13	07/06/13 1:36 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 79157

WorkOrder: 1307103

EPA Method: SW8260B		Extraction: SW5030B					Spiked Sample ID: 1307045-009A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
tert-Amyl methyl ether (TAME)	ND	10	110	112	1.65	96.5	70 - 130	20	70 - 130	
Benzene	ND	10	87.4	91.9	5.06	87.8	70 - 130	20	70 - 130	
t-Butyl alcohol (TBA)	ND	40	121	122	0.702	94.6	70 - 130	20	70 - 130	
Chlorobenzene	ND	10	89.7	92.3	2.86	88.5	70 - 130	20	70 - 130	
1,2-Dibromoethane (EDB)	ND	10	109	110	1.19	95.4	70 - 130	20	70 - 130	
1,2-Dichloroethane (1,2-DCA)	ND	10	97.2	98.2	1.02	89.4	70 - 130	20	70 - 130	
Diisopropyl ether (DIPE)	ND	10	102	106	3.82	99.3	70 - 130	20	70 - 130	
Ethyl tert-butyl ether (ETBE)	ND	10	106	110	3.48	97.7	70 - 130	20	70 - 130	
Methyl-t-butyl ether (MTBE)	ND	10	112	114	1.36	101	70 - 130	20	70 - 130	
Toluene	ND	10	84.7	88.3	4.17	85.4	70 - 130	20	70 - 130	
Trichloroethene	0.90	10	85.8	90.9	5.26	98.6	70 - 130	20	70 - 130	
%SS1:	104	25	104	103	0.897	103	70 - 130	20	70 - 130	

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

BATCH 79157 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307103-003B	07/03/13 7:51 AM	07/09/13	07/09/13 2:12 AM	1307103-005B	07/03/13 8:30 AM	07/09/13	07/09/13 2:51 AM
1307103-006B	07/03/13 8:53 AM	07/09/13	07/09/13 3:29 AM	1307103-007B	07/03/13 9:12 AM	07/09/13	07/09/13 4:07 AM
1307103-008B	07/03/13 9:28 AM	07/09/13	07/09/13 4:45 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 79068

WorkOrder: 1307103

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1307072-001B			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	60	96.4	96.8	0.493	94.5	70 - 130	20	70 - 130	
MTBE	ND	10	107	107	0	108	70 - 130	20	70 - 130	
Benzene	ND	10	97.5	95.2	2.38	95	70 - 130	20	70 - 130	
Toluene	ND	10	98.6	96.7	1.91	95.4	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	97.9	95.7	2.23	96.1	70 - 130	20	70 - 130	
Xylenes	ND	30	101	97	3.68	98	70 - 130	20	70 - 130	
%SS:	104	10	99	99	0	99	70 - 130	20	70 - 130	

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

BATCH 79068 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307103-001A	07/03/13 7:08 AM	07/04/13	07/04/13 6:55 AM	1307103-002A	07/03/13 7:29 AM	07/04/13	07/04/13 7:25 AM
1307103-004A	07/03/13 8:11 AM	07/04/13	07/04/13 7:56 AM				

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



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 79105

WorkOrder: 1307103

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1307118-021A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	60	105	102	3.31	92.5	70 - 130	20	70 - 130	
MTBE	ND	10	93.9	98.4	4.69	85.6	70 - 130	20	70 - 130	
Benzene	ND	10	105	106	0.698	104	70 - 130	20	70 - 130	
Toluene	ND	10	106	105	0.731	105	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	111	109	2.06	106	70 - 130	20	70 - 130	
Xylenes	ND	30	112	110	1.61	107	70 - 130	20	70 - 130	
%SS:	98	10	94	96	2.43	96	70 - 130	20	70 - 130	

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

BATCH 79105 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307103-003A	07/03/13 7:51 AM	07/06/13	07/06/13 9:15 AM	1307103-003A	07/03/13 7:51 AM	07/06/13	07/06/13 7:02 PM
1307103-005A	07/03/13 8:30 AM	07/06/13	07/06/13 6:31 PM				

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



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 79169

WorkOrder: 1307103

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1307185-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	60	99.6	93.9	5.90	92.8	70 - 130	20	70 - 130	
MTBE	ND	10	103	96.6	6.24	94.8	70 - 130	20	70 - 130	
Benzene	ND	10	99.3	107	7.05	111	70 - 130	20	70 - 130	
Toluene	ND	10	102	108	5.75	113	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	101	113	10.6	112	70 - 130	20	70 - 130	
Xylenes	ND	30	103	108	4.47	112	70 - 130	20	70 - 130	
%SS:	108	10	102	103	1.41	110	70 - 130	20	70 - 130	

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

BATCH 79169 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307103-006A	07/03/13 8:53 AM	07/08/13	07/08/13 11:37 PM	1307103-007A	07/03/13 9:12 AM	07/09/13	07/09/13 1:36 AM
1307103-008A	07/03/13 9:28 AM	07/08/13	07/08/13 10:37 PM				

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



Analytical Report

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/03/13
		Date Received: 07/03/13
	Client Contact: Robert Flory	Date Reported: 07/10/13
	Client P.O.: #WC	Date Completed: 07/10/13

WorkOrder: 1307104

July 10, 2013

Dear Robert:

Enclosed within are:

- 1) The results of the **5** analyzed samples from your project: **#277915; Allen,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

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

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

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

1307104

McCAMPBELL ANALYTICAL INC.
 1534 WILLOW PASS ROAD / PITTSBURG, CA 94565-1701
 Website: www.mccampbell.com / Email: main@mccampbell.com
 Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD
 TURN AROUND TIME
 RUSH 24 HR 48 HR 72 HR 5 DAY
 EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Robert Flory Bill To: same

Lab Use Only

Company: AEI

Pressurized By	Date	Pressurization Gas	
		N2	He

2500 Camino Diablo

WATER CREEK 94597 E-Mail: rflory@aericonsultants.com

Telex: (925) 746-6000 Fax: ()

Project #: 277915 Project Name: Allen

Helium Shroud SN#:

Project Location: OAKLAND

Other:

Sampler Signature: John Sigg

Notes:
Isopropyl Alcohol LEAK CHECK

Field Sample ID (Location)	Collection		Canister SN#	Manifold / Sampler Kit SN#
	Date	Time		
VS-1	7-3-13	0958	6165	770
VS-2		1011	A7518	823
VS-3		1021	6172	684
VS-4		1030	A7519	768
VS-5		1043	A7529	814

Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum			
			Initial	Final	Receipt	Final (psi)
TO15 - PHG, MIBTEX		X	30	5		
EDB & DCA		X	29	5		
"		X	27	5		
"		X	30	5		
"		X	30	5		

Relinquished By: John Sigg Date: 7-3-13 Time: 1143 Received By: Miami 06

Temp (°C): _____ Work Order #: _____

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

Equipment Condition: _____

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

Shipped Via: _____



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1307104

ClientCode: AEL

WaterTrax
 WriteOn
 EDF
 Excel
 EQuIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

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

Email: rflory@aeiconsultants.com
cc:
PO: #WC
ProjectNo: #277915; Allen

Bill to:

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

Requested TAT:

5 days

Date Received: 07/03/2013

Date Printed: 07/03/2013

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1307104-001	VS-1	Soil Gas	7/3/2013 9:58	<input type="checkbox"/>	A												
1307104-002	VS-2	Soil Gas	7/3/2013 10:11	<input type="checkbox"/>	A												
1307104-003	VS-3	Soil Gas	7/3/2013 10:21	<input type="checkbox"/>	A												
1307104-004	VS-4	Soil Gas	7/3/2013 10:30	<input type="checkbox"/>	A												
1307104-005	VS-5	Soil Gas	7/3/2013 10:43	<input type="checkbox"/>	A												

Test Legend:

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

The following SamplIDs: 001A, 002A, 003A, 004A, 005A contain testgroup.

Prepared by: Maria Venegas

Comments:

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



Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **7/3/2013 3:59:11 PM**
 Project Name: **#277915; Allen** LogIn Reviewed by: **Maria Venegas**
 WorkOrder N°: **1307104** Matrix: Soil Gas Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Container/Temp Blank temperature Cooler Temp: NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 Samples Received on Ice? Yes No

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

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

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

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/03/13
		Date Received: 07/03/13
	Client Contact: Robert Flory	Date Reported: 07/10/13
	Client P.O.: #WC	Date Completed: 07/10/13

Work Order: 1307104

July 10, 2013

CASE NARRATIVE REGARDING TO-15 ANALYSIS

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

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

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



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/03/13
		Date Received: 07/03/13
	Client Contact: Robert Flory	Date Extracted: 07/04/13
	Client P.O.: #WC	Date Analyzed: 07/04/13

TPH gas + Volatile Organic Compounds in µg/m³*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1307104

Lab ID	1307104-001A	1307104-002A	1307104-003A	1307104-004A	Reporting Limit for DF = 1 and Pressure Ratio (Final/Initial) = 2	
Client ID	VS-1	VS-2	VS-3	VS-4		
Matrix	Soil Gas	Soil Gas	Soil Gas	Soil Gas		
Initial Pressure (psia)	12.71	12.42	11.25	12.78		
Final Pressure (psia)	25.33	24.78	22.40	25.47		
DF	1	1	1	1		
					Soil Gas	W

Compound	Concentration				µg/m ³	ug/L
Benzene	ND	ND	ND	ND	6.5	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	16	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	20	8.2	NA
Ethylbenzene	ND	45	ND	ND	8.8	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	7.3	NA
Toluene	ND	ND	ND	ND	7.7	NA
TPH(g)	ND	ND	ND	ND	1800	NA
Xylenes, Total	ND	290	ND	ND	27	NA

Surrogate Recoveries (%)

%SS1:	126	129	126	129
%SS2:	124	128	125	127
%SS3:	119	122	120	121

Comments

*vapor samples are reported in µg/m³.

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

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

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



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AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #277915; Allen	Date Sampled: 07/03/13
		Date Received: 07/03/13
	Client Contact: Robert Flory	Date Extracted: 07/04/13
	Client P.O.: #WC	Date Analyzed: 07/04/13

TPH gas + Volatile Organic Compounds in µg/m³*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1307104

Lab ID	1307104-005A				Reporting Limit for DF = 1 and Pressure Ratio (Final/Initial) = 2
Client ID	VS-5				
Matrix	Soil Gas				
Initial Pressure (psia)	12.68				
Final Pressure (psia)	25.29				
DF	1				Soil Gas W

Compound	Concentration				µg/m ³	ug/L
Benzene	ND				6.5	NA
1,2-Dibromoethane (EDB)	ND				16	NA
1,2-Dichloroethane (1,2-DCA)	ND				8.2	NA
Ethylbenzene	ND				8.8	NA
Methyl-t-butyl ether (MTBE)	ND				7.3	NA
Toluene	ND				7.7	NA
TPH(g)	ND				1800	NA
Xylenes, Total	ND				27	NA

Surrogate Recoveries (%)

%SS1:	129			
%SS2:	127			
%SS3:	122			

Comments

*vapor samples are reported in µg/m³.

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

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

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



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 79066

WorkOrder: 1307104

Analyte	Extraction: TO15		Spiked Sample ID: N/A						
	Sample nL/L	Spiked nL/L	MS % Rec.	MSD % Rec.	MS-MSD % RPD	LCS % Rec.	Acceptance Criteria (%)		
							MS / MSD	RPD	LCS
Acrylonitrile	N/A	25	N/A	N/A	N/A	98.3	N/A	N/A	60 - 140
tert-Amyl methyl ether (TAME)	N/A	25	N/A	N/A	N/A	105	N/A	N/A	60 - 140
Benzene	N/A	25	N/A	N/A	N/A	86.7	N/A	N/A	60 - 140
Benzyl chloride	N/A	25	N/A	N/A	N/A	105	N/A	N/A	60 - 140
Bromodichloromethane	N/A	25	N/A	N/A	N/A	93.2	N/A	N/A	60 - 140
Bromoform	N/A	25	N/A	N/A	N/A	79.6	N/A	N/A	60 - 140
t-Butyl alcohol (TBA)	N/A	25	N/A	N/A	N/A	90.6	N/A	N/A	60 - 140
Carbon Disulfide	N/A	25	N/A	N/A	N/A	98.2	N/A	N/A	60 - 140
Carbon Tetrachloride	N/A	25	N/A	N/A	N/A	94.2	N/A	N/A	60 - 140
Chlorobenzene	N/A	25	N/A	N/A	N/A	90.4	N/A	N/A	60 - 140
Chloroethane	N/A	25	N/A	N/A	N/A	106	N/A	N/A	60 - 140
Chloroform	N/A	25	N/A	N/A	N/A	92.2	N/A	N/A	60 - 140
Chloromethane	N/A	25	N/A	N/A	N/A	95.8	N/A	N/A	60 - 140
Dibromochloromethane	N/A	25	N/A	N/A	N/A	91.9	N/A	N/A	60 - 140
1,2-Dibromo-3-chloropropane	N/A	25	N/A	N/A	N/A	102	N/A	N/A	60 - 140
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	87.4	N/A	N/A	60 - 140
1,3-Dichlorobenzene	N/A	25	N/A	N/A	N/A	84	N/A	N/A	60 - 140
1,4-Dichlorobenzene	N/A	25	N/A	N/A	N/A	77.8	N/A	N/A	60 - 140
Dichlorodifluoromethane	N/A	25	N/A	N/A	N/A	92.7	N/A	N/A	60 - 140
1,1-Dichloroethane	N/A	25	N/A	N/A	N/A	89	N/A	N/A	60 - 140
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	92.6	N/A	N/A	60 - 140
cis-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	94.1	N/A	N/A	60 - 140
trans-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	95.3	N/A	N/A	60 - 140
1,2-Dichloropropane	N/A	25	N/A	N/A	N/A	90.6	N/A	N/A	60 - 140
cis-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	99.6	N/A	N/A	60 - 140
trans-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	104	N/A	N/A	60 - 140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	N/A	25	N/A	N/A	N/A	94	N/A	N/A	60 - 140
Diisopropyl ether (DIPE)	N/A	25	N/A	N/A	N/A	93.7	N/A	N/A	60 - 140
1,4-Dioxane	N/A	25	N/A	N/A	N/A	90.4	N/A	N/A	60 - 140
Ethyl acetate	N/A	25	N/A	N/A	N/A	93.2	N/A	N/A	60 - 140
Ethyl tert-butyl ether (ETBE)	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140

LCS = Laboratory Control Sample

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

DHS ELAP Certification 1644

 QA/QC Officer



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 79066

WorkOrder: 1307104

EPA Method: TO15		Extraction: TO15					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Ethylbenzene	N/A	25	N/A	N/A	N/A	91.1	N/A	N/A	60 - 140	
Freon 113	N/A	25	N/A	N/A	N/A	93.5	N/A	N/A	60 - 140	
Hexachlorobutadiene	N/A	25	N/A	N/A	N/A	81.5	N/A	N/A	60 - 140	
4-Methyl-2-pentanone (MIBK)	N/A	25	N/A	N/A	N/A	94.3	N/A	N/A	60 - 140	
Methyl-t-butyl ether (MTBE)	N/A	25	N/A	N/A	N/A	95.3	N/A	N/A	60 - 140	
Methylene chloride	N/A	25	N/A	N/A	N/A	87.9	N/A	N/A	60 - 140	
Naphthalene	N/A	50	N/A	N/A	N/A	86.1	N/A	N/A	60 - 140	
Styrene	N/A	25	N/A	N/A	N/A	88.9	N/A	N/A	60 - 140	
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	95.5	N/A	N/A	60 - 140	
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	83.4	N/A	N/A	60 - 140	
Tetrachloroethene	N/A	25	N/A	N/A	N/A	84.3	N/A	N/A	60 - 140	
Tetrahydrofuran	N/A	25	N/A	N/A	N/A	104	N/A	N/A	60 - 140	
Toluene	N/A	25	N/A	N/A	N/A	99	N/A	N/A	60 - 140	
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	79.8	N/A	N/A	60 - 140	
1,1,1-Trichloroethane	N/A	25	N/A	N/A	N/A	92.3	N/A	N/A	60 - 140	
1,1,2-Trichloroethane	N/A	25	N/A	N/A	N/A	88.3	N/A	N/A	60 - 140	
Trichloroethene	N/A	25	N/A	N/A	N/A	91.4	N/A	N/A	60 - 140	
1,2,4-Trimethylbenzene	N/A	25	N/A	N/A	N/A	89.2	N/A	N/A	60 - 140	
1,3,5-Trimethylbenzene	N/A	25	N/A	N/A	N/A	90.8	N/A	N/A	60 - 140	
Vinyl Chloride	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140	
Xylenes, Total	N/A	75	N/A	N/A	N/A	86.2	N/A	N/A	60 - 140	
%SS1:	N/A	500	N/A	N/A	N/A	123	N/A	N/A	60 - 140	
%SS2:	N/A	500	N/A	N/A	N/A	123	N/A	N/A	60 - 140	
%SS3:	N/A	500	N/A	N/A	N/A	118	N/A	N/A	60 - 140	

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

LCS = Laboratory Control Sample

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

DHS ELAP Certification 1644

 QA/QC Officer



QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 79066

WorkOrder: 1307104

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

BATCH 79066 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1307104-001A	07/03/13 9:58 AM	07/04/13	07/04/13 8:10 AM	1307104-001A	07/03/13 9:58 AM	07/04/13	07/04/13 8:10 AM
1307104-002A	07/03/13 10:11 AM	07/04/13	07/04/13 8:51 AM	1307104-002A	07/03/13 10:11 AM	07/04/13	07/04/13 8:51 AM
1307104-003A	07/03/13 10:21 AM	07/04/13	07/04/13 9:32 AM	1307104-003A	07/03/13 10:21 AM	07/04/13	07/04/13 9:32 AM
1307104-004A	07/03/13 10:30 AM	07/04/13	07/04/13 10:13 AM	1307104-004A	07/03/13 10:30 AM	07/04/13	07/04/13 10:13 AM
1307104-005A	07/03/13 10:43 AM	07/04/13	07/04/13 10:54 AM	1307104-005A	07/03/13 10:43 AM	07/04/13	07/04/13 10:54 AM

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

DHS ELAP Certification 1644

 QA/QC Officer

APPENDIX G
LCPT Checklist

AEI LTCP CHECK LIST SEPTEMBER 29, 2013

GENERAL CRITERIA A

The unauthorized release is located within the East Bay Municipal Utility District. The present the site has been blocked off from the larger warehouse facility and has no water service. No other water sources are on the property

GENERAL CRITERIA B

A 10,000 gallon gasoline UST was present on the site and supplied fuel for delivery trucks. The unauthorized release consists only of gasoline. One grab groundwater sample reported and one monitoring well groundwater sample have reported MTBE. Low levels of 1,2-dibromoethane (EDB) and 1,2 dichloroethane (1,2-DCA) have been reported in groundwater.

GENERAL CRITERIA C

The release was stopped when the UST was taken out of service and abandoned in place in 1993.

GENERAL CRITERIA D

Although analysis of one grab groundwater sample and groundwater samples following the ignition injection of RegenOx™ reported total hydrocarbons concentrations of hydrocarbons greater than 120,000 µg/L, no free product has been reported at the site.

GENERAL CRITERIA E

A conceptual site model was developed and described in the September 12, 2007 Soil and Groundwater Investigation report. The report also contains the survey of wells in the area and a site utility survey. The shallow sediments underlying the site are predominantly relatively stratified fine grained silty sand. The results of soil sampling indicated that the residual hydrocarbons in the soil are restricted to a "smear zone" between the depths of approximate 8.5 to 12 feet bgs. The maximum TPH-g concentration was reported in sample SB-7-10 at a concentration of 2,000 mg/kg. Depth to groundwater in MW-3 has ranged from 7.35 (3/24/2011) to 8.78 (9/18/2009, 12/14/2009).

The survey of wells found no water supply wells within a ¼ mile radius and no monitoring wells closer than 900 feet to the site. No public utilities intersect the groundwater plume which extends approximately 70 feet down gradient (southwest) from the abandoned in place UST.

The maximum concentration of TPH-g grab groundwater sample was reported in soil boring SB-7 at a concentration of 110,000 µg/L. TPH-g concentrations in groundwater monitoring well MW-3 (located 7 feet from SB-7) during the first year of monitoring ranged from 20,000 µg/L to 36,000 µg/L. This suggests that the soil boring grab water samples were biased upward due to hydrocarbons adsorbed to sediment included in the groundwater samples from the soil borings. Following the RegenOx™ injection, concentrations of TPH-g increased to 120,000 µg/L, which suggests the residual hydrocarbons were initially immobile then mobilized by the injection of the RegenOx™.

Between 2009 and 2012, dilute hydrogen peroxide was infused into wells around the abandoned UST. TPH-g concentrations in well MW-3 decreased from 59,000 µg/L in 2009 to ND<50 µg/L in September 21, 2012, then rebounded to 7,100 µg/L on July 3, 2013. TPH-g concentrations in well IW-3 decreased from 77,000 µg/L in 2009 to ND<50 µg/L on July 27, 2012, then rebounded to 2,400 µg/L on July 3, 2013. TPH-g concentrations in well IW-4 decreased from 95,000 µg/L in 2011 to 270 µg/L on July 27, 2012, and then rebounded to 38,000 µg/L on July 3, 2013.

Concentrations of dissolved oxygen in the groundwater typically exceed 1.6 mg/L. A concentration above 1.0 mg/L is considered sufficient to maintain active biodegradation.

Eight soil vapor points (VS-1 through VS-4) were installed in 2008. Four were subslab sampling points and 4 shallow soil vapor points at a depth of 5 feet bgs. A fifth shallow soil vapor probe was installed in 2013. All of the vapor points were sampled in July and August of 2008. TPH-g, Benzene, EDB, 1,2-DCA, Ethylbenzene, MTBE, Toluene, and Xylenes were all reported as non-detectable. In July of 2013, shallow vapor points VS-1 through VS-5 were sampled. Xylenes were reported in VS-2 at a concentration of 290 µg/m³ and 1,2-DCA was reported in VS-4 at a concentration of 20 µg/m³. These concentrations are well below RWQCB ESLs for soil vapor intrusion.

GENERAL CRITERIA F

Removal of the UST and excavation impacted soil was considered technically infeasible due to the close proximity of load bearing walls. An injection of the chemical oxidant RegenOx™ followed by infusion of 0.5% hydrogen peroxide into the have reduced the secondary source material to the point where groundwater impact is 1/3 of initial concentration and DO concentrations have more than doubled to 1.65 mg/L.

GENERAL CRITERIA G

Soil and groundwater have been tested for MTBE and the results are found in Tables A and B in this appendix.

GENERAL CRITERIA H

No Nuisance exists.

Soil and groundwater impact is limited to an area of less than 100 feet across. The site is covered by a warehouse building and the direct contact pathway to soil and groundwater is incomplete.

Shallow soil vapor and subslab vapor sampling no hydrocarbons above acceptable levels. Soil vapor data from 2008 and 2013 are discussed in the main body of this report and summarized in Table 4 of this report.

MEDIA SPECIFIC CRITERIA: GROUNDWATER

The plume that exceeds water quality objectives is less than 100 feet long. There is no free product and the nearest groundwater production well is more than 250 feet from the defined plume boundaries.

MEDIA SPECIFIC CRITERIA: SOIL VAPOR

The site is considered low-threat for vapor Intrusion. There is a minimum of 5 vertical feet between soil vapor measurement and the foundation of the building. The data from both 2008 soil vapor at 5 feet bgs and subslab soil vapor were non detectable and 2013 shallow (5 feet bgs) soil vapor are below soil gas criteria.

Soil analytical data from the depth of 8 feet bgs and shallower report TPH concentrations of less than 100 mg/kg (Table A Attached).

MEDIA SPECIFIC CRITERIA: DIRECT CONTACT AND OUTDOOR AIR EXPOSURE

The regulatory Agency has determined that the concentration of petroleum constituents in soil will have no significant risk or adversely affect human health (LTCP Checklist August 8, 2013)

Table A - Soil Sample Analytical Data
Allen Project, 325 Martin Luther King Jr. Way, Oakland, CA

Sample ID	Date Collected	TPH-g	TPH-d	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
		mg/kg						
		<i>Method SW8015</i>		<i>Method SW8021B</i>				
SB-2 12'	05/11/05	10	5.6	<0.05	0.25	0.071	0.33	1.6
SB-4 12'	05/11/05	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-5-10	06/06/06	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-6-10	06/06/06	5.0	3.1	<0.05	0.023	0.025	0.027	0.64
SB-7-10	06/06/06	20,000	3,300	<45	200	980	320	1,400
SB-7-17	06/06/06	9.2	3.4	<0.1	0.74	0.64	0.16	0.70
SB-8-10	06/06/06	4.7	3.0	<0.05	0.058	0.030	0.083	0.48
SB-9-10	06/30/07	7.5	4.2	<0.05	0.068	0.22	0.21	1.1
SB-10-8'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-10-16'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-11-11'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-11-16'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-12-7'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-12-12'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-13-8'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-13-14'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-14-8'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-14-12'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-15-8'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-15-12'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-16-8'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-16-12'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-17-9'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-17-12'	06/30/07	<1.0	2.7	<0.05	<0.005	<0.005	<0.005	<0.005
SB-18-8'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-18-12'	06/30/07	30	10	<0.17	0.049	0.22	0.36	1.8
SB-19-8'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-19-12'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-20-8'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-20-12'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-21-12'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-21-17'	06/30/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
MW-3-5'	08/10/07	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
MW-3-10'	08/10/07	1,500	240	<10	6.0	42	12	120

Notes:

mg/kg = milligrams per kilogram

TPH-g = Total Petroleum Hydrocarbons as gasoline

TPH-d = Total Petroleum Hydrocarbons as diesel

MTBE = Methyl tertiary butyl ether

Table B - Groundwater Sample Analytical Data
Groundwater Sample Analytical Data

Sample ID	Date Collected	TPH-g	TPH-d	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
		ug/L						
		<i>Method SW8015</i>		<i>Method SW8021B</i>				
SB-2W	05/11/05	780	420	<5.0	53	9.0	35	100
SB-4W	05/11/05	<50	<50	<5.0	<0.5	<0.005	<0.005	0.76
50901-1	09/08/05	860	740	-	6.0	7.5	22	100
50901-2	09/08/05	13,000	3,600	-	410	1,200	390	1,700
50901-3	09/08/05	20,000	2,000	-	990	3,100	590	2,300
50901-4	09/08/05	550	230	-	20	17	19	56
SB5-GW	06/06/06	<50	170	<5.0	<0.5	<0.5	<0.5	1.8
SB6-GW	06/06/06	380	290	<5.0	3.4	1.8	3.8	51
SB7-GW	06/06/06	100,000	110,000	<100	3,300	11,000	2,100	20,000
SB8-GW	06/06/06	580	550	<5.0	8.4	3.6	18	47
SB9-GW	06/06/06	610	360	<5.0	10	15	21	70
SB-10-W	05/30/07	<50	71	<5.0	<0.5	<0.5	<0.5	<0.5
SB-11-W	05/30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-12-W	05/30/07	<50	80	<5.0	<0.5	<0.5	<0.5	<0.5
SB-13-W	05/30/07	<50	130	<5.0	<0.5	<0.5	<0.5	<0.5
SB-14-W	05/30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-15-W	05/30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-16-W	05/30/07	<50	73	<5.0	<0.5	<0.5	<0.5	<0.5
SB-17-W	05/30/07	<50	160	<5.0	<0.5	<0.5	<0.5	<0.5
SB-18-W	05/30/07	330	64	14	2.1	5.4	8.9	31
SB-19-W	05/30/07	<50	59	<5.0	<0.5	<0.5	<0.5	<0.5
SB-20-W	05/30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
SB-21-W	05/30/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5

Notes:

ug/L - microgram per liter

TPH-g - Total Petroleum Hydrocarbons as gasoline

TPH-d - Total Petroleum Hydrocarbons as diesel

MTBE = methyl tertiary butyl ether