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 attached report is true and correct to the best of my knowledge.

Signed: Jose arran allen Date July 18, 2012

July 16, 2012

Second Quarter 2012 Groundwater Monitoring And Hydrogen Peroxide Infusion Report

Property Identification:
325 Martin Luther King Jr. Way
Oakland, California

AEI Project No. 277915
ACEH Site: RO0002930

Prepared for:
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1.0 INTRODUCTION

AEI Consultants (AEI) has prepared this report to document the hydrogen peroxide infusion installation and the second (2nd) Quarter 2012 groundwater monitoring event at the above referenced site (Figure 1, Site Location Map). The well installation, infusion program, and groundwater monitoring is 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 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 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 (µg/L), 420 µg/L, and 53 µg/L, respectively.

2.3 2005 Terra Firma Investigation

In September 2005, Terra Firma collected groundwater samples were collected 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 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 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 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 on August 4, 2008 from well MW-3 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 H_2O_2 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.

2.8 H^2O^2 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% H^2O^2 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% H^2O^2 solution, wells MW-3, IW-2, and IW-3 were sampled to determine the effects of the H^2O^2 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.

On March 16, 2010, prior to starting a second round of H^2O^2, AEI conducted the regularly scheduled groundwater-monitoring event at the site. TPH-g in wells MW-1 and MW-2 remained below standard reporting limits. TPH-g concentrations in MW-3, IW-2, and IW-3 rebounded to 34,000 µg/L, 20,000 µg/L, and 44,000 µg/L, respectively.

Between March 16, 2010 and May 12, 2010, 9,400 gallons of 0.5% H^2O^2 were infused into wells IW-2 and IW-3. Between May 24, 2010 and June 29, 2010, 4,900 gallons of 1.25% H^2O^2 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.

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.

2.9 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.

2.10 IW-4 and _W-5 Installation

2.10.1 Tank Location

On November 8, 2011 AEI supervised a Ground Penetrating Radar (GPR) Survey performed by Subtronic Corporation, Martinez, CA. The purpose of the survey was to attempt to precisely locate the abandoned UST. Due to thickness of the floor, and nature of the sediments beneath the floor, no significant tank related anomalies could be identified by electro-magnetic methods or GPR, despite the fact earlier probing had encountered the tank at a depth of approximately 4 feet bgs.

On November 16, 2011, AEI cored the floor slab with a roto-hammer and hand probed a location on the up gradient (north) side of the area where the previous probing and soil borings had encountered the UST. The probe location which was located three feet from the wall was driven to a depth of 9.5 feet bgs where sand where a strong weathered gasoline odor was encountered. This confirmed that there was sufficient space between the UST and the wall to install additional infusion wells.

2.10.2 Installation of well IW-4 and IW-5

On November 29, 2011, AEI installed two addition 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 H^2O^2 infusion following the recent installation of additional up gradient infusion wells (IW-4, IW-5).

3.0 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. Each well was connected to the manifold through a 2-inch diameter, threaded, T-shaped header. The horizontal opening on the header was just above the concrete floor was attached to a length of 3/8-inch poly tubing that with a metering valve to control the flow rate if desired. ½-inch poly tubing attached to the top of the header was run into the top of the tank to allow gas bubbles to escape and not create an air block in the well or the line to the manifold. A diagram of the typical wellhead assemble is attached in figure ____.

Between January 2012, and January 8, 2012, 12,000 gallons of 1% H^2O^2 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 filled with H^2O^2 during the weekly system checks. Average infusion is estimated to have been 0.1 gallon per minute.

3.1 Progress Monitoring

On March 7, 2012, samples were collected from wells IW-3 and IW-4 using a peristaltic pump to evaluate infusion progress. TPH-g concentration in IW-4 was reported at a concentration of 1,700μg/L, down from 95,000 μg/L on December 14, 2011. TPH-g concentration in IW-3 was reported at a concentration of 390 μg/L, down from 36,000 μg/L on December 14, 2011.

4.0 SECOND QUARTER GROUNDWATER MONITORING EVENT

4.1 Summary of Groundwater Sampling Activities

On June 28, 2012, groundwater monitoring wells MW-1 though MW-3 and infusion wells IW-1 through IW-5 were sampled.

Prior to purging each well, 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.

Dissolved oxygen (DO) in wells IW-1, MW-2, MW-3, IW-1, IW-5, IW-2, IW-4, and IW-3 were reported at concentrations of 0.92 mg/L, 2.55 mg/L, 9.19 mg/L, 10.64 mg/L, 13.05 mg/L, 16.30 mg/L, 19.56 mg/L and 20.89 mg/L, respectively. Historical DO measurements in IW-1, the most up gradient well on the site indicate that the DO in groundwater entering the site has a concentration that ranges from 1.0 to 2.0 mg/L.

Each water sample was collected into hydrochloric acid (HCl) preserved one liter amber bottles and 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 an appropriate 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 and for fuel oxygenated and lead scavengers by method SW8260B.

4.2 Analytical Results

No TPH-g, MBTEX, fuel additives or lead scavenger were reported in wells MW-1, MW-2, or IW-1 at standard laboratory reporting limits.

TPH-g concentration in well MW-3 decreased from concentrations of 4,900 μg/L to ND<50 μg/L on December 14, 2011. MBTEX was reported at concentrations of ND<5.0 μg/L, ND<0.5 μg/L, ND<0.5 μg/L, ND<0.5 μg/L, ND<0.5 μg/L, respectively. EDB and 1,2-DCA were reported at concentrations of 1.3 μg/L and ND<0.5 μg/L, respectively.

TPH-g concentration in well MW-3 decreased from concentrations of 2,900 μg/L to ND<50 μg/L on December 14, 2011. MBTEX was reported at concentrations of ND<5.0 μg/L, ND<0.5 μg/L, ND<0.5 μg/L, ND<0.5 μg/L, 0.86 μg/L, respectively. EDB and 1,2-DCA were reported at concentrations of 2.5 μg/L and 1.3 μg/L, respectively.

TPH-g and benzene concentrations in well IW-3 decreased from concentrations of 36,000 μg/L L on December 14, 2011 to 91 μg/L on June 28, 2012. MBTEX was reported at concentrations of ND<5.0 μg/L, 1.1 μg/L, 1.6 μg/L, ND<0.5 μg/L, 3.7 μg/L, respectively. TBA, EDB, and 1,2-DCA were reported at concentrations of 4.2 μg/L, 2.4 μg/L and 1.5 μg/L, respectively.

TPH-g and benzene concentrations in well IW-4 decreased from concentrations of 95,000 μg/L on December 14, 2011 to 1,400 μg/L on June 28, 2012. MBTEX was reported at concentrations of ND<5.0 μg/L, 49 μg/L, 190 μg/L, 29 μg/L, 140 μg/L, respectively. TBA, EDB, and 1,2-DCA were reported at concentrations of 4.2 μg/L, 2.4 μg/L and 1.5 μg/L, respectively.

TPH-g and benzene concentrations in well IW-5 decreased from concentrations of 250 μg/L on December 14, 2011 to ND<50 μg/L on June 28, 2012. MBTEX was reported at concentrations of ND<5.0 μg/L, ND<0.5 μg/L, ND<0.5 μg/L, ND<0.5 μg/L, ND<0.5 μg/L, respectively. TBA, EDB, and 1,2-DCA were reported at concentrations of 2.0 μg/L, ND<0.5 μg/L and ND<0.5 μg/L, respectively.

The analytical results from the June 28, 2012 progress monitoring and previous sampling events are summarized in Table 2, Groundwater Elevation Data and Table 3, Groundwater Analytical Data. Groundwater Monitoring Well Field Sampling Forms, which include water quality data and other parameters collected during well purging are attached as Appendix A.

5.0 SUMMARY

Infusion of 1 % hydrogen peroxide solution has significantly reduced hydrocarbon concentrations in well IW-3 and IW-4. Some direct destruction occurs through direct chemical oxidation; however the bulk of the hydrocarbon destruction is believed to be due increased biological breakdown of hydrocarbons in response to the elevated concentrations of dissolved oxygen in the groundwater.

6.0 RECOMMENDATIONS

AEI recommends additional monthly progress sampling of wells IW-3 and IW-4 for TPH-g and TPH-d to monitor decrease in DO concentrations and any rebound in TPH-g concentrations. Additionally, analysis for TPH-d should be done on samples from wells MW-3 and IW-3 through IW-5 to monitor the diesel range hydrocarbons present in the weathered gasoline at the site. Evaluation of site closure under low risk closure guidelines should be made if no further rebound are seen.

The next progress monitoring event is tentatively scheduled for July 30, 2012. A Summary letter will be issued detailing and changes in hydrocarbon concentrations that may occur.

7.0 REPORT LIMITATIONS AND SIGNATURES

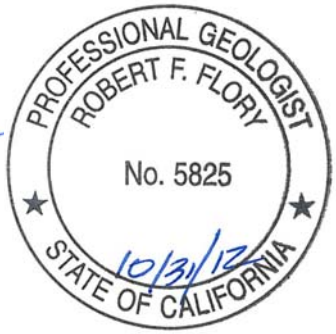
This report presents a summary of work completed by AEI, including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide requested information, but it 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.

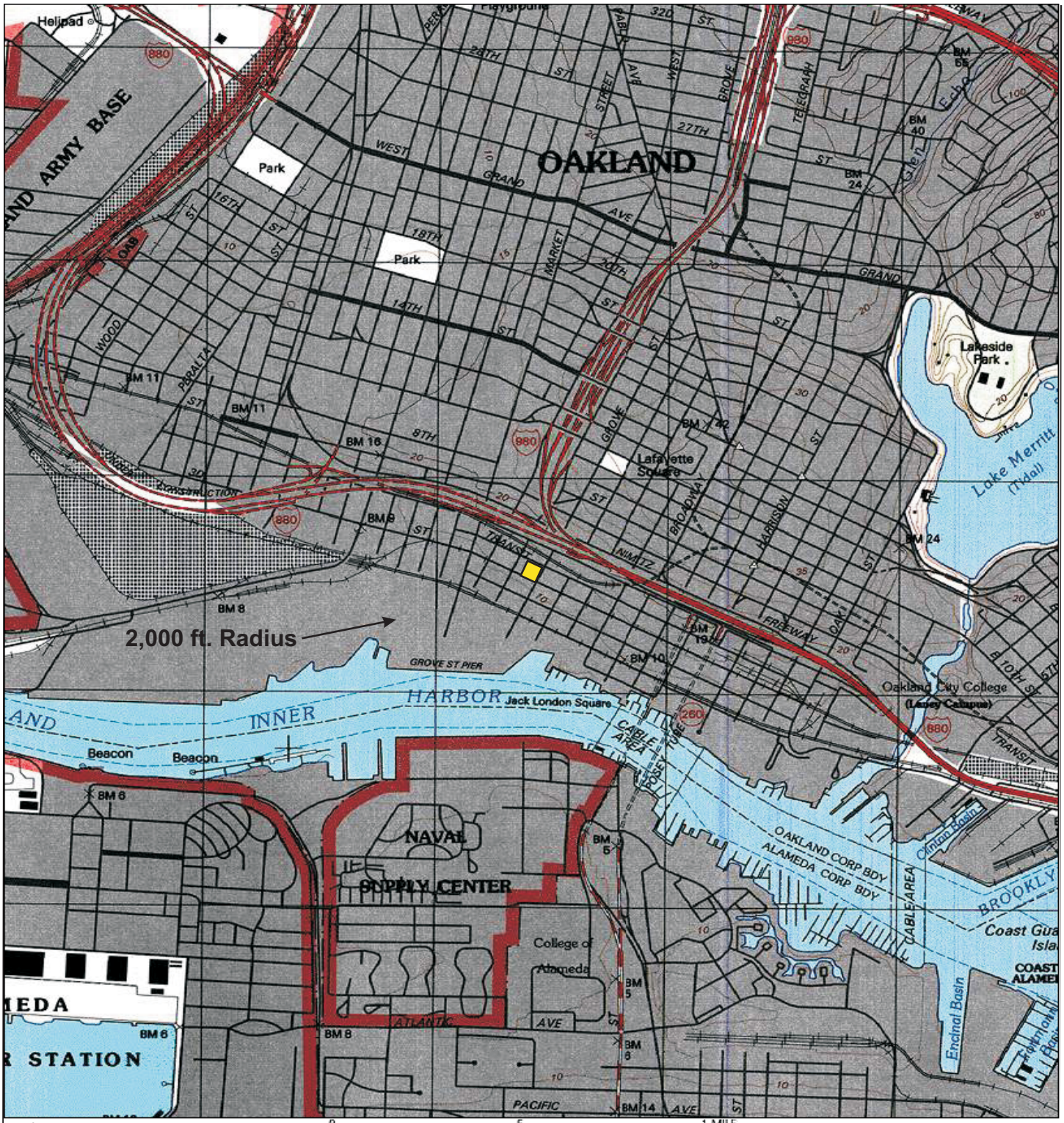
Sincerely,
AEI Consultants

Adrian M. Angel, GIT
Project Geologist

Robert F. Flory, PG
Senior Geologist



FIGURES



TN 15° MN

0 .5 1 MILE

0 1000 FEET 0 500 1000 METERS

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

LEGEND

N

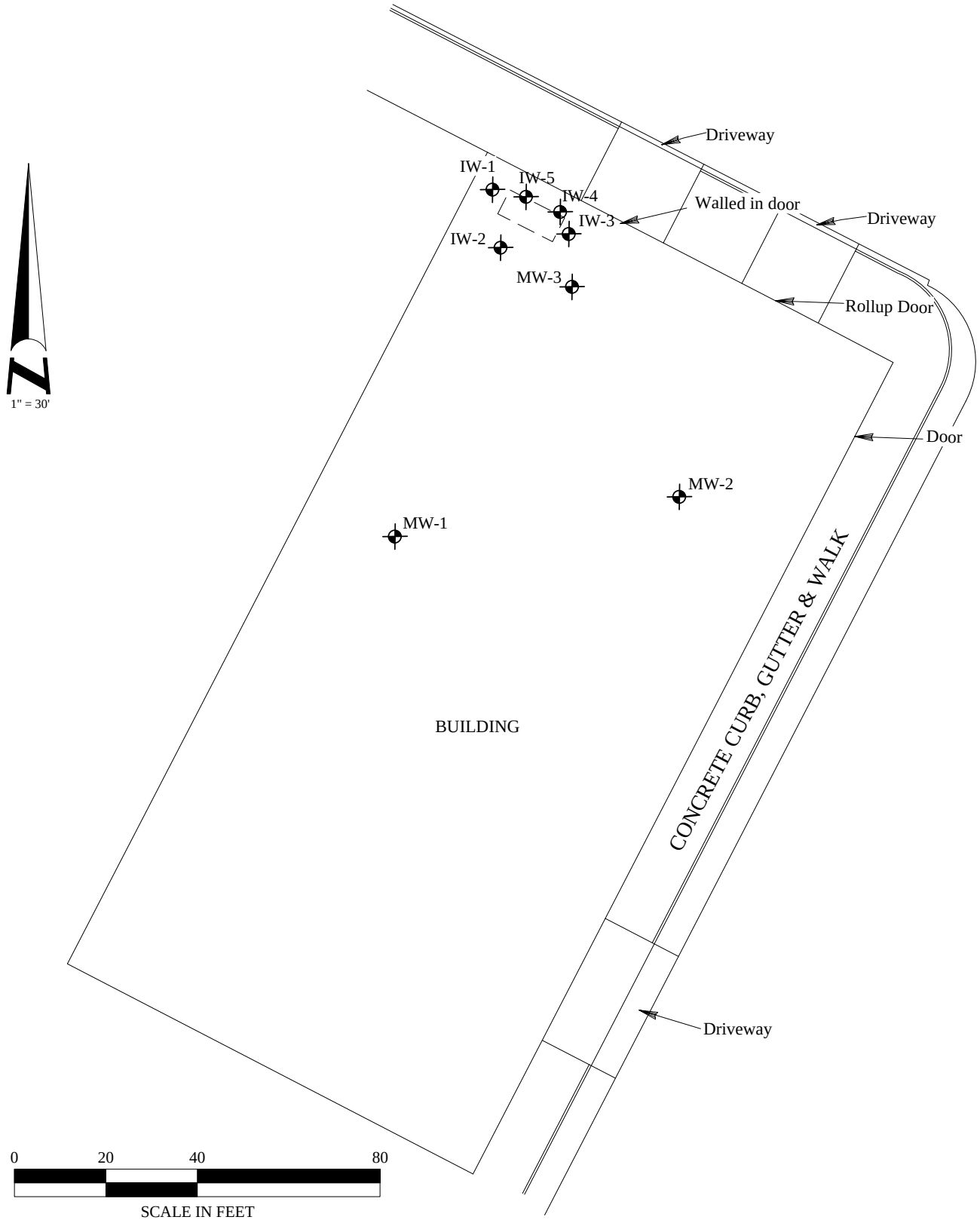
SITE LOCATION

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



2" Monitoring / Infusion Well

Abandoned in place UST

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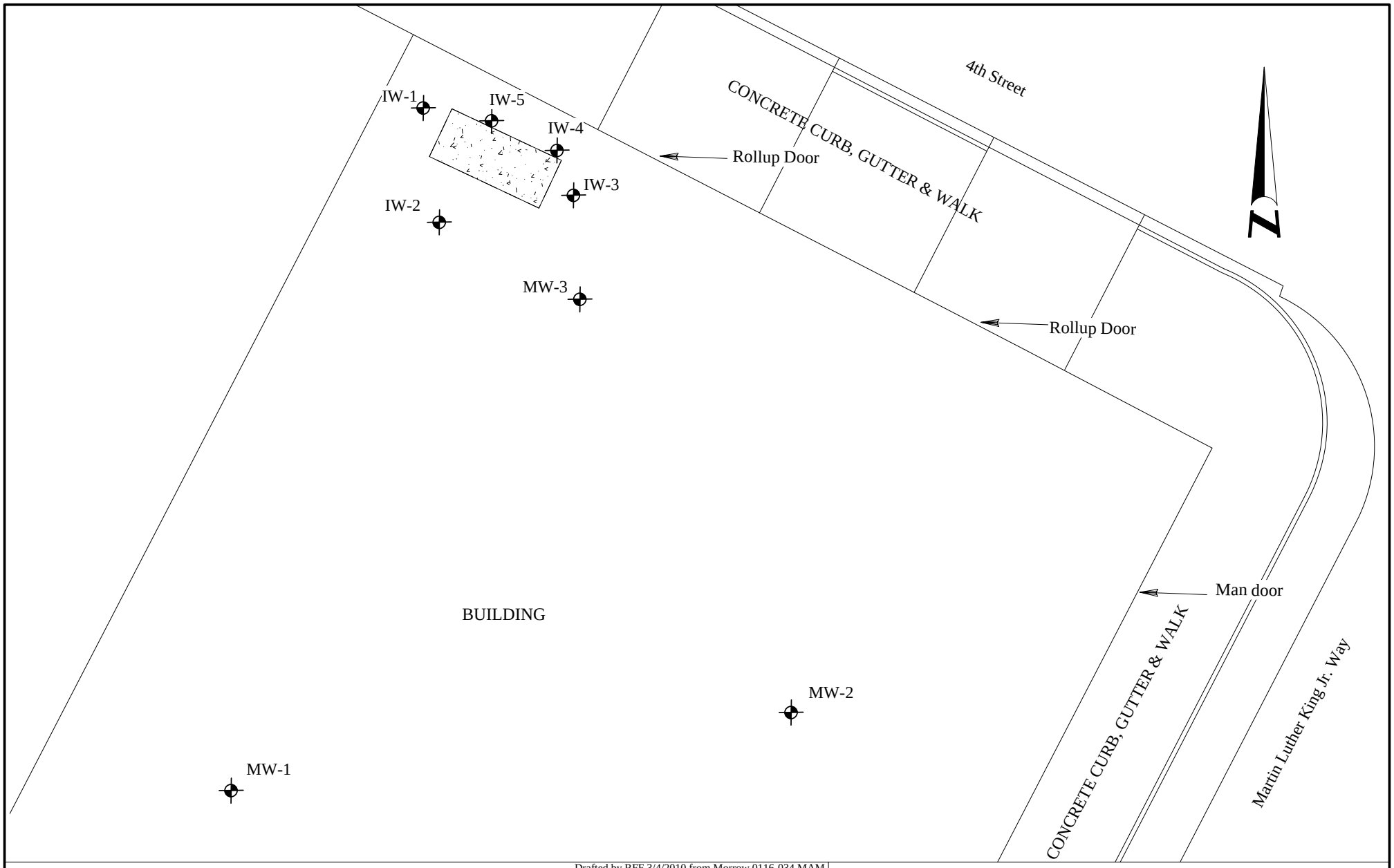
2500 Camino Diablo, Walnut Creek, CA

Site Plan

325 Martin Luther king Jr. Way
Oakland, California

FIGURE 2
AEI Project # 277915



2" Monitoring / Infusion Well

Abandoned in place UST

0 20 40 80

SCALE IN FEET

1" = 15'

Drafted by RFF 3/4/2010 from Morrow 0116-034 MAM
Revised by RFF 12/22/2011from 2011 Morrow Survey

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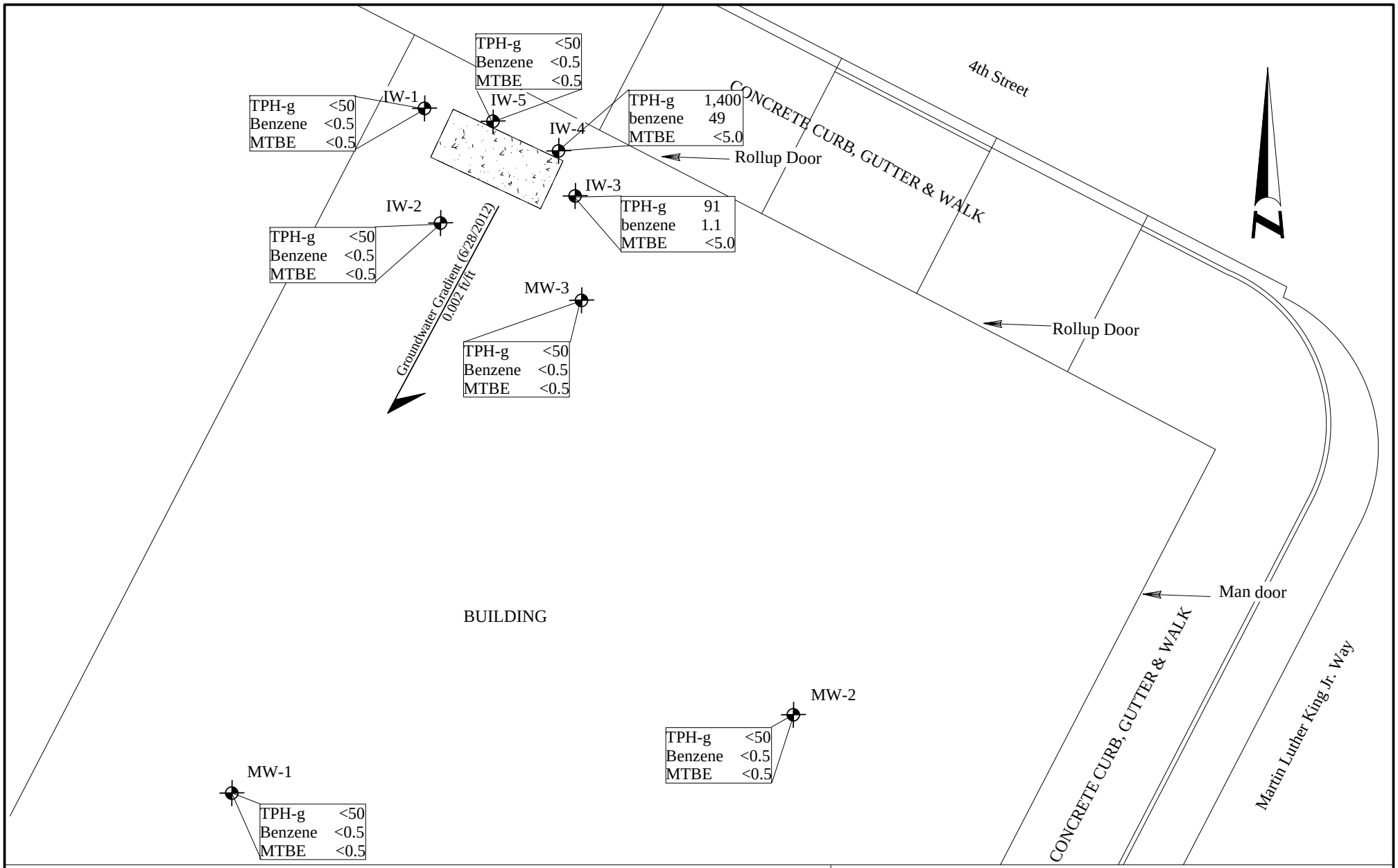
2500 Camino Diablo, Walnut Creek, CA

Detail Site Plan

325 Martin Luther king Jr. Way
Oakland, California

FIGURE 3
AEI Project # 277915



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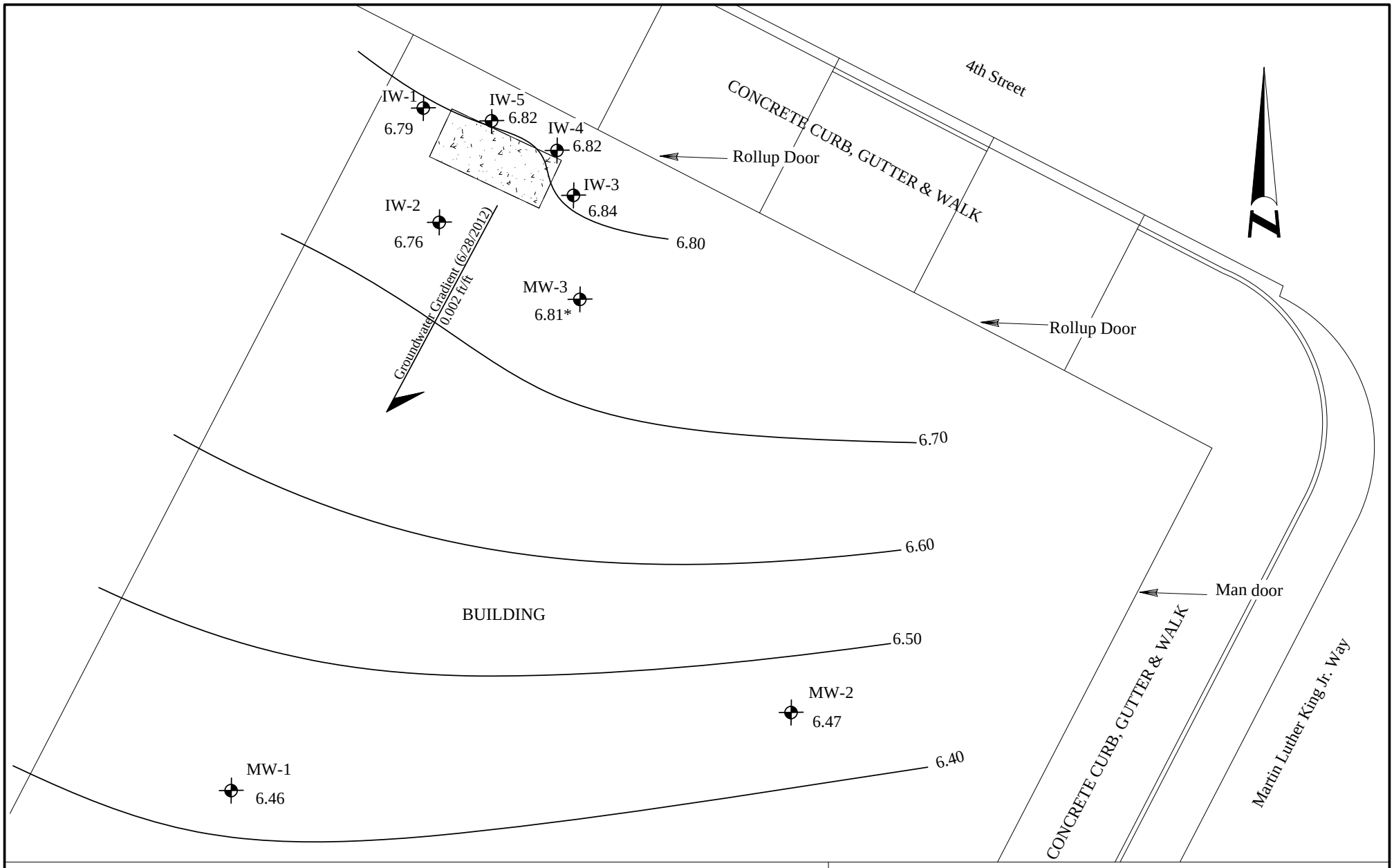
Groundwater Analytical Data (6/28/2012)

325 Martin Luther king Jr. Way
Oakland, California

FIGURE 4
AEI Project # 277915



2" Monitoring / Infusion Well
6.47

6.81* Anomalous data, not used for contouring

Abandoned in place UST

0 20 40 80

SCALE IN FEET
1" = 15'

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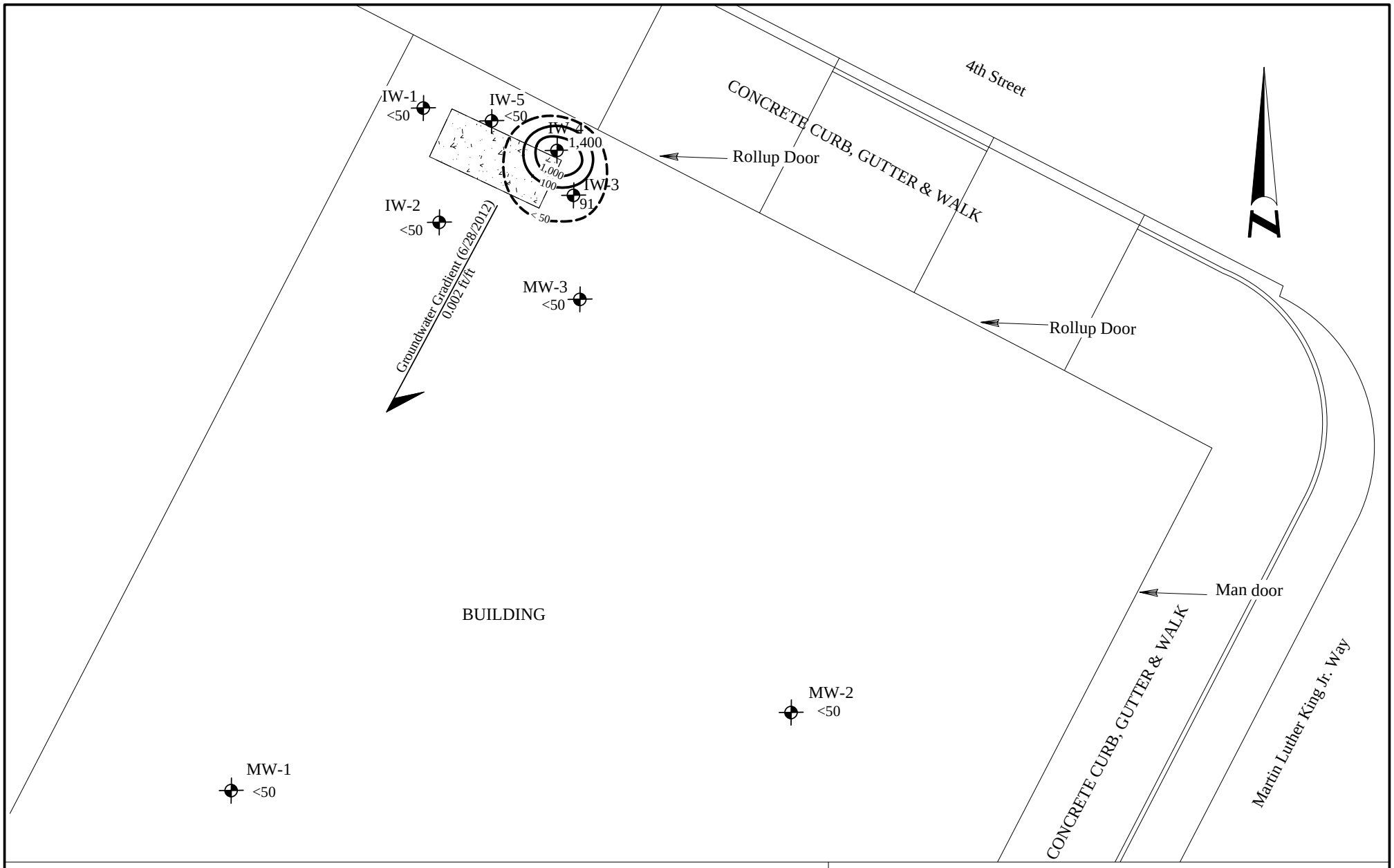
2500 Camino Diablo, Walnut Creek, CA

Groundwater Gradient (6/28/2012)

325 Martin Luther king Jr. Way
Oakland, California

FIGURE 5
AEI Project # 277915



2" Monitoring / Infusion Well

Abandoned in place UST

0 20 40 80

SCALE IN FEET
1" = 15'

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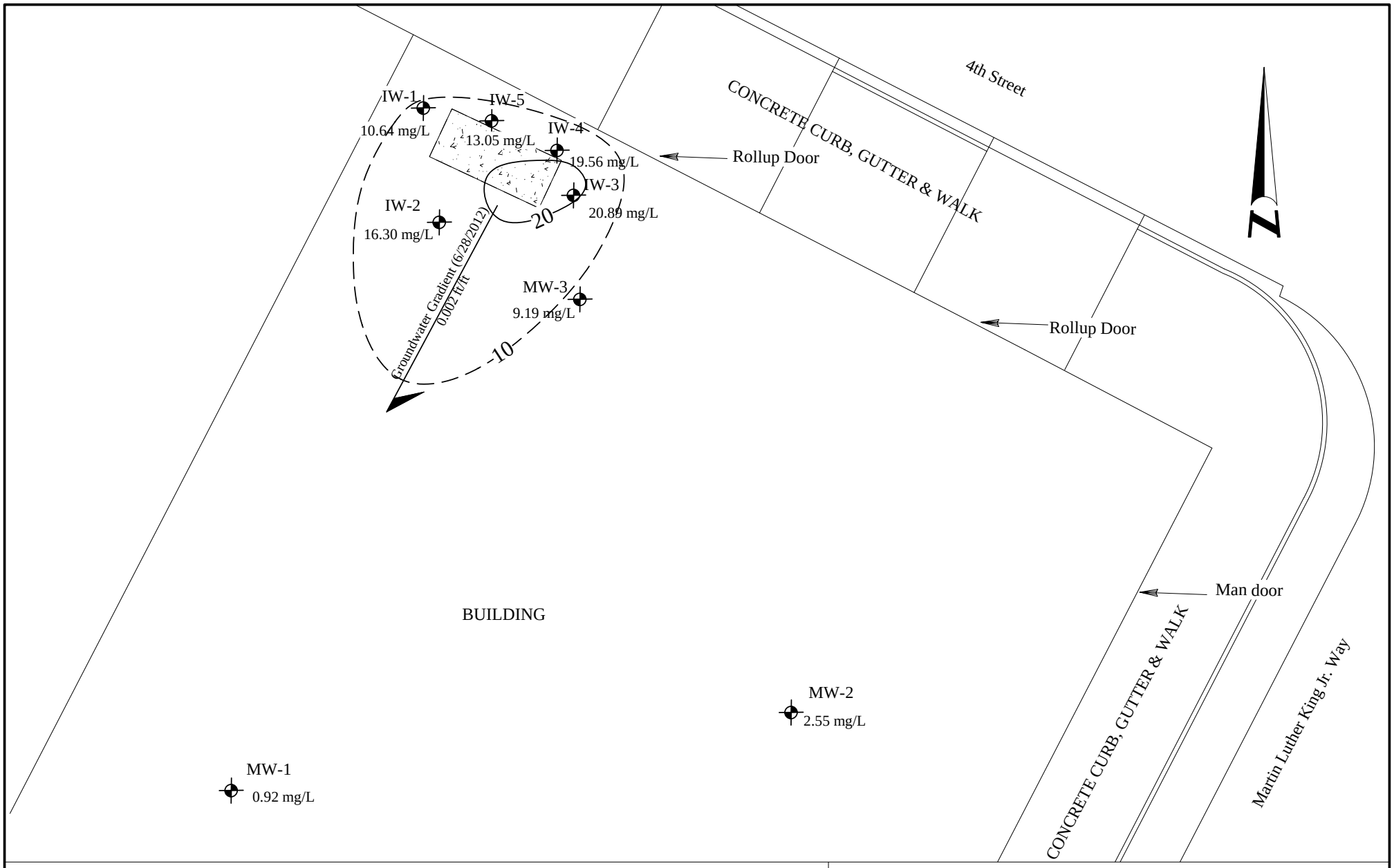
2500 Camino Diablo, Walnut Creek, CA

TPH-g Isoconcentration Map (6/28/2012)

325 Martin Luther king Jr. Way
Oakland, California

FIGURE 6
AEI Project # 277915



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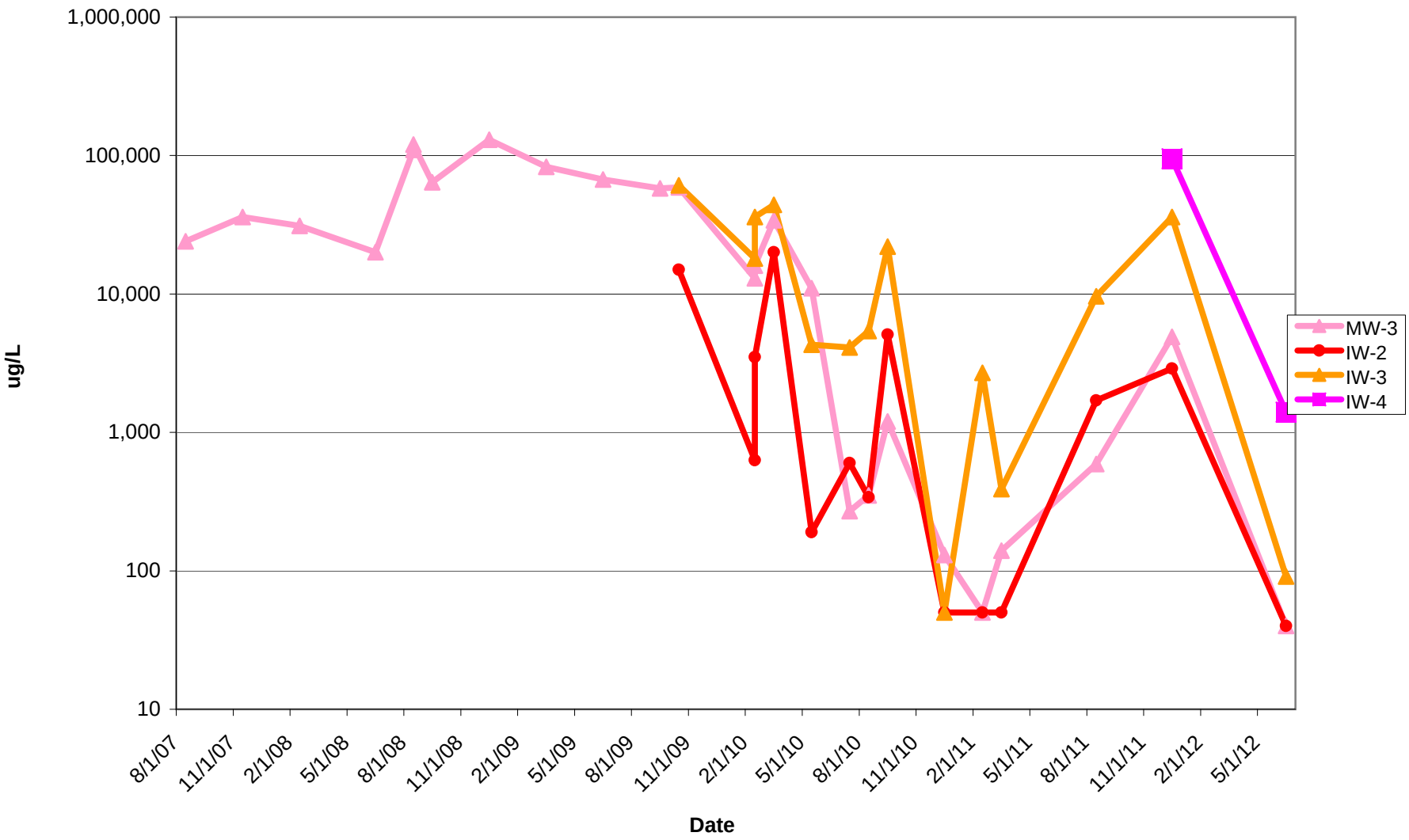
DO Concentration Map (6/28/2012)

325 Martin Luther king Jr. Way
Oakland, California

FIGURE 7
AEI Project # 277915

FIGURE 8: TPH-g Concentrations MW-3, IW-2, IW-3, and IW-4



TABLES

Table 1 - Well Construction Details

AEI Project # 277915

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	02/09/10	15.20**	15.61	15	5 - 15	0.010	4 - 15	2/12	3 - 4	0.5 - 3
IW-2	02/09/10	15.04**	15.63	15	5 - 15	0.010	4 - 15	2/12	3 - 4	0.5 - 3
IW-3	02/09/10	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

AEI Project # 277915

Well ID (Screen Interval)	Date Collected	Well Elevation *(ft amsl)*	Depth to Water *(ft)*	Groundwater Elevation *(ft amsl)*	Elevation Change *(ft)*
MW-1	8/21/2007	14.92	8.38	6.54	**----**
(8 - 18)	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**
MW-2	8/21/2007	15.27	8.78	6.49	**----**
(7 - 17)	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**
MW-3	8/21/2007	15.26	8.59	6.67	**----**
(8 - 18)	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
	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**	**8.30**	**6.81**	**0.48**

Table 2 - Groundwater Elevation Data

AEI Project # 277915

Well ID (Screen Interval)	Date Collected	Well Elevation *(ft amsl)*	Depth to Water *(ft)*	Groundwater Elevation *(ft amsl)*	Elevation Change *(ft)*
IW-1	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**
IW-2	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	**15.04**	**8.28**	**6.76**	**0.44**
IW-3	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**
IW-4	12/14/2011	14.74	8.38	6.36	----
	6/28/2012	**14.74**	**7.92**	**6.82**	**0.46**
IW-5	12/14/2011	14.54	8.18	6.36	----
	6/28/2012	**14.54**	**7.72**	**6.82**	**0.46**

Notes

14.87* = Casing elevation changes, 02/09/10

15.29** = Casing elevation changes, 12/14/2011

Table 2A - Groundwater Elevation Data
AEI Project # 277915

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**	**6.72**	**0.44**	**SW (0.002)**

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 12/14/2011re-survey elevations

Table 3 - Groundwater Analytical Data
AEI Project # 277915

Sample ID	Date	Depth to Water	TPHg	TPHd	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			Method 8015		Method 8021B				
			mg/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**
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**
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
	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

Table 3 - Groundwater Analytical Data
AEI Project # 277915

Sample ID	Date	Depth to Water	TPHg	TPHd	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			Method 8015		Method 8021B				
			mg/L						
MW-3	2/7/2011	-	<50	-	<5.0	2.3	1.0	<0.5	6.4
continued	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**
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**
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
	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**
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**

Table 3 - Groundwater Analytical Data
AEI Project # 277915

Sample ID	Date	Depth to Water	TPHg	TPHd	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			Method 8015		Method 8021B				
			mg/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**
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**
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

AEI Project # 277915

Sample ID	Date	TAME	TBA	EDB	1,2-DCA	DIPE	ETBE	MTBE
		µg/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**
MW-2	08/21/07	<0.5	<5.0	<0.5	<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**
MW-3	08/21/07	<5.0	<50	34	140	<5.0	<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**

Table 4 - Groundwater Analytical Data - Fuel Additives

AEI Project # 277915

Sample ID	Date	TAME	TBA	EDB	1,2-DCA	DIPE	ETBE	MTBE
		µg/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**
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**
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**
IW-4	03/27/12	<0.5	9.7	8.4	4.0	<0.5	<0.5	<0.5
	06/28/12	**<0.5**	**4.9**	**2.3**	**0.62**	**<0.5**	**<0.5**	**<0.5**
IW-5	**06/28/12**	**<0.5**	**2**	**<0.5**	**<0.5**	**<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:
µg/L= micrograms per liter
ND<50 = non detect at respective reporting limi
MTBE - methyl tertiary butyl ether
TAME - tert-amyl methyl ether
TBA - tert-butyl alcohol
DIPE - diisopropyl ether
ETBE - ethyl tert-butyl ether

APPENDIX A

MONITORING WELL FIELD SAMPLING FORMS

AEI CONSULTANTS

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	ALLEN	Date of Sampling:	6/28/2012
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)			
Depth of Well	17.88		
Depth to Water (from top of casing)	8.41		
Water Elevation (feet above msl)			
Well Volumes Purged			
Actual Volume Purged (liters)			
Appearance of Purge Water			
Free Product Present?		Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 4 samples / VOA's

Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
0816	1	17.54	8.14	1148	4.15	-40.2	clear
0820	2	17.48	8.09	1131	1.39	-41.9	clear
0823	3	17.51	7.99	1132	1.17	-45.9	clear
0825	4	17.54	8.02	1135	1.01	-49.7	clear
0827	5	17.56	8.07	1140	0.92	-53.0	clear

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

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	ALLEN	Date of Sampling:	6/28/2012
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA		and D. Gonzalez

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")			
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)			
Depth of Well	17.59		
Depth to Water (from top of casing)	8.30		
Water Elevation (feet above msl)			
Well Volumes Purged			
Actual Volume Purged (liters)			
Appearance of Purge Water			
Free Product Present?		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
0907	1	17.72	6.67	430	7.67	277.6	
0911	2	17.67	8.62	424	8.62	255.5	clear clear
0914	3	17.69	8.75	430	8.77	248.8	clear
0916	4	17.72	6.69	457	8.94	+226.3 D.O.	clear
0919	5	17.73	6.79	471	9.19	224.6	clear

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

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	ALLEN	Date of Sampling:	6/28/2012
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")			
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)			
Depth of Well	16.70		
Depth to Water (from top of casing)	8.86		
Water Elevation (feet above msl)			
Well Volumes Purged			
Actual Volume Purged (liters)			
Appearance of Purge Water			
Free Product Present?		Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 4 samples / VOA's

Time	Volume Removed (liters)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
0840	1	17.85	7.53	1002	2.52	-0.9	clear
0843	2	17.86	7.56	1000	2.46	0.8	clear
0845	3	17.92	7.58	998	2.41	5.9	clear
0847	4	17.99	7.56	1005	2.54	11.0	clear
0851	5	17.99	7.63	1014	2.55	13.6	clear

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

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-1

Project Name:	ALLEN	Date of Sampling:	6/28/2012
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")			
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)			
Depth of Well	14.54		
Depth to Water (from top of casing)	8.41		
Water Elevation (feet above msl)			
Well Volumes Purged			
Actual Volume Purged (liters)			
Appearance of Purge Water			
Free Product Present?		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
0925	1	17.72	6.36	517	9.53	226.3	clear
0928	2	17.67	6.97	537	10.01	210.6	clear
0930	3	17.66	7.09	567	10.11	190.8	clear
0933	4	17.65	7.22	575	10.35	170.1	clear
0935	5	17.63	7.27	551	10.64	162.9	clear

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

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-2

Project Name:	ALLEN	Date of Sampling:	6/28/2012
Job Number:	277925	Name of Sampler:	J. Sigg
Project Address:	325 Martin Luther King Jr Way, Oakland CA	and Diego Gonzalez	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")			
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)			
Depth of Well	14.58		
Depth to Water (from top of casing)	8.28		
Water Elevation (feet above msl)			
Well Volumes Purged			
Actual Volume Purged (liters)			
Appearance of Purge Water			
Free Product Present?		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
1001	1	17.84	5.98	244	12.51	260.0	clear
1003	2	17.66	6.46	250	14.48	257.7	clear
1005	3	17.65	6.52	~~247.0~~ 284 DG	15.10	245.1	clear
1007	4	17.64	6.51	303	15.73	232.6	clear
1010	5	17.62	6.58	297	16.30	226.7	clear

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

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-3

Project Name:	ALLEN	Date of Sampling:	6/28/2012
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")			
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)			
Depth of Well	14.74		
Depth to Water (from top of casing)	6.45		
Water Elevation (feet above msl)			
Well Volumes Purged			
Actual Volume Purged (liters)			
Appearance of Purge Water			
Free Product Present?		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
1031	1	18.34	5.61	198	19.22	224.9	Clear
1034	2	18.28	6.34	198	18.82	207.1	Clear
1037	3	18.29	6.33	197	19.65	193.6	Clear
1039	4	18.31	6.43	198	20.28	179.5	Clear
1042	5	18.30	6.55	198	20.89	165.6	Clear
~~1042~~							

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

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-4

Project Name:	ALLEN	Date of Sampling:	6/28/2012
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")			
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)			
Depth of Well	15.72		
Depth to Water (from top of casing)	7.92		
Water Elevation (feet above msl)			
Well Volumes Purged			
Actual Volume Purged (liters)			
Appearance of Purge Water			
Free Product Present?		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
1016	1	18.40	5.90	162	15.42	288.5	clear
1018	2	18.39	6.28	162	18.17	289.1	clear
1020	3	18.42	6.33	164	18.62	287.0	clear
1022	4	18.42	6.34	166	19.09	284.4	clear
1024	5	18.40	6.38	171	19.56	298.8	clear

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

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-5

Project Name:	ALLEN	Date of Sampling:	6/28/2012
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")			
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)			
Depth of Well	15.68		
Depth to Water (from top of casing)	7.72		
Water Elevation (feet above msl)			
Well Volumes Purged			
Actual Volume Purged (liters)			
Appearance of Purge Water			
Free Product Present?		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
0942	1	18.04	6.33	159	8.62	274.9	clear
0945	2	17.98	6.67	147	11.74	276.8	clear
0947	3	18.00	6.66	147	12.14	273.7	clear
0949	4	18.02	6.65	147	12.60	271.0	clear
0952		18.03	6.68	148	13.05	265.1	clear

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

APPENDIX B

LABORATORY ANALYTICAL AND CHAIN OF CUSTODY DOCUMENTATION

AEI CONSULTANTS

McCampbell Analytical, Inc.
"When Quality Counts"

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

Analytical Report

AEI Consultants	Client Project ID: #277915; Allen	Date Sampled: 06/28/12
		Date Received: 06/28/12
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Reported: 07/05/12
Walnut Creek, CA 94597	Client P.O.: #WC08337	Date Completed: 07/03/12

WorkOrder: 1206837

July 05, 2012

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1206837

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 #: WCO8337
2500 Camino Diablo	
Walnut Creek, CA 94597	E-Mail: rflory@aeiconsultants.com
Tel: (925) 746-6000	Fax: (925) 946-6099
Project #:277915	Project Name: Allen
Project Location: 325 Martin Luther King Jr. Way	
Sampler Signature:	

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other
(H) MW-1		6/28	0827	4		X					X	X		
+ MW-3 D.G			0919	4		X					X	X		
						X					X	X		
✓ MW-2			0851	4		X					X	X		
(H) IW-1			0935	4		X					X	X		
+ IW-2			1010	4		X					X	X		
+ (H) IW-3			1042	4		X					X	X		
+ IW-4			1024	4		X					X	X		
+ IW-5		—	0952	4										

Analysis Request / Other / Comments

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)	Comments
X																X			
																X			
																X			
																X			
																X			
																X			
																X			
																X			
																X			
X																X			

Relinquished By: Date: 6-28-12 Time: 1147 Received By:

Relinquished By: Date: Time: Received By:

Relinquished By: Date: Time: Received By:

ICE/t° 4.7 GOOD CONDITION ✓ HEAD SPACE ABSENT ✓ DECHLORINATED IN LAB _____

PRESERVATION APPROPRIATE ✓ CONTAINERS ✓ PERSERVED IN LAB _____

VOAS	O&G	METALS	OTHER
✓			

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1206837 **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: #WC08337
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: **06/28/2012**
Date Printed: **06/28/2012**

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
1206837-001	MW-1	Water	6/28/2012 8:27	☐	B	A	A									
1206837-002	MW-3	Water	6/28/2012 9:19	☐	B	A										
1206837-003	MW-2	Water	6/28/2012 8:51	☐	B	A										
1206837-004	IW-1	Water	6/28/2012 9:35	☐	B	A										
1206837-005	IW-2	Water	6/28/2012 10:10	☐	B	A										
1206837-006	IW-3	Water	6/28/2012 10:42	☐	B	A										
1206837-007	IW-4	Water	6/28/2012 10:24	☐	B	A										
1206837-008	IW-5	Water	6/28/2012 9:52	☐	B	A										

Test Legend:

1	5-OXYS+PBSCV_W	2	G-MBTEX_W	3	PREDF 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.

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

Sample Receipt Checklist

Client Name: **AEI Consultants**
Date and Time Received: **6/28/2012 11:53:02 AM**
Project Name: **#277915; Allen**
LogIn Reviewed by: Maria Venegas
WorkOrder N°: **1206837** 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: 4.7°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

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

AEI Consultants	Client Project ID: #277915; Allen	Date Sampled: 06/28/12
		Date Received: 06/28/12
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 06/29/12-07/02/12
Walnut Creek, CA 94597	Client P.O.: #WC08337	Date Analyzed: 06/29/12-07/02/12

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1206837

Lab ID	1206837-001B	1206837-002B	1206837-003B	1206837-004B	Reporting Limit for DF =1	
Client ID	MW-1	MW-3	MW-2	IW-1		
Matrix	W	W	W	W		
DF	1	1	1	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND	ND	ND	NA	2.0
1,2-Dibromoethane (EDB)	ND	1.3	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	7.0	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	0.73	ND	ND	ND	NA	0.5
Surrogate Recoveries (%)						
%SS1:	99	98	98	97		
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.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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

AEI Consultants	Client Project ID: #277915; Allen	Date Sampled: 06/28/12
		Date Received: 06/28/12
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 06/29/12-07/02/12
Walnut Creek, CA 94597	Client P.O.: #WC08337	Date Analyzed: 06/29/12-07/02/12

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

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1206837

Lab ID	1206837-005B	1206837-006B	1206837-007B	1206837-008B	Reporting Limit for DF =1	
Client ID	IW-2	IW-3	IW-4	IW-5		
Matrix	W	W	W	W		
DF	1	1	1	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	2.5	4.2	4.9	2.0	NA	2.0
1,2-Dibromoethane (EDB)	ND	2.4	2.3	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	1.5	0.62	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	NA	0.5
Surrogate Recoveries (%)						
%SS1:	96	96	96	97		
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.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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1534 Willow Pass Road, Pittsburg, CA 94565-1701
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AEI Consultants	Client Project ID: #277915; Allen	Date Sampled: 06/28/12
		Date Received: 06/28/12
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 06/28/12-06/29/12
Walnut Creek, CA 94597	Client P.O.: #WC08337	Date Analyzed: 06/28/12-06/29/12

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1206837

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	96	
002A	MW-3	W	ND	ND	ND	ND	ND	0.86	1	96	
003A	MW-2	W	ND	ND	ND	ND	ND	ND	1	95	
004A	IW-1	W	ND	ND	ND	ND	ND	ND	1	93	
005A	IW-2	W	ND	ND	ND	ND	ND	ND	1	94	
006A	IW-3	W	91	ND	1.1	1.6	ND	3.7	1	96	d1
007A	IW-4	W	1400	ND	49	190	29	140	1	104	d1
008A	IW-5	W	ND	ND	ND	ND	ND	ND	1	93	

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	µg/L
	S	1.0	0.05	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 McCampbell Analytical is not responsible for their interpretation:
d1) weakly modified or unmodified gasoline is significant

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Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 68764 | WorkOrder: 1206837

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1206846-001A**

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	79.2	78.2	1.25	87.6	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	77.5	75.7	2.42	90.8	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	83.1	83.4	0.295	91.3	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	81.5	79.3	2.73	86.9	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	84.2	82.5	2.06	88.4	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	84.3	82.8	1.77	89.8	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	82.2	81.4	0.996	89.8	70 - 130	20	70 - 130
%SS1:	98	25	99	99	0	102	70 - 130	20	70 - 130

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

BATCH 68764 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1206837-001B	06/28/12 8:27 AM	06/29/12	06/29/12 8:48 PM	1206837-003B	06/28/12 8:51 AM	06/29/12	06/29/12 9:31 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.

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.

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QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 68794 | WorkOrder: 1206837

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1206852-002A**

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	85.2	83.4	2.06	82.8	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	85.3	82.2	3.74	79.8	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	92.7	92.4	0.310	89.3	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	87.2	85	2.49	84	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	93	91.4	1.67	91.1	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	91.9	90.2	1.84	89.5	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	90.8	89.4	1.53	87	70 - 130	20	70 - 130
%SS1:	98	25	100	102	1.44	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 68794 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1206837-002B	06/28/12 9:19 AM	07/02/12	07/02/12 3:03 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.

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.

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 68795 | WorkOrder: 1206837

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1206837-004B**

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	88.9	89	0.0977	88.3	70 - 130	20	70 - 130
t-Butyl alcohol (TBA)	ND	40	104	109	4.80	87.6	70 - 130	20	70 - 130
1,2-Dibromoethane (EDB)	ND	10	85.3	84.6	0.774	79.8	70 - 130	20	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	92.4	88.4	4.41	85.6	70 - 130	20	70 - 130
Diisopropyl ether (DIPE)	ND	10	101	98.7	2.05	95.5	70 - 130	20	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	97.3	95.9	1.50	92.5	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	92.1	92	0.0981	85.4	70 - 130	20	70 - 130
%SS1:	97	25	99	97	1.30	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 68795 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1206837-004B	06/28/12 9:35 AM	07/02/12	07/02/12 3:25 PM	1206837-005B	06/28/12 10:10 AM	07/02/12	07/02/12 4:05 PM
1206837-006B	06/28/12 10:42 AM	07/02/12	07/02/12 4:44 PM	1206837-007B	06/28/12 10:24 AM	07/02/12	07/02/12 5:24 PM
1206837-008B	06/28/12 9:52 AM	07/02/12	07/02/12 6:04 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.

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.

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 68739 | WorkOrder: 1206837

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1206837-003A**

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	94.6	106	10.9	83.6	70 - 130	20	70 - 130
MTBE	ND	10	94.7	101	6.86	91.3	70 - 130	20	70 - 130
Benzene	ND	10	91	87.1	4.30	82.4	70 - 130	20	70 - 130
Toluene	ND	10	92.4	88.9	3.91	83.9	70 - 130	20	70 - 130
Ethylbenzene	ND	10	92.9	88.8	4.53	82.8	70 - 130	20	70 - 130
Xylenes	ND	30	95.2	92	3.38	83.9	70 - 130	20	70 - 130
%SS:	95	10	94	92	1.43	91	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 68739 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1206837-001A	06/28/12 8:27 AM	06/28/12	06/28/12 5:12 PM	1206837-002A	06/28/12 9:19 AM	06/29/12	06/29/12 6:53 PM
1206837-003A	06/28/12 8:51 AM	06/28/12	06/28/12 6:12 PM	1206837-004A	06/28/12 9:35 AM	06/28/12	06/28/12 6:42 PM
1206837-005A	06/28/12 10:10 AM	06/28/12	06/28/12 7:11 PM	1206837-006A	06/28/12 10:42 AM	06/28/12	06/28/12 7:41 PM
1206837-007A	06/28/12 10:24 AM	06/28/12	06/28/12 8:10 PM	1206837-008A	06/28/12 9:52 AM	06/28/12	06/28/12 8:40 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.

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