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AEI Consultants

Environmental & Engineering Services

June 29, 2016

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

Subject: **Perjury Statement and Report Transmittal**
Zimmerman Property
3442 Adeline Street
Oakland, California 94608
ACEH Fuel Leak Case No. RO0002936
AEI Project Number: 281939

Dear Ms. Detterman:

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

If you have any questions or need additional information, please contact me at (925) 457-5607 or Mr. Adrian Angel at AEI Consultants at (408) 559-7600.

Sincerely,

Sandra Lee Mouat / Bill Mouat

Steffi Zimmerman
c/o Sandra Lee and Bill Mouat, Owner Representatives

AEI Consultants
Environmental & Engineering Services
3880 S. Bascom Ave., Suite 109, San Jose, CA 95124
Tel: 408.559.7600 Fax: 408.559.7601

May 17, 2016

Ms. Karel Detterman, P.G.
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Way Parkway
Alameda, California 94502

Subject: **First Quarter 2016 Groundwater Monitoring**
Zimmerman Property
3442 Adeline Street
Oakland, California 94608
AEI Project No. 281939
Alameda County LOP Fuel Leak Case No. RO0002936

Dear Ms. Detterman:

This letter presents the results of the First Quarter 2016 groundwater monitoring event performed by AEI Consultants (AEI) at the above-referenced subject property (the "Site"). The location of the Site is shown on Figure 1. A vicinity map is presented on Figure 2.

AEI has been retained by Ms. Steffi Zimmerman to provide environmental engineering and consulting services relating to the release of gasoline from a former underground storage tank (UST) at the Site. Descriptions of the groundwater monitoring activities, findings, and a summary are presented in the following sections. The release is an open case with the Alameda County Environmental Health (ACEH). This monitoring event was discussed with the ACEH case manager during a meeting on March 15, 2016.

GROUNDWATER MONITORING ACTIVITIES

Groundwater monitoring and sampling activities were performed on January 12 and 13, 2016. These activities were performed at nine (9) monitoring wells, including Wells MW-1, MW-2, MW-4 through MW-7, IW-1, BF-1, and BF-5. Well MW-3 has not been located nor monitored since December 15, 2009; this well appears to have been covered since that time. Monitoring well construction details are provided on Table 1. The locations of the monitoring wells are shown on Figure 3.

Groundwater Level Measurements

Prior to groundwater sampling, groundwater level measurements were obtained at each of the accessible monitoring wells. Well caps were removed from the top(s) of casings at each location thus allowing the wells to equilibrate with atmospheric conditions.

Depth(s) to groundwater were measured to within ± 0.01 feet using an electronic water meter. Depth(s) to water also were measured in Wells BF-1 and BF-5; however, these water depths were not used for evaluating the direction of groundwater flow and gradient because the wells have not been surveyed.

Groundwater Sampling

Following measurement of the water levels, the wells were then purged using a peristaltic pump at a rate of approximately 0.5 liters per minute. During well purging, groundwater parameters, including pH, temperature, pH, specific conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and groundwater appearance (visual turbidity), were monitored and measured at one-minute intervals. The wells were purged until the groundwater parameters stabilized. Groundwater parameters were assumed to be stabilized on the basis of three (3) successive readings, including to within ± 0.1 for pH, ± 3% for conductivity, ± 10 mv for ORP, and ± 10% for temperature. Visual estimates of turbidity were noted while purging the wells. Monitoring well data were recorded on Field Sampling Forms presented in Appendix A.

Once the groundwater parameters stabilized, groundwater samples were then collected from each well. The samples were obtained using the peristaltic pump. Upon collection, the samples were placed into 40-milliliter (mL volatile organic analysis (VOA) vials) that were preserved with hydrochloric acid. The samples also were preserved with zero headspace (no air bubbles). Sample identifications were recorded onto chain-of-custody documentation and placed in a chilled cooler containing ice for transportation to the analytical laboratory. The samples were delivered to a California state-certified laboratory, McCampbell Analytical, Inc. of Pittsburg, California for analyses. Groundwater samples from the wells were analyzed for total petroleum hydrocarbons quantified as gasoline (TPH-g), as well as for methyl tert-butyl ether (MTBE), benzene, toluene, ethylbenzene, and total xylenes (MBTEX) by United States Environmental Protection Agency Method SW8021B/8015Bm.

FINDINGS

Groundwater flow conditions were assessed using the groundwater level measurements obtained during this monitoring event. As shown on Tables 2 and 3, depth(s) to groundwater below the top(s) of well casing(s) ranged between 5.61 and 7.06 feet. Groundwater elevations ranged between 23.67 and 25.43 feet above mean sea level.

During this event, it is noted that the average groundwater elevations are roughly 0.07 feet lower than those elevations measured during the previous monitoring event, which was in April 2014. Based on the groundwater monitoring data gathered during this investigation, the direction of groundwater flow is generally to the west at a gradient of approximately 0.013 feet per foot (ft/ft) between Wells MW-4 and MW-6, which are located within the western portion of the Site; however, a southerly component of groundwater flow also appears to be present between Wells MW-2 and MW-4 within the eastern portion of the Site at a gradient of 0.019 ft/ft.

Groundwater elevation data from this event and previous events are summarized on Tables 2 and 3. Groundwater elevation contours are presented in Figure 4.

Groundwater Analytical Results

TPH-g, MTBE, and BTEX constituents were detected in four of the monitoring wells during this monitoring event. Current and historical groundwater analytical results are presented on Table 3. The results of TPH-g- and benzene analyses of groundwater are shown on Figure 5. Chain-of-custody documentation and the certified analytical report are provided in Appendix B.

TPH-g was detected in Wells MW-2 and MW-5 through MW-7 at concentrations between 63 and 1,800 micrograms per liter (µg/L). MTBE was only detected in Well MW-7 at a concentration of 31 µg/L. Benzene was detected in Wells MW-2 and MW-5 through MW-7 at concentrations between 1.8 and 400 µg/L. Toluene, ethylbenzene, and total xylenes were only detected in Well MW-7 at concentrations between 6.8 and 9.7 µg/L. No TPH-g, MTBE or BTEX were detected in Wells MW-1, MW-3, MW-4, IW-1, BF-1, and BF-5 at concentrations at or above the laboratory reporting limits.

SUMMARY

Based upon our review of the current and historical groundwater analytical data for this Site, groundwater quality appears to have fluctuated since the previous monitoring event, however a long term decreasing trend is apparent. Downgradient Well MW-6 showed historic low concentrations of TPH-g and BTEX. Since the inception of groundwater monitoring, groundwater concentrations for the various constituents at locations downgradient of the former gasoline UST within the eastern portion of the Site have significantly decreased.

In a directive letter dated April 22, 2016, the next semi-annual groundwater monitoring event shall include volatile organic compounds (VOC) by EPA Method 8260B and semi-volatile organic compounds (SVOCs) by EPA Method 8270. The next event is scheduled to occur in July 2016.

Please contact any of the undersigned for any questions or comments at (925) 746-6000.

Sincerely,
AEI Consultants

Adrian M. Angel
Project Geologist

Peter J. McIntyre, PG
Executive Vice President
Principal Geologist

REGISTERED GEOLOGIST
PETER J. MCINTYRE
Exp. 5/31/18
No. 7702
STATE OF CALIFORNIA

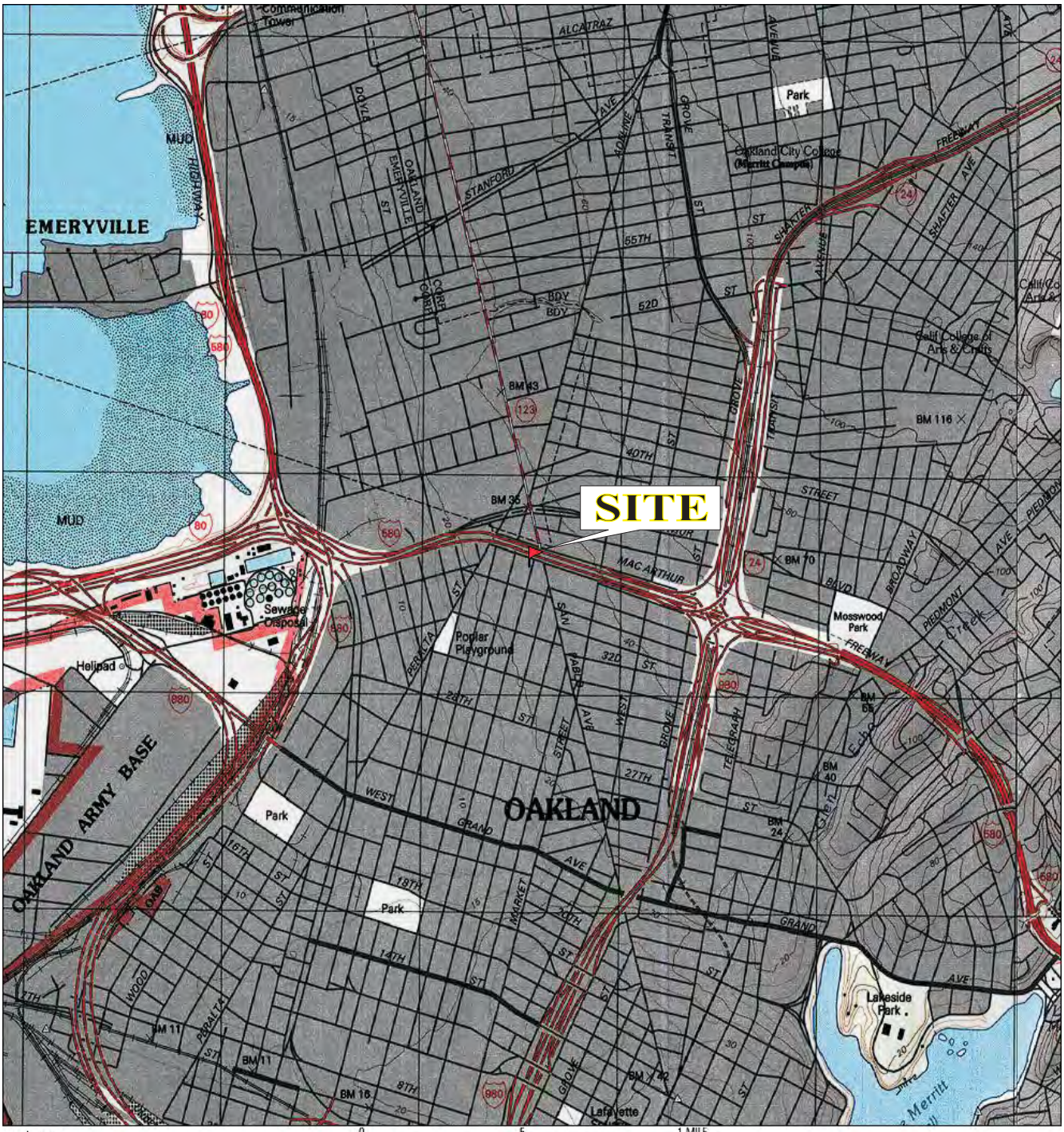
Attachments:

Figures
Figure 1: Site Location Map
Figure 2: Site Vicinity Map
Figure 3: Site Map
Figure 4: Groundwater Elevation Map
Figure 5: Groundwater Analytical Data (01/12-13/2016)

Tables
Table 1: Monitoring Well Construction Details
Table 2 and 2a: Groundwater Elevation Data
Table 3: Groundwater Analytical Data

Appendices
Appendix A: Groundwater Monitoring Well Field Sampling Forms
Appendix B: Laboratory Analytical Reports

FIGURES



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2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597

Site Location Map

3442 Adeline Street
Oakland, CA 94608

FIGURE 1
Job No: 281939

Property Boundary

Former UST Area

Approximate Scale:
1 inch = 55 feet

0’ 55’

N

AEI CONSULTANTS
2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597

Site Vicinity Map

3442 Adeline Street
Oakland, CA 94608

FIGURE 2
Job No: 281939

LEGEND

DRAFTED BY RFF

- Monitoring Well/Backfill Casings
- AEI Soil Boring
- Clear Water Soil Boring
- Soil vapor Sample
- Former Gasoline UST
- Interim Source Removal Excavation

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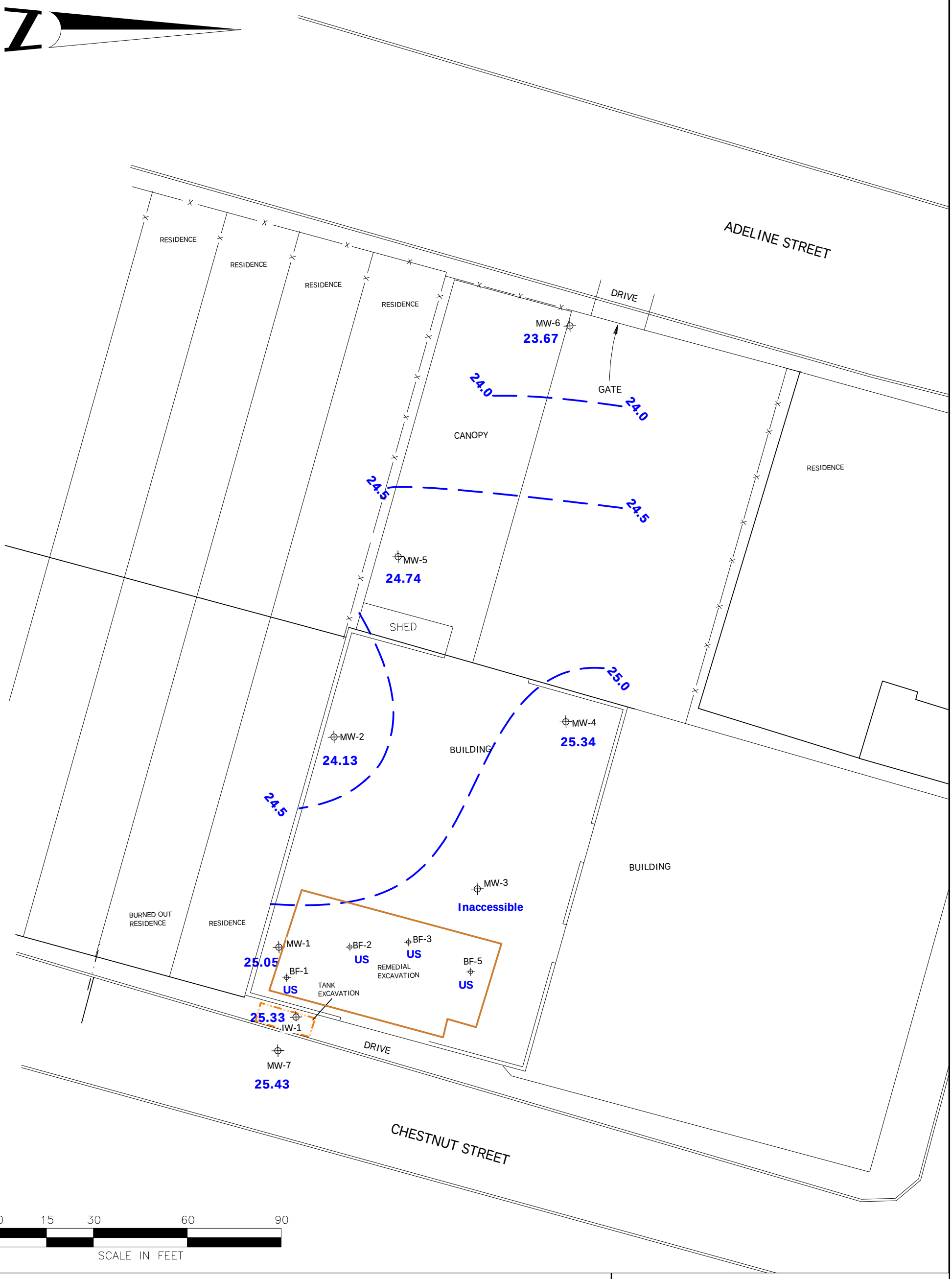
2500 CAMINO DIABLO, WALNUT CREEK

SITE MAP

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 3
PROJECT NO. 281939



LEGEND

DRAFTED BY RFF

- Monitoring Well/Backfill Casing Groundwater Elevation Feet Above Mean Sea Level (MSL) — 25.34
- Groundwater Elevation Contour
- US = Unsurveyed
- Former Gasoline UST
- Interim Source Removal Excavation

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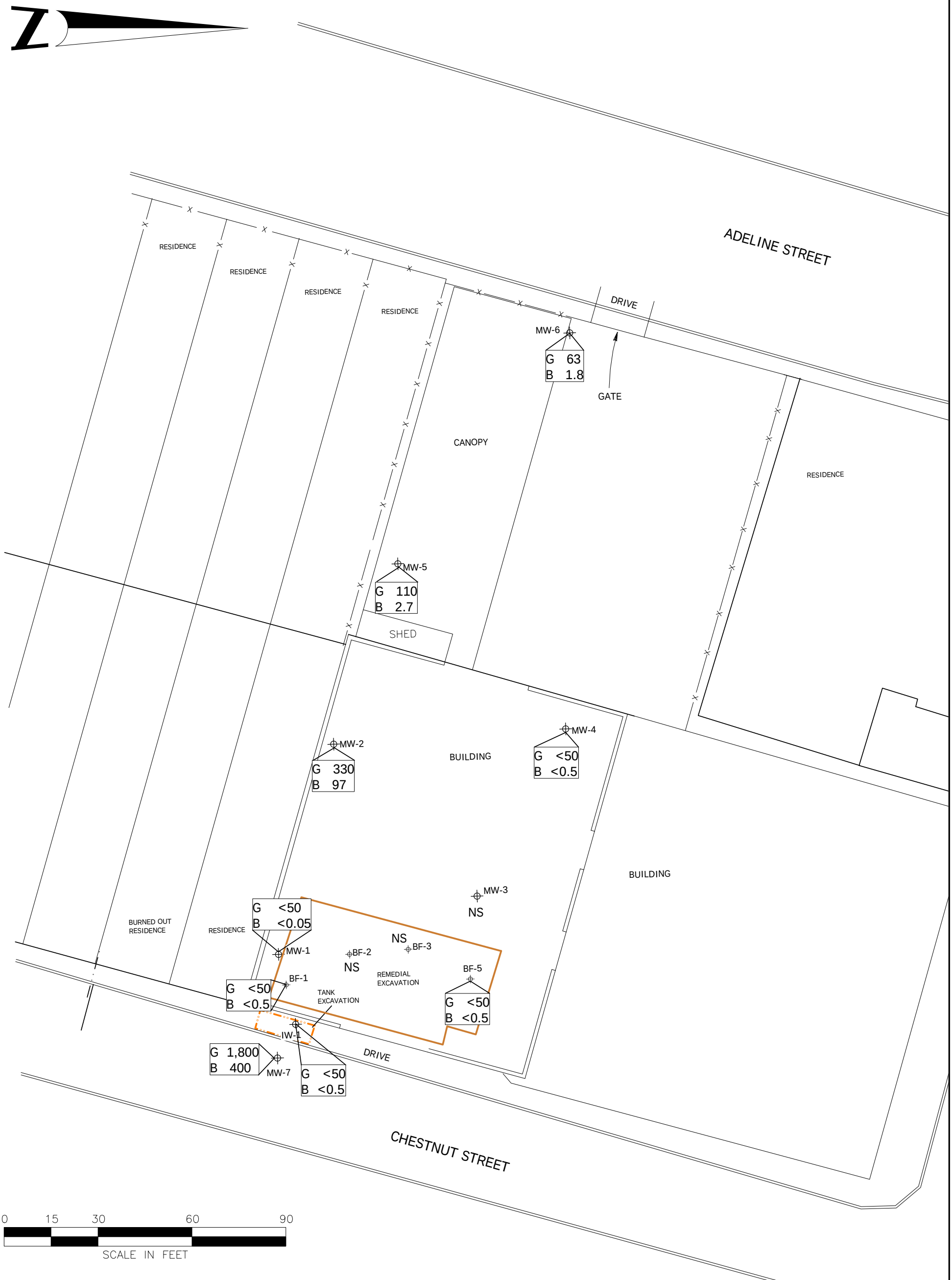
2500 CAMINO DIABLO, WALNUT CREEK

Groundwater Elevation Map (1/12-13/2016)

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 4
PROJECT NO. 281939



LEGEND

DRAFTED BY RFF

- Monitoring Well
- NS Not Sampled
- backfill casing
- Former Gasoline UST
- Interim Source Removal Excavation

G 86
B <0.5

Total Petroleum Hydrocarbons as gasoline (Units µg/L)
Benzene (Units µg/L)
<0.5 = not reported at or above the stated detection limit

AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK

GROUNDWATER ANALYTICAL DATA (1/12-13/2016)

3442 ADELINE STREET
OAKLAND, CALIFORNIA

FIGURE 5
PROJECT NO. 281939

TABLES

Table 1: Monitoring Well Construction Details
3442 Adeline Street St. Oakland, CA 94608

Well ID	Date Installed	Top of Casing Elevation (ft amsl)	Well Box Rim Elevation (ft amsl)	Depth to Water 4/30/14 (ft)	Well Depth (ft)	Casing Material	Casing Diameter (in)	Slotted Casing (ft)	Slot Size (in)	Sand Interval (ft)	Sand Size	Bentonite Interval (ft)	Grout Interval (ft)
MW-1	04/01/09	31.12	32.13	5.42	17	PVC	4	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-2	04/01/09	31.19	31.43	6.62	17	PVC	4	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-3	04/01/09	32.07	32.39	----	17	PVC	4	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-4	04/02/09	31.68	31.98	6.92	17	PVC	2	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-5	05/12/09	30.39	30.82	----	17	PVC	2	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-6	04/02/09	29.34	29.96	5.89	17	PVC	2	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
MW-7	05/13/09	31.04	31.45	6.29	17	PVC	2	7-17	0.020	6-17	# 2/12	4-6	0.75 - 5
IW-1	05/12/09	31.66	31.90	6.01	15	PVC/ stainless	2	13-15	40 mesh	12-15	# 2/12	11-12	0.75-12

Notes:
ft amsl = feet above mean sea level ft btc = feet below top of casing

Table 2: Groundwater Elevation Data
3442 Adeline Street St. Oakland, CA 94608

Well ID (Screen Interval)	Date Collected	Top of Casing Elevation *(ft amsl)*	Depth to Water *(ft)*	Groundwater Elevation *(ft amsl)*	Elevation Change *(ft)*
MW-1	6/10/2009	31.12	7.01	24.11	----
(7-17)	8/27/2009	31.12	6.96	24.16	0.05
	12/15/2009	31.12	5.96	25.16	1.00
	3/12/2010	31.12	5.06	26.06	0.90
	10/21/2010	31.12	7.00	24.12	-1.94
	5/5/2011	31.12	5.88	25.24	1.12
	4/25/2012	31.12	5.33	25.79	0.55
	12/12/2012	31.12	5.35	25.77	-0.02
	4/4/2013	31.12	6.63	24.49	-1.28
	4/30/2014	31.12	5.42	25.70	1.21
	1/12/2016	**31.12**	**6.07**	**25.05**	**-0.65**
MW-2	6/10/2009	31.19	9.50	21.69	----
(7-17)	8/27/2009	31.19	10.50	20.69	-1.00
	12/15/2009	31.19	8.68	22.51	1.82
	3/12/2010	31.19	5.09	26.10	3.59
	10/21/2010	31.19	7.51	23.68	-2.42
	5/5/2011	31.19	6.68	24.51	0.83
	4/25/2012	31.19	5.58	25.61	1.10
	12/12/2012	31.19	6.47	24.72	-0.89
	4/4/2013	31.19	7.56	23.63	-1.09
	4/30/2014	31.19	6.62	24.57	0.94
	1/13/2016	**31.19**	**7.06**	**24.13**	**-0.44**
MW-3	6/10/2009	32.07	8.44	23.63	----
(7-17)	8/27/2009	32.07	8.59	23.48	-0.15
	12/15/2009	32.07	7.66	24.41	0.93
	3/12/2010	Well inaccessible	----	----	----
	10/21/2010	Well inaccessible	----	----	----
MW-4	6/10/2009	31.68	9.45	22.23	----
(7-17)	8/27/2009	31.68	10.29	21.39	-0.84
	12/15/2009	31.68	8.19	23.49	2.10
	3/12/2010	31.68	5.45	26.23	2.74
	10/21/2010	31.68	9.93	21.75	-4.48
	5/5/2011	31.68	6.60	25.08	3.33
	4/25/2012	31.68	5.73	25.95	0.87
	12/12/2012	31.68	6.21	25.47	-0.48
	4/4/2013	31.68	7.88	23.80	-1.67
	4/30/2014	31.68	6.92	24.76	0.96
	1/13/2016	**31.68**	**6.34**	**25.34**	**0.58**

Table 2: Groundwater Elevation Data
3442 Adeline Street St. Oakland, CA 94608

Well ID (Screen Interval)	Date Collected	Top of Casing Elevation *(ft amsl)*	Depth to Water *(ft)*	Groundwater Elevation *(ft amsl)*	Elevation Change *(ft)*
MW-5 (7-17)	6/10/2009	30.39	9.13	21.26	----
	8/27/2009	30.39	9.54	20.85	-0.41
	12/15/2009	30.39	8.33	22.06	1.21
	3/12/2010	Well inaccessible	----	----	----
	10/21/2010	30.39	6.85	23.54	1.48
	5/5/2011	30.39	3.25	27.14	3.60
	4/25/2012	30.39	4.50	25.89	-1.25
	12/12/2012	30.39	5.43	24.96	-0.93
	4/4/2013	30.39	7.25	23.14	-1.82
	4/30/2014	Well inaccessible	----	----	----
	1/12/2016	**30.39**	**5.65**	**24.74**	**----**
MW-6 (7-17)	6/10/2009	29.34	9.98	19.36	
	8/27/2009	29.34	11.84	17.50	-1.86
	12/15/2009	29.34	8.33	21.01	3.51
	3/12/2010	29.34	4.66	24.68	3.67
	10/21/2010	29.34	10.00	19.34	-5.34
	5/5/2011	29.34	5.59	23.75	4.41
	4/25/2012	29.34	4.82	24.52	0.77
	12/20/2012	29.34	5.23	24.11	-0.41
	4/4/2013	29.34	7.37	21.97	-2.14
	4/30/2014	29.34	5.89	23.45	1.48
	1/12/2016	**29.34**	**5.67**	**23.67**	**0.22**
MW-7 (7-17)	6/10/2009	31.04	6.53	24.51	----
	8/27/2009	31.04	6.19	24.85	0.34
	12/15/2009	31.04	5.71	25.33	0.48
	3/12/2010	31.04	5.34	25.70	0.37
	10/21/2010	31.04	6.59	24.45	-1.25
	5/5/2011	31.04	5.98	25.06	0.61
	4/25/2012	31.04	5.71	25.33	0.27
	12/20/2012	Well inaccessible	----	----	----
	4/4/2013	31.04	6.18	24.86	-0.47
	4/30/2014	31.04	6.29	24.75	-0.11
	1/12/2016	**31.04**	**5.61**	**25.43**	**0.68**
IW-1 (13-15)	6/10/2009	31.66	7.65	24.01	----
	8/27/2009	31.66	7.70	23.96	-0.05
	12/15/2009	31.66	10.99	20.67	-3.29
	3/12/2010	31.66	6.00	25.66	4.99
	10/21/2010	31.66	9.35	22.31	-3.35
	5/5/2011	31.66	6.73	24.93	2.62
	4/25/2012	31.66	8.05	23.61	-1.32
	12/20/2012	31.66	12.88	18.78	-4.83
	4/4/2013	31.66	12.81	18.85	0.07
	4/30/2014	31.66	6.01	25.65	6.80
	1/12/2016	**31.66**	**6.33**	**25.33**	**-0.32**

Table 2a: Groundwater Elevation Data
3442 Adeline Street St. Oakland, CA 94608

Event	Date	Average Water Table Elevation (ft amsl)	Change from Previous Episode (ft)	Flow Direction (gradient) (ft/ft)
1	6/10/2009	22.40	----	West (0.0186)
2	8/27/2009	21.85	-0.55	West (0.0186)
3	12/15/2009	23.42	1.58	West (0.0181)
4	3/12/2010	25.75	2.33	West (0.004)
5	10/21/2010	22.81	-2.94	North Northwest (0.041)
6	5/5/2011	25.13	2.32	West (0.01)
7	4/25/2012	25.52	0.38	West (0.01)
8	12/20/2012	25.01	-0.51	West (0.01)
9	4/4/2013	23.41	-1.60	West (0.01)
10	4/30/2014	24.62	1.21	West (0.01)
11	1/12-13/2016	24.55	-0.07	West (0.01)

Table 3: Groundwater Analytical Data
3442 Adeline Street St. Oakland, CA 94608

Sample ID	Date	Depth to Water	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
			Method 8015C		*Method 8021B*				
		(ft)	(µg/L)						
MW-1	04/17/09	7.01	97	220	<5.0	10	<0.5	3.0	5.4
	08/27/09	6.96	----	7,000	<180	610	10	320	220
	09/17/09	----	----	92	<15	0.91	0.70	<0.5	<0.5
	12/15/09	5.96	----	2500	<50	170	6.4	66	120
	03/12/10	5.06	----	500	<5.0	4.0	1.1	0.6	0.7
	10/21/10	7.00	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	05/05/11	5.88	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/25/12	5.33	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	12/20/12	5.35	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	6.63	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/30/14	5.42	----	83	<5.0	<0.5	0.53	<0.5	<0.5
	01/12/16	**6.07**	----	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<1.5**
MW-2	04/17/09	9.50	2,200	7,000	<100	850	19	93	470
	08/27/09	10.50	----	26,000	<1,200	3,600	<25	1,200	3,000
	12/15/09	8.68	----	25,000	<250	2,900	70	1,500	2,400
	03/12/10	5.69	----	7,300	<350	590	7.0	6.4	680
	10/21/10	7.51	----	1,900	<15	140	1.4	28	140
	05/05/11	6.68	----	27,000	<180	2,300	13	1,700	2,600
	04/25/12	5.58	----	9,600	<120	440	8.8	260	920
	12/20/12	6.47	----	2,900	<35	63	2.6	21	85
	04/04/13	7.56	----	7,900	<150	960	10	380	690
	04/30/14	6.62	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	01/13/16	**7.06**	----	**330**	**<5.0**	**97**	**<0.5**	**2.5**	**14**
MW-3	04/17/09	8.44	2,200	10,000	<110	930	5.6	270	920
	08/27/09	8.59	----	17,000	<250	3800	38	730	710
	09/17/09	----	----	260	<15	1.8	1.0	<0.5	2.1
	10/14/09	----	----	1,800	<30	220	13	37	130
	12/15/09	7.66	----	4,900	<50	890	13	160	130
	03/12/10	Well inaccessible							
	10/21/10	Well inaccessible							

Table 3: Groundwater Analytical Data
3442 Adeline Street St. Oakland, CA 94608

Sample ID	Date	Depth to Water	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
			Method 8015C		*Method 8021B*				
		(ft)	(µg/L)						
MW-4	04/17/09	9.45	1,200	4,700	<30	140	2.0	28	18
	08/27/09	10.29	----	4,300	<25	75	11	8.6	3.4
	12/15/09	8.19	----	3,000	<15	64	11	5.6	3.3
	03/12/10	5.45	----	6,100	<35	1200	14	170	6.2
	10/21/10	9.93	----	1,900	<15	120	4.7	5.7	1.8
	05/05/11	6.60	----	4,900	<25	560	2.6	41	17
	04/25/12	5.73	----	330	<5.0	23	1.4	2.0	4.2
	12/20/12	6.21	----	150	<5.0	5.8	<0.5	<0.5	<0.5
	04/04/13	7.88	----	1,000	<5.0	30	4.6	0.61	0.65
	04/30/14	6.92	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	01/13/16	**6.34**	----	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<1.5**
MW-5	05/22/09	9.13	2,800	14,000	<100	3,000	12	340	420
	08/27/09	9.54	----	25,000	<400	3,300	36	110	160
	12/15/09	8.33	----	8,200	<250	1,200	6.9	300	610
	03/12/10	Well inaccessible							
	10/21/10	6.85	----	<50	<5.0	1.3	<0.5	<0.5	<0.5
	05/05/11	3.25	----	790	<20	140	1.0	29	30
	04/25/12	4.51	----	67	<5.0	3.4	<0.5	1.4	0.83
	12/20/12	5.43	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	7.25	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/30/14	Well inaccessible		----	----	----	----	----	----
	01/12/16	**5.65**	**----**	**110**	**<5.0**	**2.7**	**<0.5**	**<0.5**	**<1.5**
MW-6	04/17/09	9.98	1,000	5,600	<300	210	3.0	180	160
	08/27/09	11.84	----	2,200	<120	98	7.9	20	1.1
	12/15/09	8.59	----	4,700	<250	370	6.9	260	300
	03/12/10	4.66	----	9,300	<90	210	12	250	110
	10/21/10	10.00	----	380	<5.0	35	1.2	4.6	3.8
	05/05/11	5.59	----	7,000	<75	80	2.9	120	28
	04/25/12	4.82	----	7,400	<150	99	11.0	100	27
	12/20/12	5.23	----	5,500	<50	81	3.1	78	16
	04/04/13	7.37	----	5,300	<70	76	5.7	50	12
	04/30/14	5.89	----	670	<5.0	12	2.4	2.3	0.77
	01/12/16	**5.67**	**----**	**63**	**<5.0**	**1.8**	**<0.5**	**<0.5**	**<1.5**

Table 3: Groundwater Analytical Data
3442 Adeline Street St. Oakland, CA 94608

Sample ID	Date	Depth to Water	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
			Method 8015C		*Method 8021B*				
		(ft)	(µg/L)						
MW-7	04/17/09	6.53	3,700	12,000	<120	1,000	37	100	36
	08/27/09	6.19	----	12,000	<100	550	30	130	33
	12/15/09	5.71	----	9,600	<100	620	26	140	20
	03/12/10	5.34	----	10,000	<25	850	33	87	28
	10/21/10	6.59	----	7,900	<180	1,100	22	44	21
	05/05/11	5.98	----	9,300	<200	690	23	42	21
	04/25/12	5.71	----	8,600	<75	1,000	31	10	20
	12/20/12	Well inaccessible due to parked car							
	04/04/13	6.18	----	12,000	<210	2,800	51	96	37
	04/30/14	6.29	----	220	<5.0	39	0.75	0.53	<0.5
	01/12/16	**5.61**	----	**1,800**	**31**	**400**	**6.8**	**9.7**	**7.6**
IW-1	05/22/09	7.65	680	1,200	<15	58	2.7	2.3	18
	08/27/09	7.70	----	160	<5.0	4.1	0.5	0.8	1.6
	09/17/09	----	----	300	<5.0	8.0	1.5	1.4	0.85
	12/15/09	10.99	----	220	<5.0	5.4	1.4	0.65	0.7
	03/12/10	6.00	----	<50	<5.0	1.9	<0.5	<0.5	<0.5
	10/21/10	9.35	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	05/05/11	6.73	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/25/12	8.05	----	<50	<5.0	0.91	<0.5	<0.5	0.57
	12/20/12	12.88	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	12.81	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/30/14	6.01	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	01/12/16	**6.33**	**----**	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<1.5**
BF-1	03/27/09	----	----	19,000	<250	890	27	460	1,200
post H_2O_2	06/17/09	----	----	6,700	<150	840	19	170	150
pre-aeration	08/10/09	----	----	11,000	<120	710	14	440	290
post aeration	08/27/09	----	----	9,600	<90	590	14	350	220
	09/13/09	----	----	<50	<5.0	1.2	<0.5	<0.5	<0.5
	10/14/09	----	----	2,400	<10	83	1.9	5.0	120
	12/11/09	6.70	----	200	<5.0	12	<0.5	2.2	9.6
	03/12/10	5.61	----	<50	<0.5	2.9	<0.5	<0.5	<0.5
	10/21/10	7.95	----	560	<5.0	68	1.5	6.7	25
	05/05/11	6.25	----	<50	<5.0	0.65	<0.5	<0.5	<0.5
	04/25/12	5.85	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	12/20/12	5.82	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	6.78	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/30/14	5.36	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	01/12/16	**6.58**	**----**	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<1.5**

Table 3: Groundwater Analytical Data
3442 Adeline Street St. Oakland, CA 94608

Sample ID	Date	Depth to Water	TPH-d	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
			Method 8015C		*Method 8021B*				
		(ft)	(µg/L)						
BF-5	08/27/09	----	----	170	<25	32	0.55	4.2	220
	10/14/09	----	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	12/11/09	7.25	----	130	<5.0	40	<0.5	0.91	<0.5
	03/12/10	6.09	----	<50	<5.0	4.3	<0.5	0.91	<0.5
	10/21/10	8.62	----	80	<5.0	8.8	<0.5	1.4	4.5
	05/05/11	6.75	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/25/12	6.37	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	12/20/12	6.33	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/13	7.25	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/30/14	5.83	----	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	01/12/16	**7.09**	**----**	**<50**	**<5.0**	**<0.5**	**<0.5**	**<0.5**	**<1.5**

Notes:
µg/L = micrograms per liter
ESL = Environmental Screening Level
TPH-g = total petroleum hydrocarbons as gasoline
TPH-d = total petroleum hydrocarbons as diesel
MTBE = methyl tert-butyl ether
Bold Value = most recent sample
---- = not sampled

APPENDIX A

GROUNDWATER MONITORING WELL FIELD SAMPLING FORMS

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Zimmerman	Date of Sampling:	1/12/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	31.12		
Depth of Well	17.00		
Depth to Water (from top of casing)	6.07		
Water Elevation (feet above msl)	25.05		
Well Volumes Purged	Micropurged		
Actual Volume Purged (milliliters)	3750		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOA

Time	Vol Removed (milliliters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
16:00	750	18.32	6.58	450	43.98	238.3	
16:05	1500	18.38	6.62	448	44.05	238.3	
16:10	2250	18.31	6.64	451	43.70	238.1	
16:15	3000	18.37	6.63	450	42.23	238.3	
16:20	3750	18.34	6.63	450	42.86	238.1	

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

Bottom of drop tube at 11.5 feet bgs. Purge rate <0.5 liters per minute. No odor.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Zimmerman	Date of Sampling:	1/12/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	31.19		
Depth of Well	17.00		
Depth to Water (from top of casing)	7.06		
Water Elevation (feet above msl)	24.13		
Well Volumes Purged	Micropurged		
Actual Volume Purged (milliliters)	5,000		
Appearance of Purge Water			
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOA

Time	Vol Removed (milliiters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
10:55	1,000	17.89	5.77	386	41.10	242.3	
11:00	2,000	17.94	5.79	386	41.73	242.0	
11:05	3,000	17.92	5.78	386	41.69	242.6	
11:10	4,000	17.94	5.81	386	41.67	242.3	
11:15	5,000	17.95	5.73	386	41.51	242.4	

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

Bottom of drop tube at 11.0 feet bgs. Purge rate <0.5 liters per minute. No odor.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Zimmerman	Date of Sampling:	1/12/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	32.07		
Depth of Well	17.00		
Depth to Water (from top of casing)			
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	Vol Removed (milliiters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments

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

Well inaccessible

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Zimmerman	Date of Sampling:	1/13/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	31.68		
Depth of Well	17.00		
Depth to Water (from top of casing)	6.34		
Water Elevation (feet above msl)	25.34		
Well Volumes Purged	Micropurged		
Actual Volume Purged (milliliters)	3,750		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOA

Time	Vol Removed (Liters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
9:30	750	17.96	5.90	417	42.73	190.1	
9:35	1,500	17.96	5.90	417	42.38	188.5	
9:40	2,250	17.98	5.90	416	41.85	183.7	
9:45	3,000	18.03	5.89	416	41.64	186.2	
9:50	3,750	18.05	5.91	416	41.37	183.5	

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

Bottom of drop tube at 11.0 feet bgs. Purge rate <0.5 liters per minute. No odor.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Zimmerman	Date of Sampling:	1/12/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	30.39		
Depth of Well	17.00		
Depth to Water (from top of casing)	5.65		
Water Elevation (feet above msl)	24.74		
Well Volumes Purged	Micropurged		
Actual Volume Purged (milliliters)	3,750		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOA

Time	Vol Removed (Liters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
12:40	750	16.40	6.42	1,339	2.08	29.9	
12:45	1,500	16.50	6.41	1,338	2.37	36.9	
12:50	2,250	16.49	6.39	1,325	2.57	37.9	
12:55	3,000	16.53	6.40	1,331	2.02	39.0	
13:00	3,750	16.56	6.39	1,324	1.96	39.7	

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

Bottom of drop tube at 10.0 feet bgs. Purge rate <0.5 liters per minute. No odor.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-6

Project Name:	Zimmerman	Date of Sampling:	1/12/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	29.34		
Depth of Well	17.00		
Depth to Water (from top of casing)	5.67		
Water Elevation (feet above msl)	23.67		
Well Volumes Purged	Micropurged		
Actual Volume Purged (milliliters)	3750		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOA

Time	Vol Removed (milliiters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
11:50	750	17.07	6.27	330	30.36	141.9	
11:55	1,500	17.08	6.29	328	30.19	142.2	
12:00	2,250	17.06	6.31	332	30.15	136.6	
12:05	3,000	16.98	6.30	338	30.13	135.9	
12:10	3,750	16.92	6.35	348	30.35	136.2	

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

Bottom of drop tube at 13.0 feet bgs. Purge rate <0.5 liters per minute.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-7

Project Name:	Zimmerman	Date of Sampling:	1/12/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	31.04		
Depth of Well	17.00		
Depth to Water (from top of casing)	5.61		
Water Elevation (feet above msl)	25.43		
Well Volumes Purged	Micropurged		
Actual Volume Purged (milliliters)	5,000		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOA

Time	Vol Removed (milliliters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
13:45	1,000	19.06	6.38	1,345	2.40	47.9	
13:50	2,000	19.15	6.37	1,345	1.15	53.8	
13:55	3,000	19.15	6.37	1,345	0.77	55.6	
14:00	4,000	19.16	6.35	1,344	0.66	45.1	
14:05	5,000	19.18	6.36	1,342	0.64	43.1	

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

Bottom of drop tube at 12.0 feet bgs. Purge rate <0.5 liters per minute. Strong hydrocarbon odor.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: IW-1

Project Name:	Zimmerman	Date of Sampling:	1/12/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	31.66		
Depth of Well	15.00		
Depth to Water (from top of casing)	6.33		
Water Elevation (feet above msl)	25.33		
Well Volumes Purged	Micropurged		
Actual Volume Purged (liters)			
Appearance of Purge Water			
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOA

Time	Vol Removed (milliliters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
14:40	750	19.22	6.66	739	41.82	213.8	
14:45	1,500	19.22	6.66	739	42.29	212.7	
14:50	2,250	19.23	6.66	738	40.36	212.9	
14:55	3,000	19.24	6.67	738	41.23	211.5	
15:00	3,750	19.22	6.68	739	39.27	210.9	

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

Bottom of drop tube at 13.0 feet bgs. Purge rate <0.5 liters per minute. No odor.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: BF-1

Project Name:	Zimmerman	Date of Sampling:	1/12/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	Unsurveyed		
Depth of Well	12.00		
Depth to Water (from top of casing)	6.58		
Water Elevation (feet above msl)			
Well Volumes Purged	Micropurged		
Actual Volume Purged (millilliters)	6,250		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOA

Time	Vol Removed (milliliters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
16:45	1,250	19.03	6.70	934	25.64	139.6	
16:50	2,500	19.06	6.67	934	26.52	136.2	
16:55	3,750	19.08	6.69	935	26.54	133.2	
17:00	5,000	19.09	6.72	936	26.07	131.6	
17:05	6,250	19.10	6.70	935	26.81	130.3	

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

Bottom of drop tube at 10.0 feet bgs. Purge rate <0.5 liters per minute. No odor.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: BF-3

Project Name:	Zimmerman	Date of Sampling:	1/13/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	Unsurveyed		
Depth of Well	12.00		
Depth to Water (from top of casing)			
Water Elevation (feet above msl)			
Well Volumes Purged	Micropurged		
Actual Volume Purged (millilliters)			
Appearance of Purge Water			
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size

Time	Vol Removed (milliliters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments

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

Not sampled.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: BF-5

Project Name:	Zimmerman	Date of Sampling:	1/13/2016
Job Number:	281939	Name of Sampler:	A. Armstrong
Project Address:	3442 Adeline St. Oakland Cal		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4"		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	Unsurveyed		
Depth of Well	12.00		
Depth to Water (from top of casing)	7.09		
Water Elevation (feet above msl)			
Well Volumes Purged	Micropurged		
Actual Volume Purged (liters)	5,250		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	----

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOA

Time	Vol Removed (Liters)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
12:00	750	19.32	6.56	1029	0.74	5.3	
12:05	1,500	19.37	6.57	1030	0.55	-5.3	
12:10	2,250	19.40	6.56	1031	0.50	-6.5	
12:15	3,000	19.43	6.55	1031	0.41	-5.3	
12:20	3,750	19.45	6.55	1031	0.46	1.0	
12:25	4,500	19.47	6.54	1031	0.43	2.4	
12:30	5,250	19.47	6.54	1031	0.42	-1.0	

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

Bottom of drop tube at 11.0 feet bgs. Purge rate <0.5 liters per minute. No odor.

APPENDIX B

LABORATORY ANALYTICAL REPORTS

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

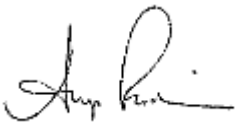
WorkOrder: 1601458

Report Created for: AEI Consultants

2500 Camino Diablo, Ste.#200
Walnut Creek, CA 94597

Project Contact: Jeremy Smith
Project P.O.: 101479
Project Name: 281939; Zimmerman, 3442 Adeline Street, Oakland, CA
Project Received: 01/13/2016

Analytical Report reviewed & approved for release on 01/21/2016 by:



Angela Rydelius,
Laboratory Manager

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

Glossary of Terms & Qualifier Definitions

Client: AEI Consultants
Project: 281939; Zimmerman, 3442 Adeline Street, Oakland, CA
WorkOrder: 1601458

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

S	Surrogate spike recovery outside accepted recovery limits
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1/d3	weakly modified or unmodified gasoline is significant; and/or lighter gasoline range compounds (the most mobile fraction) are significant
d1	weakly modified or unmodified gasoline is significant

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1601458
Date Received:	1/13/16 20:46	**Extraction Method:**	SW5030B
Date Prepared:	1/16/16-1/20/16	**Analytical Method:**	SW8021B/8015Bm
Project:	281939; Zimmerman, 3442 Adeline Street, Oakland, CA	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-1	**1601458-001A**	**Water**	**01/12/2016 16:21**	**GC3**	**115496**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	01/16/2016 08:11
MTBE	ND	5.0	1	01/16/2016 08:11
Benzene	ND	0.50	1	01/16/2016 08:11
Toluene	ND	0.50	1	01/16/2016 08:11
Ethylbenzene	ND	0.50	1	01/16/2016 08:11
Xylenes	ND	1.5	1	01/16/2016 08:11

Surrogates	REC (%)	Limits	
aaa-TFT	99	70-130	01/16/2016 08:11

Analyst(s): SS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-2	**1601458-002A**	**Water**	**01/13/2016 11:16**	**GC3**	**115496**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**330**	50	1	01/16/2016 08:41
MTBE	ND	5.0	1	01/16/2016 08:41
Benzene	**97**	0.50	1	01/16/2016 08:41
Toluene	ND	0.50	1	01/16/2016 08:41
Ethylbenzene	**2.5**	0.50	1	01/16/2016 08:41
Xylenes	**14**	1.5	1	01/16/2016 08:41

Surrogates	REC (%)	Limits	
aaa-TFT	114	70-130	01/16/2016 08:41

Analyst(s): SS Analytical Comments: d1

(Cont.)

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1601458
Date Received:	1/13/16 20:46	**Extraction Method:**	SW5030B
Date Prepared:	1/16/16-1/20/16	**Analytical Method:**	SW8021B/8015Bm
Project:	281939; Zimmerman, 3442 Adeline Street, Oakland, CA	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-4	**1601458-003A**	**Water**	**01/13/2016 09:51**	**GC3**	**115496**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	01/16/2016 09:11
MTBE	ND	5.0	1	01/16/2016 09:11
Benzene	ND	0.50	1	01/16/2016 09:11
Toluene	ND	0.50	1	01/16/2016 09:11
Ethylbenzene	ND	0.50	1	01/16/2016 09:11
Xylenes	ND	1.5	1	01/16/2016 09:11

Surrogates	REC (%)	Limits	
aaa-TFT	99	70-130	01/16/2016 09:11

Analyst(s): SS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-5	**1601458-004A**	**Water**	**01/12/2016 13:01**	**GC3**	**115496**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**110**	50	1	01/16/2016 09:41
MTBE	ND	5.0	1	01/16/2016 09:41
Benzene	**2.7**	0.50	1	01/16/2016 09:41
Toluene	ND	0.50	1	01/16/2016 09:41
Ethylbenzene	ND	0.50	1	01/16/2016 09:41
Xylenes	ND	1.5	1	01/16/2016 09:41

Surrogates	REC (%)	Limits	
aaa-TFT	116	70-130	01/16/2016 09:41

Analyst(s): SS Analytical Comments: d1/d3

(Cont.)

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1601458
Date Received:	1/13/16 20:46	**Extraction Method:**	SW5030B
Date Prepared:	1/16/16-1/20/16	**Analytical Method:**	SW8021B/8015Bm
Project:	281939; Zimmerman, 3442 Adeline Street, Oakland, CA	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-6	**1601458-005A**	**Water**	**01/12/2016 12:11**	**GC3**	**115496**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**63**	50	1	01/19/2016 16:55
MTBE	ND	5.0	1	01/19/2016 16:55
Benzene	**1.8**	0.50	1	01/19/2016 16:55
Toluene	ND	0.50	1	01/19/2016 16:55
Ethylbenzene	ND	0.50	1	01/19/2016 16:55
Xylenes	ND	1.5	1	01/19/2016 16:55

Surrogates	REC (%)	Limits	
aaa-TFT	102	70-130	01/19/2016 16:55

Analyst(s): TD Analytical Comments: d1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-7	**1601458-006A**	**Water**	**01/12/2016 14:06**	**GC3**	**115568**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**1800**	100	2	01/20/2016 18:53
MTBE	**31**	10	2	01/20/2016 18:53
Benzene	**400**	1.0	2	01/20/2016 18:53
Toluene	**6.8**	1.0	2	01/20/2016 18:53
Ethylbenzene	**9.7**	1.0	2	01/20/2016 18:53
Xylenes	**7.6**	3.0	2	01/20/2016 18:53

Surrogates	REC (%)	Qualifiers	Limits	
aaa-TFT	135	S	70-130	01/20/2016 18:53

Analyst(s): TD Analytical Comments: d1,c4

(Cont.)

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1601458
Date Received:	1/13/16 20:46	**Extraction Method:**	SW5030B
Date Prepared:	1/16/16-1/20/16	**Analytical Method:**	SW8021B/8015Bm
Project:	281939; Zimmerman, 3442 Adeline Street, Oakland, CA	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
IW-1	1601458-007A	Water	01/12/2016 15:01	GC3	115568

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	01/19/2016 12:52
MTBE	ND	5.0	1	01/19/2016 12:52
Benzene	ND	0.50	1	01/19/2016 12:52
Toluene	ND	0.50	1	01/19/2016 12:52
Ethylbenzene	ND	0.50	1	01/19/2016 12:52
Xylenes	ND	1.5	1	01/19/2016 12:52

Surrogates	REC (%)	Limits	
aaa-TFT	96	70-130	01/19/2016 12:52

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BF-1	1601458-008A	Water	01/12/2016 17:05	GC3	115568

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	01/19/2016 13:22
MTBE	ND	5.0	1	01/19/2016 13:22
Benzene	ND	0.50	1	01/19/2016 13:22
Toluene	ND	0.50	1	01/19/2016 13:22
Ethylbenzene	ND	0.50	1	01/19/2016 13:22
Xylenes	ND	1.5	1	01/19/2016 13:22

Surrogates	REC (%)	Limits	
aaa-TFT	96	70-130	01/19/2016 13:22

Analyst(s): TD

(Cont.)

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1601458
Date Received:	1/13/16 20:46	**Extraction Method:**	SW5030B
Date Prepared:	1/16/16-1/20/16	**Analytical Method:**	SW8021B/8015Bm
Project:	281939; Zimmerman, 3442 Adeline Street, Oakland, CA	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BF-5	1601458-009A	Water	01/13/2016 12:31	GC3	115568

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	01/19/2016 13:53
MTBE	ND	5.0	1	01/19/2016 13:53
Benzene	ND	0.50	1	01/19/2016 13:53
Toluene	ND	0.50	1	01/19/2016 13:53
Ethylbenzene	ND	0.50	1	01/19/2016 13:53
Xylenes	ND	1.5	1	01/19/2016 13:53

Surrogates	REC (%)	Limits	
aaa-TFT	99	70-130	01/19/2016 13:53

Analyst(s): TD

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Quality Control Report

Client:	AEI Consultants	**WorkOrder:**	1601458
Date Prepared:	1/15/16	**BatchID:**	115496
Date Analyzed:	1/15/16	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	281939; Zimmerman, 3442 Adeline Street, Oakland, CA	**Sample ID:**	MB/LCS-115496 1601418-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	57.8	40	60	-	96	70-130
MTBE	ND	9.86	5.0	10	-	99	70-130
Benzene	ND	10.3	0.50	10	-	103	70-130
Toluene	ND	10.5	0.50	10	-	105	70-130
Ethylbenzene	ND	10.8	0.50	10	-	108	70-130
Xylenes	ND	32.5	1.5	30	-	108	70-130
Surrogate Recovery							
aaa-TFT	9.72	9.56		10	97	96	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	59.0	68.0	60	ND	98	113	70-130	14.3	20
MTBE	9.31	9.15	10	ND	93	92	70-130	1.70	20
Benzene	10.3	10.3	10	ND	103	103	70-130	0	20
Toluene	10.4	10.4	10	ND	104	104	70-130	0	20
Ethylbenzene	10.8	10.9	10	ND	108	109	70-130	0.923	20
Xylenes	32.4	32.1	30	ND	108	107	70-130	1.01	20
Surrogate Recovery									
aaa-TFT	9.68	10.0	10		97	100	70-130	3.37	20

(Cont.)

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Quality Control Report

Client:	AEI Consultants	**WorkOrder:**	1601458
Date Prepared:	1/19/16	**BatchID:**	115568
Date Analyzed:	1/19/16	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	281939; Zimmerman, 3442 Adeline Street, Oakland, CA	**Sample ID:**	MB/LCS-115568 1601458-008AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	60.3	40	60	-	100	70-130
MTBE	ND	10.5	5.0	10	-	105	70-130
Benzene	ND	10.8	0.50	10	-	108	70-130
Toluene	ND	11.1	0.50	10	-	111	70-130
Ethylbenzene	ND	11.4	0.50	10	-	114	70-130
Xylenes	ND	34.4	1.5	30	-	115	70-130
Surrogate Recovery							
aaa-TFT	9.61	9.31		10	96	93	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	60.4	66.6	60	ND	101	111	70-130	9.81	20
MTBE	9.19	9.82	10	ND	92	98	70-130	6.59	20
Benzene	9.98	11.2	10	ND	100	112	70-130	11.9	20
Toluene	10.2	10.4	10	ND	102	104	70-130	2.70	20
Ethylbenzene	10.5	11.0	10	ND	105	110	70-130	4.71	20
Xylenes	31.7	33.0	30	ND	106	110	70-130	4.11	20
Surrogate Recovery									
aaa-TFT	9.49	9.85	10		95	99	70-130	3.77	20

McCampbell Analytical, Inc.
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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1601458 **ClientCode: AEL**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Jeremy Smith
AEI Consultants
2500 Camino Diablo, Ste.#200
Walnut Creek, CA 94597
(925) 478-9698 FAX: (925) 944-2895

Email: jasmith@aeiconsultants.com
cc/3rd Party:
PO: 101479
ProjectNo: 281939; Zimmerman, 3442 Adeline Street, Oakland, CA

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

Requested TAT: **5 days;**

Date Received: **01/13/2016**
Date Logged: **01/13/2016**

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
1601458-001	MW-1	Water	1/12/2016 16:21	☐	A	A										
1601458-002	MW-2	Water	1/13/2016 11:16	☐	A											
1601458-003	MW-4	Water	1/13/2016 9:51	☐	A											
1601458-004	MW-5	Water	1/12/2016 13:01	☐	A											
1601458-005	MW-6	Water	1/12/2016 12:11	☐	A											
1601458-006	MW-7	Water	1/12/2016 14:06	☐	A											
1601458-007	IW-1	Water	1/12/2016 15:01	☐	A											
1601458-008	BF-1	Water	1/12/2016 17:05	☐	A											
1601458-009	BF-5	Water	1/13/2016 12:31	☐	A											

Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

Comments:

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

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WORK ORDER SUMMARY

Client Name: AEI CONSULTANTS **QC Level:** LEVEL 2 **Work Order:** 1601458
Project: 281939; Zimmerman, 3442 Adeline Street, Oakland, CA **Client Contact:** Jeremy Smith **Date Logged:** 1/13/2016
Comments: **Contact's Email:** jasmith@aeiconsultants.com

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1601458-001A	MW-1	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	1/12/2016 16:21	5 days	Present	☐	
1601458-002A	MW-2	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	1/13/2016 11:16	5 days	Present	☐	
1601458-003A	MW-4	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	1/13/2016 9:51	5 days	Present	☐	
1601458-004A	MW-5	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	1/12/2016 13:01	5 days	Present	☐	
1601458-005A	MW-6	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	1/12/2016 12:11	5 days	Present	☐	
1601458-006A	MW-7	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	1/12/2016 14:06	5 days	Present	☐	
1601458-007A	IW-1	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	1/12/2016 15:01	5 days	Present	☐	
1601458-008A	BF-1	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	1/12/2016 17:05	5 days	Present	☐	
1601458-009A	BF-5	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	1/13/2016 12:31	5 days	Present	☐	

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

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

1601458

McCAMPBELL ANALYTICAL INC.

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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

Report To: Jeremy Smith Bill To: same P.O. # 101479

Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com

Tele: (925) 746-6000 Fax: (925) 746-6099

Project #: 281939 Project Name: Zimmerman

Project Location: 3442 Adeline Street, Oakland, CA

Sampler Signature:

SAMPLE ID	Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8021 + 8015)/MTBE	TPH as Diesel (8015) with Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	HVOCs EPA 8260	BTEX ONLY (EPA 602 / 8020)	TPH Multi-Range (G/D/MO) 8015 w/ Silica Gel	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8260	EPA 625 / 8270 - SVOCs	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals 6020	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
MW-1	MW-1	1/12/16	1621			x					x	X			x																
MW-2	MW-2	1/13/16	1116			x					x	X			x																
~~MW-3~~	~~MW-3~~					~~x~~					~~x~~	~~X~~			~~x~~																
MW-4	MW-4	1/13/16	951			x					x	X			x																
MW-5	MW-5	1/12/16	1301			x					x	X			x																
MW-6	MW-6	1/12/16	1216			x					x	X			x																
MW-7	MW-7	1/12/16	1406			x					x	X			x																
IW-1	IW-1	1/12/16	1501			x					x	X			x																
BF-1	BF-1	1/12/16	1705			x					x	X			x																
BF-5	BF-5	1/13/16	1234			x					x	X			x																

Relinquished By:	Date:	Time:	Received By:
	1/13/16	1447	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 4°
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB

PRESERVATION	VOAS	O&G	METALS	OTHER
APPROPRIATE CONTAINERS				

PERSERVED IN LAB

McCampbell Analytical, Inc.
"When Quality Counts"

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Sample Receipt Checklist

Client Name:	**AEI Consultants**	Date and Time Received:	**1/13/2016 14:47**
Project Name:	**281939; Zimmerman, 3442 Adeline Street, Oakland, CA**	Date Logged:	**1/13/2016**
WorkOrder №:	**1601458** Matrix: Water	Received by:	Jena Alfaro
Carrier:	Client Drop-In	Logged by:	Agustina Venegas

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

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

UCMR3 Samples:

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

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

Comments: