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Environmental & Civil Engineering

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December 9, 2003

Mr. Don Hwang
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Alameda County
DEC 15 2003
Environmental Health

Subject: **Soil and Groundwater Investigation**
3635 13th Avenue
Oakland, California
STID 1121
AEI Project No. 6906

Dear Mr. Hwang:

Enclosed is a copy of the soil and groundwater investigation report for the above referenced site, sent to you following review by Mr. Williamson.

I look forward to discussing this report with you and in working with your office to develop a cost effective closure approach for this site.

Thank you and please contact me at (925) 283-6000, extension 104, at your convenience to discuss the report.

Sincerely,

Peter McIntyre
Project Manager, Geologist

October 30, 2003

SOIL AND GROUNDWATER INVESTIGATION REPORT

3635 13th Avenue
Oakland, California

Project No. 6906

Prepared For:

Mr. John Williamson
1151 Wellington Street
Oakland, CA 94602

Prepared By:

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AEI

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1.0 INTRODUCTION

AEI Consultants (AEI) has prepared this report on behalf of Mr. John Williamson, which documents the soil and groundwater investigation performed at the property located at 3635 13th Avenue in Oakland, California (Figure 1: Site Location Map). AEI has been retained by Mr. Williamson to provide environmental consulting and engineering services associated with the release of petroleum hydrocarbons at the property.

This report presents the activities and findings of the offsite investigation performed to better assess the extent of the release from the former underground storage tank system on the property. Six soil borings were advanced southeast of the property, along 13th Avenue in August and October 2003. The investigation was performed in response to the requirement of the Alameda County Health Care Services Agency (ACHCSA) to further characterize the release.

2.0 SITE DESCRIPTION AND BACKGROUND

The subject property (hereinafter referred to as the "site" or "property") is located in a residential area of the City of Oakland, on the west corner of 13th Avenue and Excelsior Street. The site is approximately 4,000 square feet in size and is currently vacant and un-improved. The site is surrounded by fencing. The site was previously developed with a gasoline service station.

In December 1992, three underground storage tanks (USTs), one 250-gallon waste oil UST, one 500-gallon gasoline UST, and one 1,000-gallon gasoline UST were removed Aqua Science Engineers, Inc. of San Ramon. The waste oil UST was located in a former building on the southern half of the property, and the gasoline USTs were located on the northern end of the property. Refer to Figure 2 for the former locations of the USTs. Soil samples collected beneath the former waste oil UST revealed concentrations of 8,200 mg/kg Total Oil and Grease (TOG), 290 mg/kg Total Petroleum Hydrocarbons (TPH) as gasoline (TPH-g), and 225 mg/kg total lead. Soil samples collected from beneath the 1,000-gallon gasoline UST indicated maximum concentrations of 27 mg/kg TPH-g and 5.5 mg/kg benzene. Only minor concentrations of TPH as gasoline and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were found in samples collected beneath the 500-gallon gasoline UST [(1)].

In September 1993, AEI removed and disposed of approximately 360 cubic yards of contaminated soil from near the former waste oil UST. Sidewall samples collected from this excavation indicated that only minor contaminant concentrations remained in the soil. Following this project, the former 250-gallon waste oil UST was concluded to not pose a significant threat to the groundwater [(2)].

Three monitoring wells (MW-1 through MW-3) were installed in March 1994 [(3)]. Soil samples analyzed during the well installations contained only minor concentration of petroleum hydrocarbons. The wells were monitored on a quarterly basis from November 1994 to August

1995, when the ACHCSA approved a change in monitoring frequency to a biannual schedule. Historical water elevations and groundwater sample analytical data is presented in Table 1.

On November 16, 1995, AEI advanced a soil boring at each end of the former dispenser island to depths of 4.5 feet below ground surface (bgs) on the west end, and 10 feet bgs on the east. Soil samples were collected beneath the former dispensers at the request of the ACHCSA. Analysis of soil samples collected from the two borings indicated that concentrations of TPH-g and BTEX were below laboratory detection limits [4].

At the request of the ACHCSA, AEI prepared a workplan outlining a scope of work to further define the extent of impacted soil and groundwater beneath the site [5]. This investigation was performed between August 1997 and January 1998. Nine soil borings (SB1 through SB9) were advanced on the property and down-gradient of the former gasoline USTs [6]. Refer to Figure 2 for the locations of the borings. Groundwater sample analytical data is presented in Table 2 and soil sample analytical data in Table 3. The investigation revealed significant concentrations of contaminants in soil and groundwater and that the release had spread off-site in a southerly direction.

An additional workplan was prepared, outlining the installation of two additional groundwater monitoring wells [7]. However, due to the City of Oakland's requirement for liability insurance provided by the property owner for the wells, off-site monitoring wells could not be installed. A letter addendum to the workplan was prepared and approved to investigate the offsite extent of the release with temporary soil borings [8]. The remainder of this report presents the results of that investigation and monitoring events performed on the existing well network.

3.0 GEOLOGY AND HYDROGEOLOGY

The site is located at approximately 195 feet above mean seal level (msl). The site is located on a slight topographic rise, which slopes moderately to the southwest, toward Highway 580, approximately 200 feet southwest of the site.

Logs of soil borings revealed that the native soils beneath the site generally consist of clayey sand and clay from near ground surface to between 14 and 18 feet bgs. Clayey and silty sand was present below this depth to between 20 and 23 feet bgs. The sandy layer was underlain by stiff clay. A 0.75 foot thick gravel lens was present in SB-10 at 17 feet bgs, above the sandy zone. Saturated conditions were observed in the sandy zone. Water levels were measured in the recent borings at 15 to 25 feet bgs.

During recent monitoring activities, water levels were measured at approximately 14 feet bgs. In the February 1996 monitoring event, water levels rose to between approximately 4 and 9 feet bgs. Water level measurements consistently reveal a southerly groundwater flow direction. The hydraulic gradient calculated from the data obtained during the last three monitoring event was 0.05 to 0.06 ft/ft.

4.0 DRILLING ACTIVITIES

Prior to mobilization, a drilling permit was obtained from Alameda County Public Works Agency (ACPWA). Two excavation permits were obtained from the City of Oakland for drilling in the public right of way. Copies of permits are included in Appendix A. Underground Service Alert (USA) was notified to identify public utilities in the locations of the borings.

Soil borings SB-10 and SB-11 were performed on August 21, 2003. Due to unmarked utilities encountered on this date, the remaining borings (SB-12 to SB-15) were performed on October 9 and 10, 2003, after the locations were safely cleared with a water knife vacuum system to depths deemed below any potential utility lines.

The borings were drilling with direct push (Geoprobe®) drilling equipment. The borings were continuously cored with 2" diameter acrylic liners within the sampling barrel. Soil samples were cut from the liners at approximately 4 to 5 foot intervals. Selected samples were sealed with Teflon™ tape and plastic caps and placed in a cooler with wet ice to await transportation to the laboratory. Logs of the borings are included in Appendix B.

When saturated soils were observed in the borings, groundwater samples were collected. To collect groundwater samples, the drill rods were removed and temporary ¾" poly vinyl chloride (PVC) well casing was installed, with 5 to 10 feet of factory slotted screen. Groundwater samples were collected from five of the soil borings. Although apparently saturated soils were observed in SB-14, this boring was left open with casing installed for approximately six hours, after which no evidence was observed of collectable groundwater. Samples from the other borings were collected with either a stainless steal bailer or drop tube equipped with a check ball.

Groundwater samples were collected into 40-ml volatile organic analysis (VOA) vials and 1-liter amber bottles. The groundwater samples were capped so that there was no head space or visible air bubbles within the vials, then placed in a cooler with wet ice to await transportation to the laboratory.

Upon completion of sample collection, all drilling rods and temporary casing was removed from the borings. The boreholes were then backfilled with neat cement grout. The tops of the boreholes were then sealed with concrete patch to match the existing grade.

5.0 WELL MONTITORING AND SAMPLING

This report documents groundwater monitoring and sampling events performed on January 24, 2002, July 15, 2003 and October 10, 2003 of the three existing wells, MW-1, MW-2, and MW-3. During each event, the wells were opened and the water levels from the top of the casings were measured with an electric water level meter. Each well was then purged of approximately 3 well volumes of water, until the purge water appeared reasonably clear and water quality measurements were relatively stable. During purging, the following water quality parameters

were measured: temperature, pH, specific conductivity, dissolved oxygen, and oxidation-reduction potential (ORP). Once the water levels returned to at least 90% of their original levels in the wells, water samples were collected. Refer to Appendix C for Groundwater Well Sampling Field Forms, which include details on the sampling of each well.

The groundwater samples were collected from each well with new disposable bailers. Water was poured from the bailers into two 40 ml VOA vials and 1-liter amber bottles and capped so that neither headspace nor air bubbles were visible within the sample containers. The samples were labeled and placed on ice and transported under chain of custody protocol for analysis.

6.0 SAMPLE ANALYSES

Soil and groundwater samples were analyzed at McCampell Analytical Inc. (Department of Health Services Certification #1644) of Pacheco, California. From SB-10 to SB-15, a total of 12 soil samples and 5 groundwater samples were analyzed. Three groundwater samples were analyzed during each monitoring event. All samples were analyzed for TPH-g by EPA method 8015Cm, for TPH as diesel (TPH-d) by EPA method 8015C and for BTEX and methyl tertiary butyl ether (MTBE) by EPA method 8021B. Laboratory analytical reports, which include copies of chain of custody documents and laboratory quality assurance / quality control data, are included in Appendix D.

6.1 Soil Sample Analytical Results

TPH-g and TPH-d were both detected in 7 of the soil samples, up to 660 mg/kg and 100 mg/kg, respectively, with the highest concentrations in sample SB-15 15. Benzene was detected in four of the soil samples, up to 0.39 mg/kg (SB-10 12'). TEX were detected in several samples, up to 5.6 mg/kg, 1.3 mg/kg, and 1.9 mg/kg, respectively. MTBE was not detected above laboratory detection in any of the soil samples. Refer to Table 3 for detailed soil sample analytical data.

6.2 Groundwater Samples

Groundwater sample analyzed during the last three monitoring events consistently reveal the highest contaminant concentrations present in well MW-2. During the most recent event, TPH-g and TPH-d were detected in this well at 19,000 µg/l and 1,800 µg/l, respectively. Benzene was detected at 2700 µg/l in MW-2 and at 14 µg/l in MW-3. Detailed analytical data from the monitoring wells in included in Table 1.

Petroleum hydrocarbons were detected in each of the five water samples collected from the soil borings. TPH-g ranged from 270 µg/l (SB-13) up to 3,800 µg/l (SB-11). TPH-d ranged from 420 µg/l (SB-12) up to 2,400 µg/l (SB-11). Benzene concentrations ranged from <0.5 µg/l (SB-12, SB-13, and SB-15) up to 140 µg/l (SB-11). MTBE was not

detected in any of these groundwater samples. Detailed groundwater sample analytical data from the soil borings is presented in Table 2.

7.0 SUMMARY AND CONCLUSIONS

This investigation included the collection and analyses of soil and groundwater sample collected form six off-site soil borings (SB-10 to SB-15) advanced south of the source area to further define the extent of the release.

Soil samples collected during this investigation did not reveal any significant additional area of impacted unsaturated soils, although low concentrations of hydrocarbons were found in soil samples collected from the two borings near the property to the south (SB-10 and SB-11) and in the apparent smear zone in SB-15.

Groundwater sample analytical data from the off-site borings did reveal the TPH-g and TPH-d have spread off-site in a southerly direction, although concentrations decrease with distance from MW-2, located adjacent to the former tank hold. Benzene was not detected the three down-gradient borings SB-12, SB-13, and SB-15, however benzene concentrations in MW-2 ranged from 2,300 µg/l to 3,100 µg/l over the last three monitoring events. Despite the fact that the plume appears to have a limited off-site extent, high dissolved contaminant concentrations remain in well MW-2.

Past sampling has revealed impacted soil remaining in the soils near boring SB3 and high dissolved contaminant concentrations centrally on the property (SB1, SB-3, and SB-7). Based on these findings and those of the recent investigation, it would be prudent to evaluate cost effective source area soil and groundwater treatment options. Treatment of this area would limit additional offsite migration of contaminants. In the meantime and as requested by the ACHCSA, quarterly monitoring of the existing well network will continue, with the next episode scheduled to occur in January 2004.

8.0 REFERENCES

1. *Underground Storage Tank Removal Final Report*, January 20, 1993 – Aqua Science Engineers, Inc.
2. *Contaminated Soil Over-excavation Final Report*, November 18, 1999 – All Environmental, Inc.
3. *Soil Boring and Monitoring Well Installation Report*, December 14, 1994 – All Environmental, Inc.
4. *Phase II Limited Subsurface Investigation*, December 11, 1995 – All Environmental, Inc.
5. *Phase II Subsurface Investigation Workplan*, June 5, 1997 – All Environmental, Inc.
6. *Phase II Subsurface Investigation Report*, January 20, 1999 – All Environmental, Inc.

7. *Workplan*, December 3, 1999 – AEI Consultants
8. Letter to Amir Gholami of the ACHCSA, September 9, 2002 – AEI Consultants

9.0 REPORT LIMITATIONS AND SIGNATURES

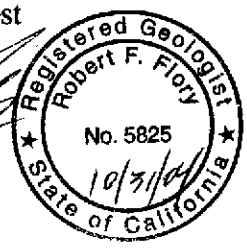
This report presents a summary of work completed by AEI, including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, but it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

These services were performed in accordance with generally accepted practices in the environmental engineering and construction field that existed at the time and location of the work.

Sincerely,
AEI Consultants

Peter McIntyre
Project Manager, Geologist

Robert F. Flory, RG
Senior Geologist



Report Distribution:

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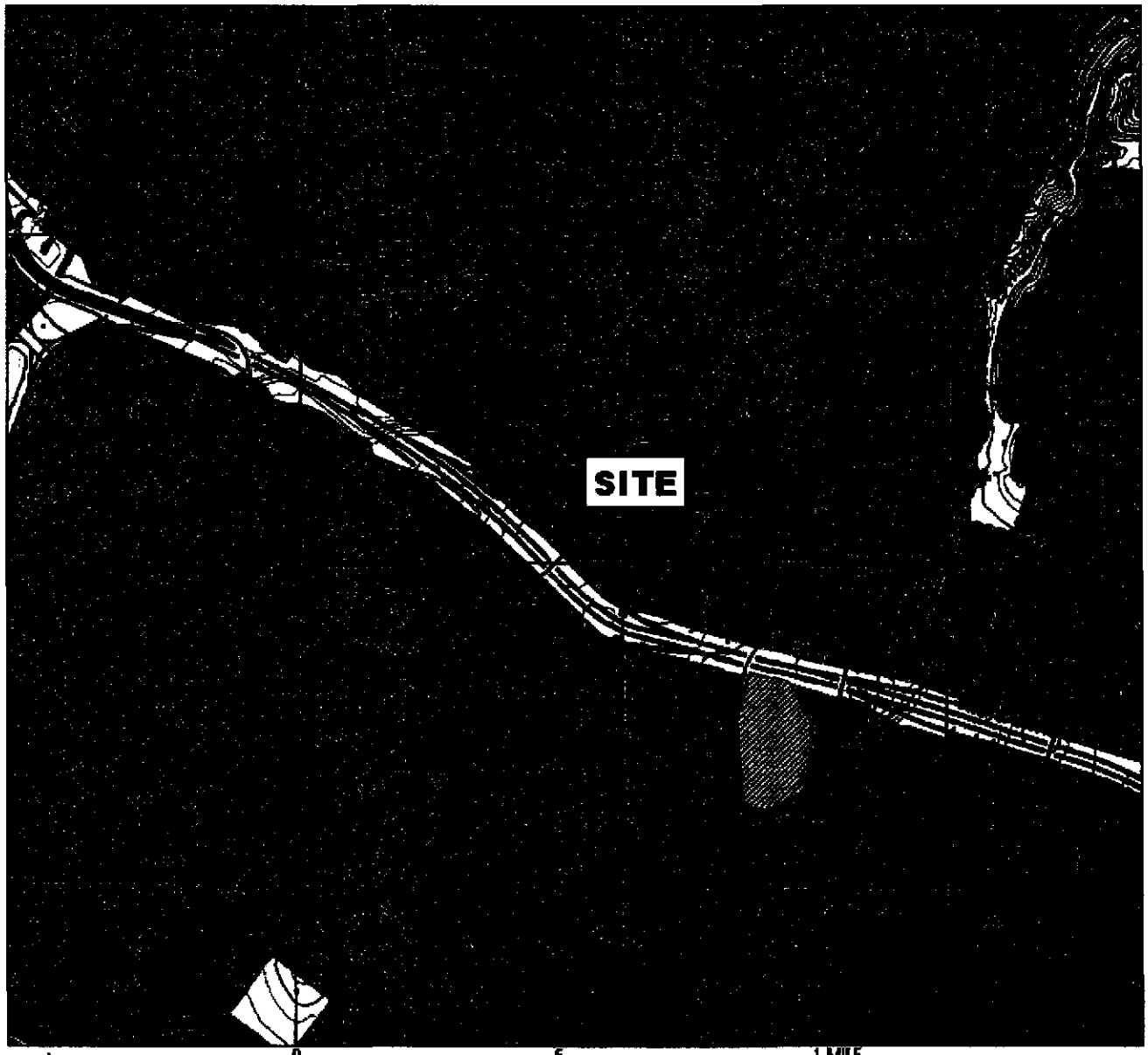

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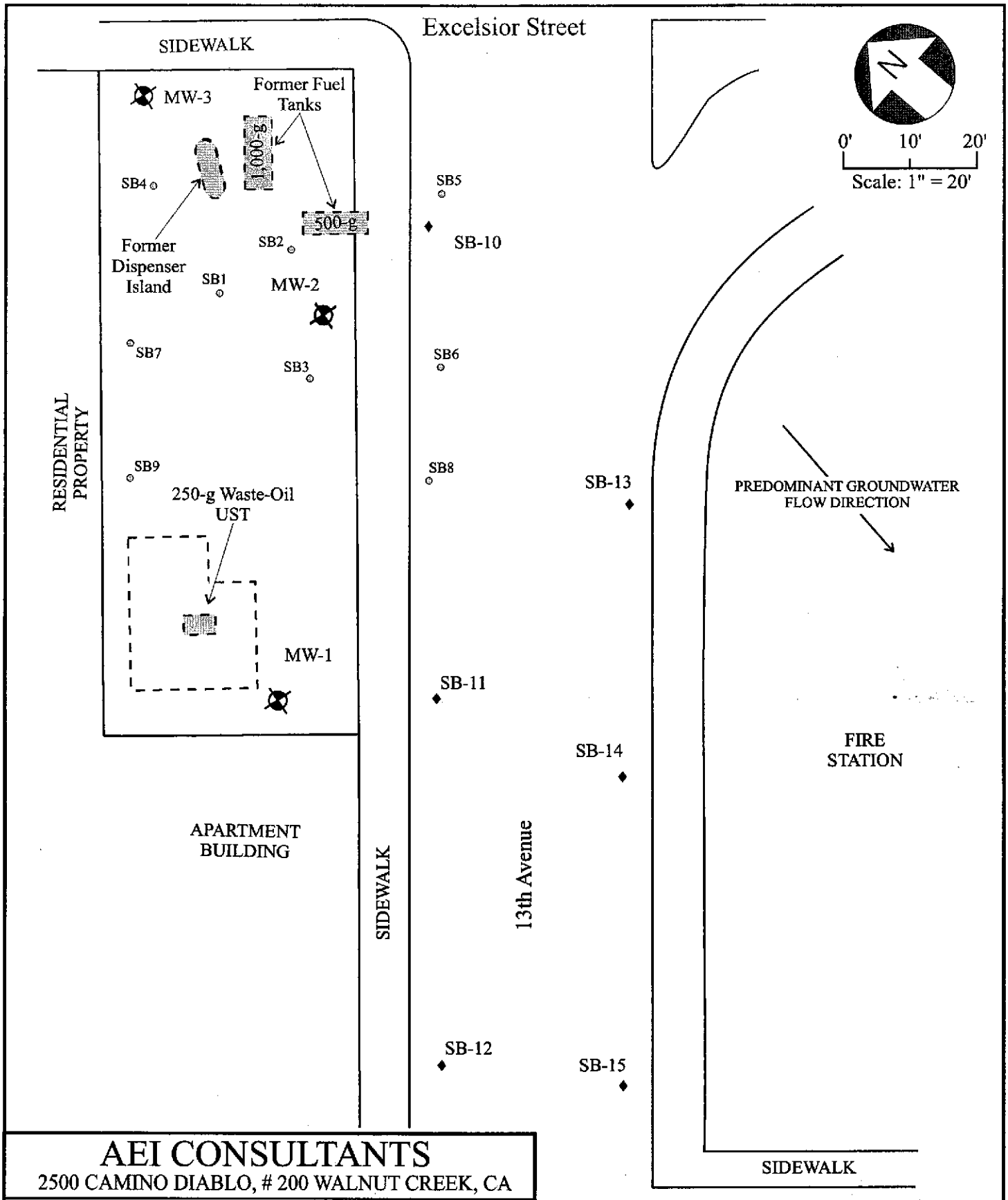
AEI CONSULTANTS

SITE LOCATION MAP

3635 13th AVENUE
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 6906



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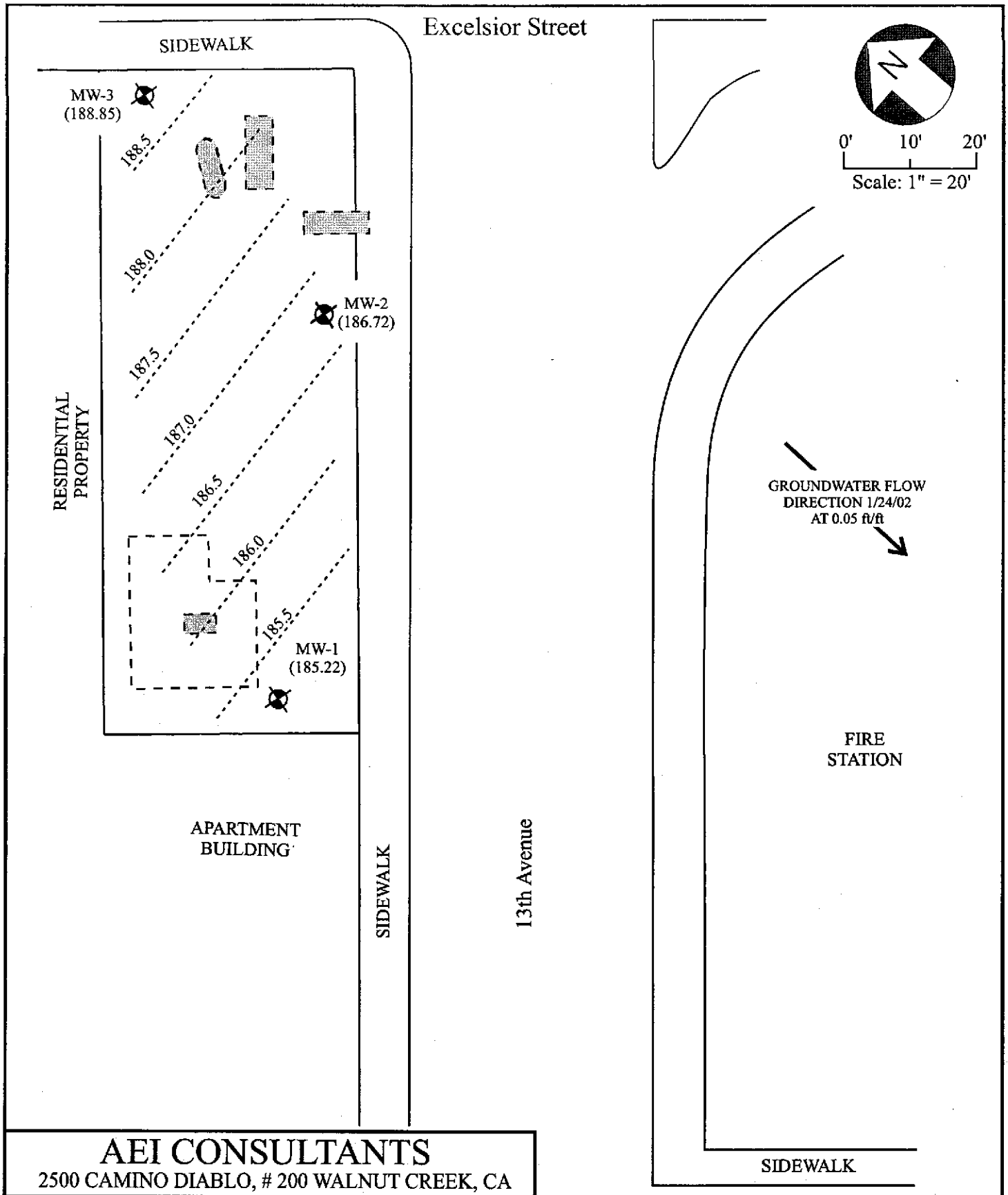
2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

SITE PLAN

3635 13th Avenue Oakland, California	FIGURE 2 AEI Project # 6316

LEGEND (REV. 10/03)

- Monitoring Well
- Soil Boring 11/97 & 1/98
- Soil Boring 8/21 & 10/9-10 2003



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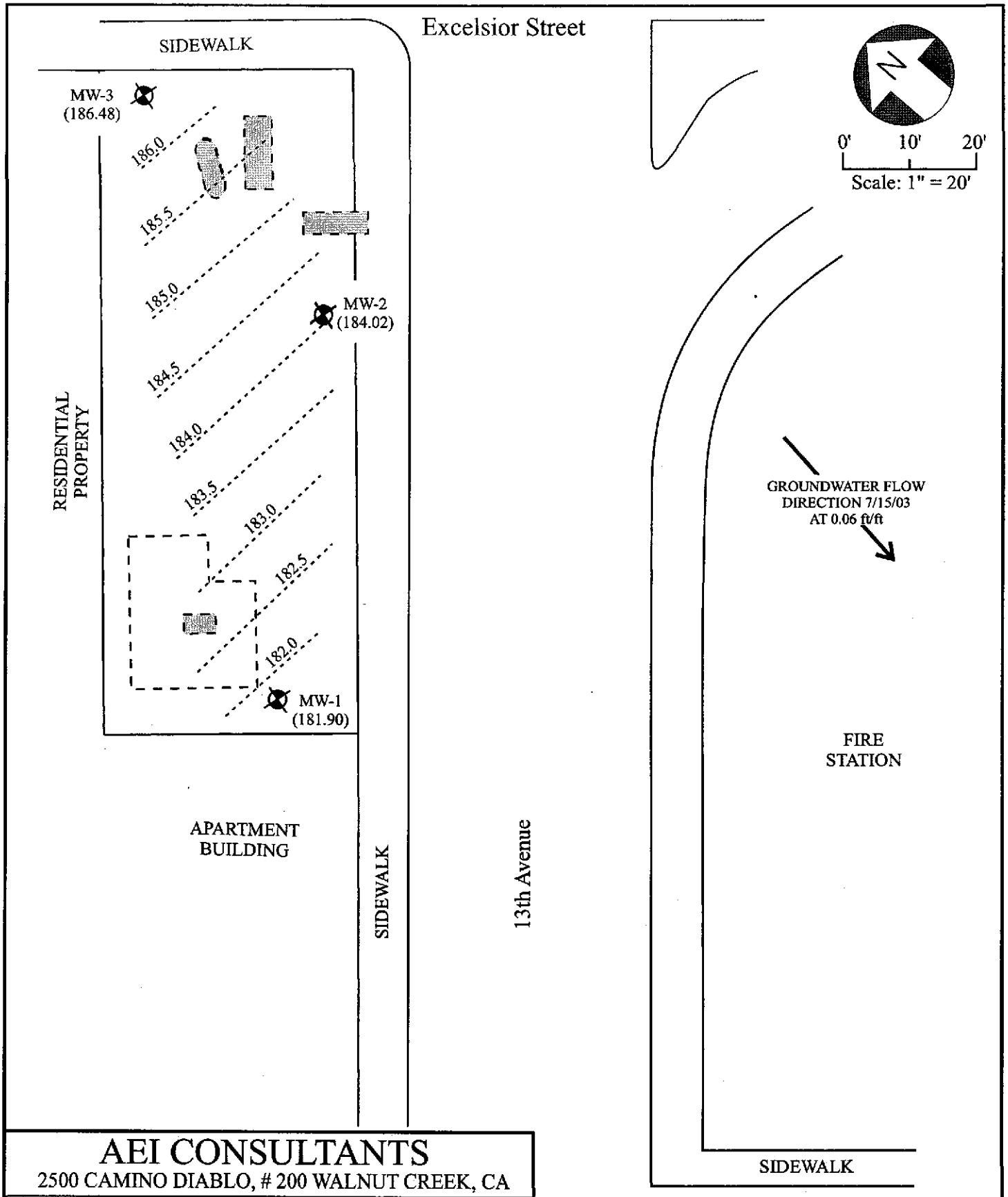
2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

WATER TABLE CONTOURS 1/24/02

3635 13th Avenue Oakland, California	FIGURE 3 AEI Project # 6316

LEGEND (REV. 10/03)

- Monitoring Well, with water table elevation in ft above msl (1/24/02)
- Water table contours in ft above msl Interval = 0.5 ft



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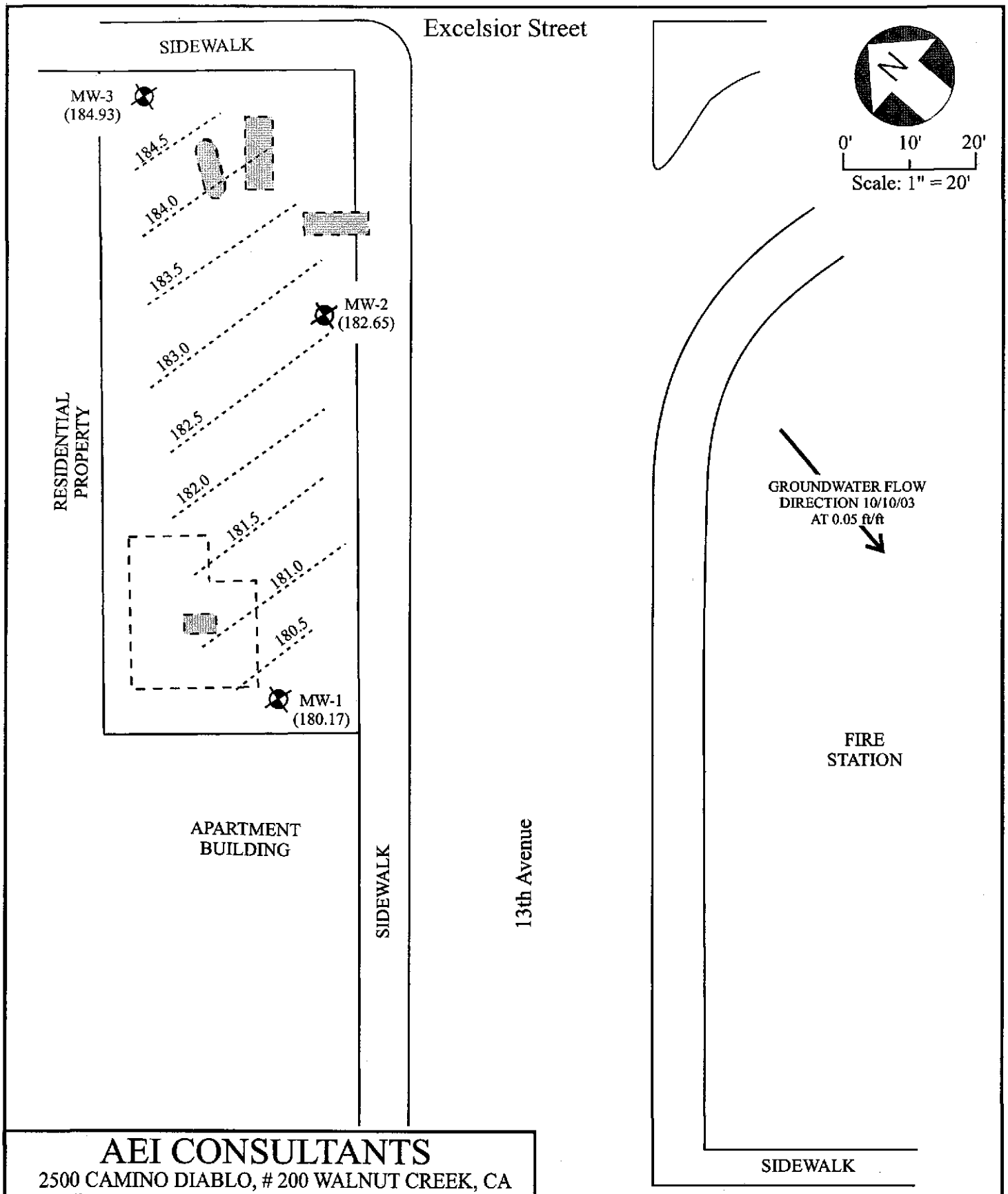
2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

WATER TABLE CONTOURS 7/15/03

3635 13th Avenue Oakland, California	FIGURE 4 AEI Project # 6316

LEGEND (REV. 10/03)

- Monitoring Well, with water table elevation in ft above msl (7/15/03)
- Water table contours in ft above msl Interval = 0.5 ft



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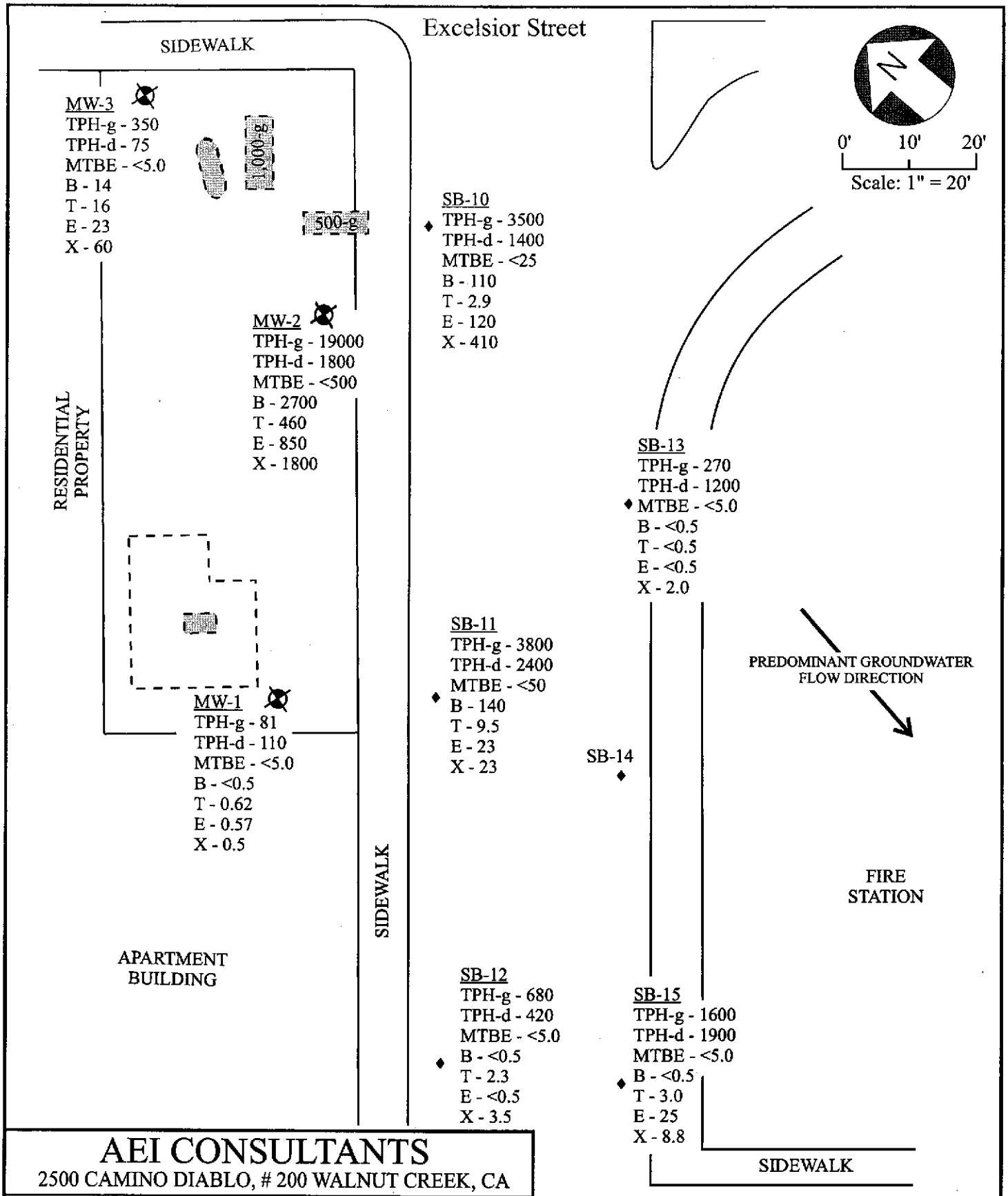
2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

WATER TABLE CONTOURS 10/10/03

3635 13th Avenue Oakland, California	FIGURE 5 AEI Project # 6316

LEGEND (REV. 10/03)

- Monitoring Well, with water table elevation in ft above msl (10/10/03)
- Water table contours in ft above msl Interval = 0.5 ft



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2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

RECENT GROUNDWATER SAMPLE ANALYTICAL DATA

3635 13th Avenue
Oakland, California

FIGURE 6
AEI Project # 6316

LEGEND (REV. 10/03)

- Monitoring Well
- Soil Boring 8/21 & 10/9-10 2003
  All data in µg/l
  See Tables 1 & 2 for details

Table 1
Monitoring Well Sample Analytical Data

Well ID	Date	Well Elevation	Depth to Water	Water Table Elevation	TPH-g (µg/l)	MTBE (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Xylenes (µg/l)	TPH-d (µg/l)	TOG (mg/l)
MW - 1	11/22/1994	194.75	10.92	183.83	210	-	<0.5	<0.5	<0.5	2.3	<50	<0.5
	2/23/1995	194.75	10.58	184.17	140	-	<0.5	<0.5	0.6	1.5	<50	1.2
	5/24/1995	194.75	10.94	183.81	<50	-	<0.5	<0.5	<0.5	<0.5	<50	<0.5
	8/18/1995	194.75	14.52	180.23	2800	-	25	6.2	22	30	<50	<0.5
	2/7/1996	194.75	4.43	190.32	<50	-	<0.5	<0.5	<0.5	<0.5	<50	<0.5
	9/6/1996	194.75	13.60	181.15	<50	<5.0	<0.5	<0.5	<0.5	<0.5	<50	<5.0
	6/19/1997	194.75	13.07	181.68	630	15	25	9.7	100	14	400	<5.0
	1/24/2002	194.75	9.53	185.22	60	<5.0	3.3	2.8	2.0	6.0	<50	-
	7/15/2003	194.75	12.85	181.90	87	<5.0	15	4.9	3.3	9.2	<50	-
	10/10/2003	194.75	14.58	180.17	81	<5.0	<0.5	0.62	0.57	0.5	110	-
MW - 2	11/22/1994	196.44	12.54	183.90	11000	-	35	21	7.2	50	<50	<0.5
	2/23/1995	196.44	12.35	184.09	4000	-	<0.5	<0.5	2.5	5.7	<50	1.6
	5/24/1995	196.44	12.11	184.33	8600	-	95	37	37	70	<50	<0.5
	8/18/1995	196.44	16.25	180.19	7200	-	43	21	21	71	<50	<0.5
	2/7/1996	196.44	9.34	187.10	11000	-	17	9.3	9.3	25	<50	0.6
	9/6/1996	196.44	15.22	181.22	15000	ND	4300	920	460	1600	1900	<5.0
	6/19/1997	196.44	13.33	183.11	26000	<200	5300	1500	910	3200	2900	<5.0
	1/24/2002	196.44	9.72	186.72	34000	<200	3100	1100	1100	2900	5300	-
	7/15/2003	196.44	12.42	184.02	18000	<1000	2300	310	690	1600	6600	-
	10/10/2003	196.44	13.79	182.65	19000	<500	2700	460	850	1800	1800	-
MW -3	11/22/1994	198.93	11.53	187.40	200	NA	<0.5	<0.5	<0.5	2	<50	3
	2/23/1995	198.93	11.89	187.04	1500	NA	6.6	6.4	4.2	13	<50	0.9
	5/24/1995	198.93	12.71	186.22	710	NA	2.5	3.2	3.1	16	<50	<0.5
	8/18/1995	198.93	16.14	182.79	310	NA	3.1	2.1	2.2	11	<50	<0.5
	2/7/1996	198.93	6.22	192.71	400	NA	1.4	2.5	2.2	7	<50	2.2
	9/6/1996	198.93	13.51	185.42	<50	<5.0	<0.5	<0.5	<0.5	<0.5	<50	<5.0
	6/19/1997	198.93	12.46	186.47	<50	<5.0	<0.5	<0.5	<0.5	<0.5	<50	<5.0
	1/24/2002	198.93	10.08	188.85	58	<5.0	4	2.7	2.3	6.7	<50	-
	7/15/2003	198.93	12.45	186.48	<50	<5.0	<0.5	<0.5	<0.5	<0.5	<50	-
	10/10/2003	198.93	14.00	184.93	350	<5.0	14	16	23	60	75	-

Well Elevation in feet above mean sea level (msl)
Depth to water in feet below the tops of the well casings
Water Table Elevations in feet above msl
TPH-g - Total petroleum hydrocarbons (TPH) as gasoline
TPH-d - TPH as diesel
TOG - Total oil and grease

MTBE - Methyl tertiary butyl ether
mg/l - milligrams per liter
µg/l - micrograms per liter
- = sample not analyzed by this method
ND = non detect (detection limit not known)

Table 2
Groundwater Sample Analytical Results: Soil Borings

Sample ID	Date	TPH-g (µg/l)	MTBE (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-Benzene (µg/l)	Xylenes (µg/l)	TPH-d µg/L
SB1	8/97-1/98	63,000	<200	2,600	1,100	1,700	3,600	27,000
SB3	8/97-1/98	11,000	<100	1,700	840	330	1,100	790
SB5	8/97-1/98	12,000	<330	200	14	280	28	28,000
SB6	8/97-1/98	2,200	<28	330	4.7	49	14	-
SB7	8/97-1/98	36,000	<1100	2,200	550	850	1,700	200,000
SB8	8/97-1/98	6,200	<92	430	22	150	170	1,200
SB9	8/97-1/98	160	22	6.2	8.1	4.2	17	210
SB-10W	8/21/2003	3,500	<25	110	2.9	120	410	1,400
SB-11W	8/21/2003	3,800	<50	140	9.5	23	23	2,400
SB-12 W	10/9/2003	680	<5.0	<0.5	2.3	<0.5	3.5	420
SB-13 W	10/10/2003	270	<5.0	<0.5	<0.5	<0.5	2.0	1,200
SB-15 W	10/10/2003	1,600	<5.0	<0.5	3.0	25.0	8.8	1,900
MDL		50	5	0.5	0.5	0.5	0.5	50

MTBE - Methyl tertiary butyl ether
mg/l - milligrams per liter
µg/l - micrograms per liter
- = sample not analyzed by this method
TPH-g - Total petroleum hydrocarbons (TPH) as gasoline
TPH-d - TPH as diesel
MDL - method detection limit with no sample dilution

Table 3
Soil Sample Analytical Data

Sample ID	Date	TPH-g mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylenes mg/kg	TPH-d mg/kg
SB1-10'	8/97-1/98	8.2	<2.0	0.17	0.031	0.097	0.069	15
SB2-10'	8/97-1/98	1.3	<0.05	0.061	0.016	0.03	0.014	<1.0
SB3-5'	8/97-1/98	1.6	<0.05	0.048	0.044	0.016	0.046	-
SB3-10'	8/97-1/98	590	<6.0	8.6	15	10	48	160
SB3-15'	8/97-1/98	1,000	<10	8.3	8.8	15	52	-
SB3-20'	8/97-1/98	<1.0	<0.05	0.006	0.009	<0.005	0.017	-
SB3-25'	8/97-1/98	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	-
SB4-10'	8/97-1/98	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	<1.0
SB5-15'	8/97-1/98	2.0	<0.05	0.08	<0.005	0.045	0.012	4.9
SB6-15'	8/97-1/98	2.2	<0.05	0.058	0.008	0.007	0.073	<1.0
SB7-15'	8/97-1/98	7.9	<0.05	<0.005	0.016	<0.005	0.073	2.3
SB8-10'	8/97-1/98	33	<0.23	0.25	0.089	0.30	0.29	11
SB9-10'	8/97-1/98	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	<1.0
SB-10 12'	8/21/2003	100	<1.0	0.39	<0.10	0.88	1.4	38
SB-10 19'	8/21/2003	66	<0.05	<0.005	0.075	0.047	0.13	6.3
SB-11 8'	8/21/2003	1.8	<0.05	0.10	0.012	<0.005	<0.005	1.1
SB-11 12'	8/21/2003	1.3	<0.05	0.05	<0.005	<0.005	<0.005	2.1
SB-11 19'	8/21/2003	150	<0.50	0.13	0.11	0.25	0.18	27
SB-12 12'	10/9/2003	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	<1.0
SB-12 18'	10/9/2003	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	<1.0
SB-13 20'	10/10/2003	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	<1.0
SB-14 16'	10/10/2003	74	<0.50	<0.050	<0.050	<0.050	0.12	98
SB-14 23'	10/10/2003	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	<1.0
SB-15 15'	10/10/2003	660	<2.0	<0.20	5.6	1.3	1.9	100
SB-15 19'	10/10/2003	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	<1.0
MDL		1.0	0.05	0.005	0.005	0.005	0.005	1.0

MTBE - Methyl tertiary butyl ether
mg/kg - milligrams per kilogram
MDL - method detection limit with no sample dilution
- = sample not analyzed by this method
TPH-g - Total petroleum hydrocarbons (TPH) as gasoline
TPH-d - TPH as diesel

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-6633 James Yoo
FAX (510)782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 3635 13th AVE. OAKLAND

CLIENT
Name JOHN WILLIAMSON
Address 1151 WELLINGTON ST Phone 510-530-2993
City OAKLAND Zip 94602

APPLICANT
Name AEI CONSULTANTS Fax 925-283-6121
Address 2500 CAMINO DIABLO Phone 925-283-6000
City WALNUT CREEK Zip 94597
STE. 200

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☒	DIRECT PUSH	

DRILLER'S NAME VIRONEX

DRILLER'S LICENSE NO. 705927

WELL PROJECTS
Drill Hole Diameter ____ in. Maximum
Casing Diameter ____ in. Depth ____ ft.
Surface Seal Depth ____ ft. Owner's Well Number ____

GEOTECHNICAL PROJECTS
Number of Borings 6
Hole Diameter 2 in. Maximum Depth 20 ft.

STARTING DATE Aug. 26, 2003
COMPLETION DATE Aug. 26, 2003

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Brandi Reese DATE 8-4-03
PLEASE PRINT NAME BRANDI REESE

Rev.9-11-02

FOR OFFICE USE
PERMIT NUMBER W03-0747
WELL NUMBER
APN

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL, ENVIRONMENTAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or [illegible] material.

E. CATHODIC
Fill hole inside zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS #B1 ATTACHED

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [signature] DATE 8/1/03

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD, CA. 94544-1395
PHONE (510) 670-6633 James Yoo FAX (510) 782-1939

PERMIT NO. W03-0747

WATER RESOURCES SECTION
GROUNDWATER PROTECTION ORDINANCE
B#1-GENERAL CONDITIONS: GEOTECHNICAL & CONTAMINATION BOREHOLES

1. Prior to any drilling activities shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that Federal, State, County or to the City and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained.

2. Boreholes shall not be left open for a period of more than **24 hours**. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

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

4. Permit is valid only for the purpose specified herein **August 26, to August 26, 2003**. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

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

6. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.

7. Submit site plan showing location or boring.

CITY OF OAKLAND • Community and Economic Development Agency

250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job Site 3635 13TH AV Parcel# 023 048C 005 00 Appl# X0300754

Descr soil boring for geotechnical investigation(#2) Permit Issued 08/04/03

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #.

	Applcnt	Phone#	Lic#	--License Classes--
Owner	WILLIAMSON JOHN			
Contractor	ALL ENVIRONMENTAL INC	X	(925)283-6000	654919 A
Arch/Engr				
Agent				

Applic Addr 3364 MT. DIABLO BL., LAFAYETTE, CA, 94549

$205.00 TOTAL FEES PAID AT ISSUANCE

$1.00 Applic Dev	$205.00 Permit
$.00 Processing	$.00 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	

ADDRESS:

DIST.:

CITY OF OAKLAND

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

Permit valid for 90 days from date of issuance.

PERMIT NUMBER **X 0 3 0 0 1 5 4**	SITE ADDRESS/LOCATION 3635 13th AVE. OAKLAND
APPROX. START DATE 8·26·03 / APPROX. END DATE 8·26·03	24-HOUR EMERGENCY PHONE NUMBER 925·283·6000 (Permit not valid without 24-Hour number) OR 925·285·8286
CONTRACTOR'S LICENSE # AND CLASS 654919 A HAZ	CITY BUSINESS TAX # 680288965

ATTENTION:

1- State law requires that the contractor/owner call Underground Service Alert (USA) two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1-800-642-2444. Underground Service Alert (USA) # _____

2- **48 hours prior to starting work, you MUST CALL (510) 238-3651 to schedule an inspection.**

3- **48 hours prior to re-paving, a compaction certificate is required (waived for approved slurry backfill).**

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☒ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. _____, B&PC for this reason _____

WORKER'S COMPENSATION

☒ I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # 1720862-02 Company Name STATE COMPENSATION INSURANCE

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Title 12 Chapter 12.12 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

Brando K Reese — 8·4·03

Signature of Permittee ☒ Agent for ☒ Contractor ☐ Owner — Date

UTE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☒ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☒ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☐ YES ☒ NO
ISSUED BY		DATE ISSUED 8-4-03	

CITY OF OAKLAND • Community and Economic Development Agency

250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job Site 3625 MT. DIABLO BL. Parcel# 023 1486 005 00 Appl# X0300753

Descr soil boring for geotechnical investigation (#1) Permit Issued 08/04/03

Work Type EXCA\ATION-PRIVATE P

USA # Util Co. Job # Acctg#:

Util Fund #:

	Applcnt	Phone#	Lic#	--License Classes--
Owner	WILLIAMSON JOHN			
Contractor	ALL ENVIRONMENTAL INC	X	(925)283-6000	654918 A
Arch/Engr				
Agent				

Applic Addr 3364 MT. DIABLO BL. LAFAYETTE CA, 94549

$205.00 TOTAL FEES PAID AT ISSUANCE

$.00 Applic $205.00 Permit

$.00 Process $.00 Rec Mgmt

$.00 Gen Plan $.00 Invstg

$.00 Other

DRESS:

DIST.:

CITY OF OAKLAND

CITY OF OAKLAND
Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

Permit valid for 90 days from date of issuance.

PERMIT NUMBER **X 0 3 0 0 1 5 3**	SITE ADDRESS/LOCATION 3635 13th AVE
APPROX. START DATE 8·26·03 / APPROX. END DATE 8·26·03	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number) 925·283·6000 925·285·8286
CONTRACTOR'S LICENSE # AND CLASS 654919 A HAZ	CITY BUSINESS TAX # 6802888965

ATTENTION:

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☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. _____, B&PC for this reason _____

WORKER'S COMPENSATION

☒ I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # 172086202-02 Company Name STATE COMPENSATION INSURANCE

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

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Brandon K Reese — 8·4·03

Signature of Permittee ☒ Agent for ☒ Contractor ☐ Owner — Date

ATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☐ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☐ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☐ YES ☐ NO
ISSUED BY		DATE ISSUED	

Project No: 6906

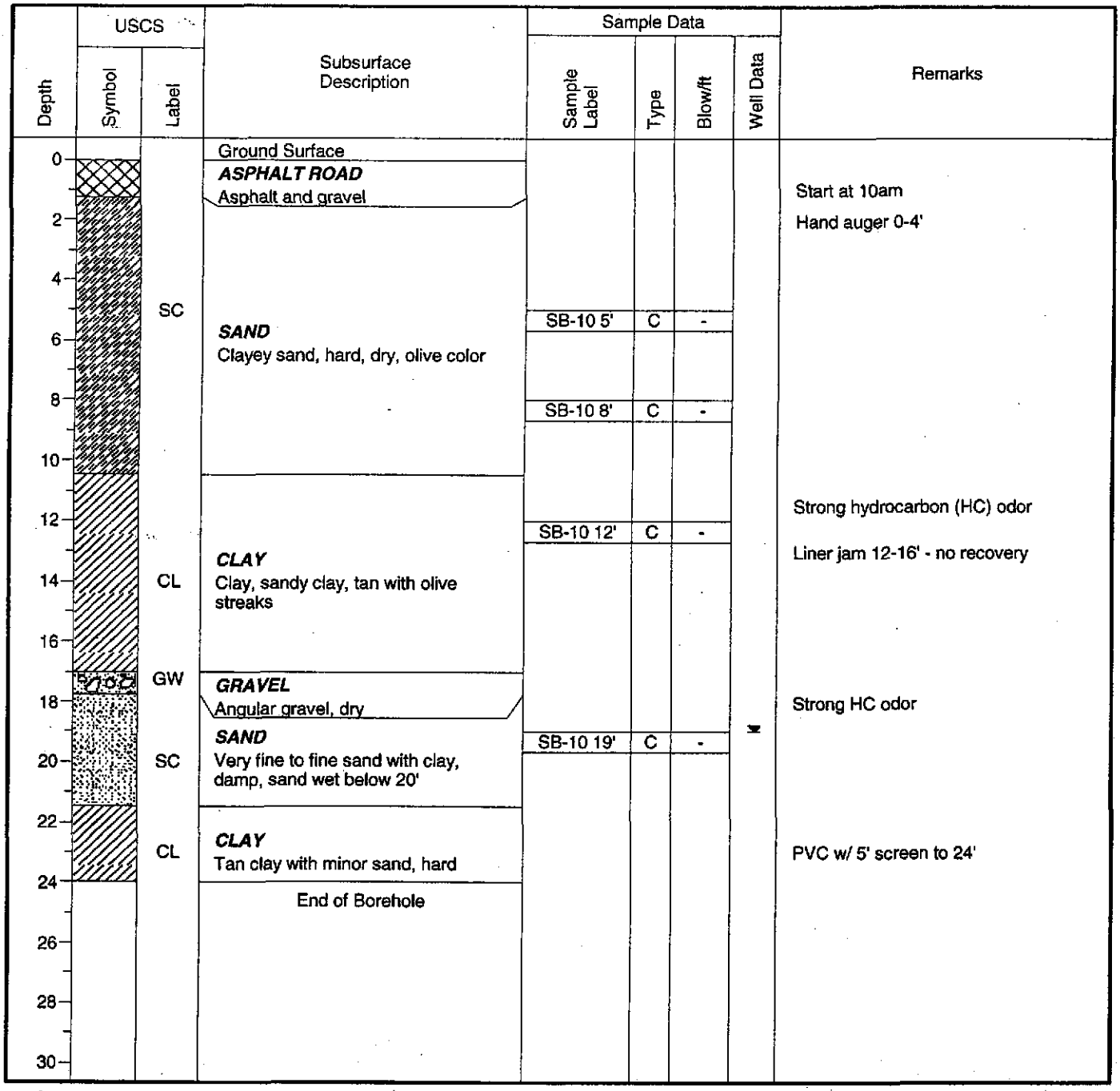
Sheet: 1 of 1

Project Name: Williamson

Log of Borehole: SB-10

Client: J. Williamson

Location: 3635 13th Ave., Oakland



Drill Date: 8/21/03

Drill Method: Direct Push

Total Depth (ft): 24

Depth to Water (ft): 19

Reviewed by: LMS

Logged by: PJM

AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597
(925) 283-6000

Project No: 6906

Sheet: 1 of 1

Project Name: Williamson

Log of Borehole: SB-11

Client: J. Williamson

Location: 3635 13th Ave., Oakland

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Label	Type	Blow/ft	Well Data	Remarks
0			Ground Surface					
			ASPHALT ROAD Asphalt and concrete with aggregate fill					Start at 8:15am
2								Hand auger 0-5'
		CL	***CLAY*** Clay, moderately plastic, grey to black					
4								
			CLAY Clay with fine sand, olive color					
6								
8		CL		SB-11 8'	C	-		Strong hydrocarbon (HC) odor
10			Sand increasing with depth Damp but not saturated					
12				SB-11 12'	C	-		Strong HC odor
14								
16		CL	***CLAY*** Brown - tan clay, hard				▼	Water level @2 hr
18								
			SAND Very fine to fine sand with minor silt, olive color, saturated	SB-11 19'	C	-		
20		SM						
22								
		CL	***CLAY*** Clay with sand, orange - tan					PVC w/ 5' screen to 24'
24			End of Borehole					
26								
28								
30								

Drill Date: 8/21/03

Drill Method: Direct Push

Total Depth (ft): 24

Depth to Water (ft): 17.2

Reviewed by: LMS

Logged by: PJM

AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597
(925) 283-6000

Project No: 6906

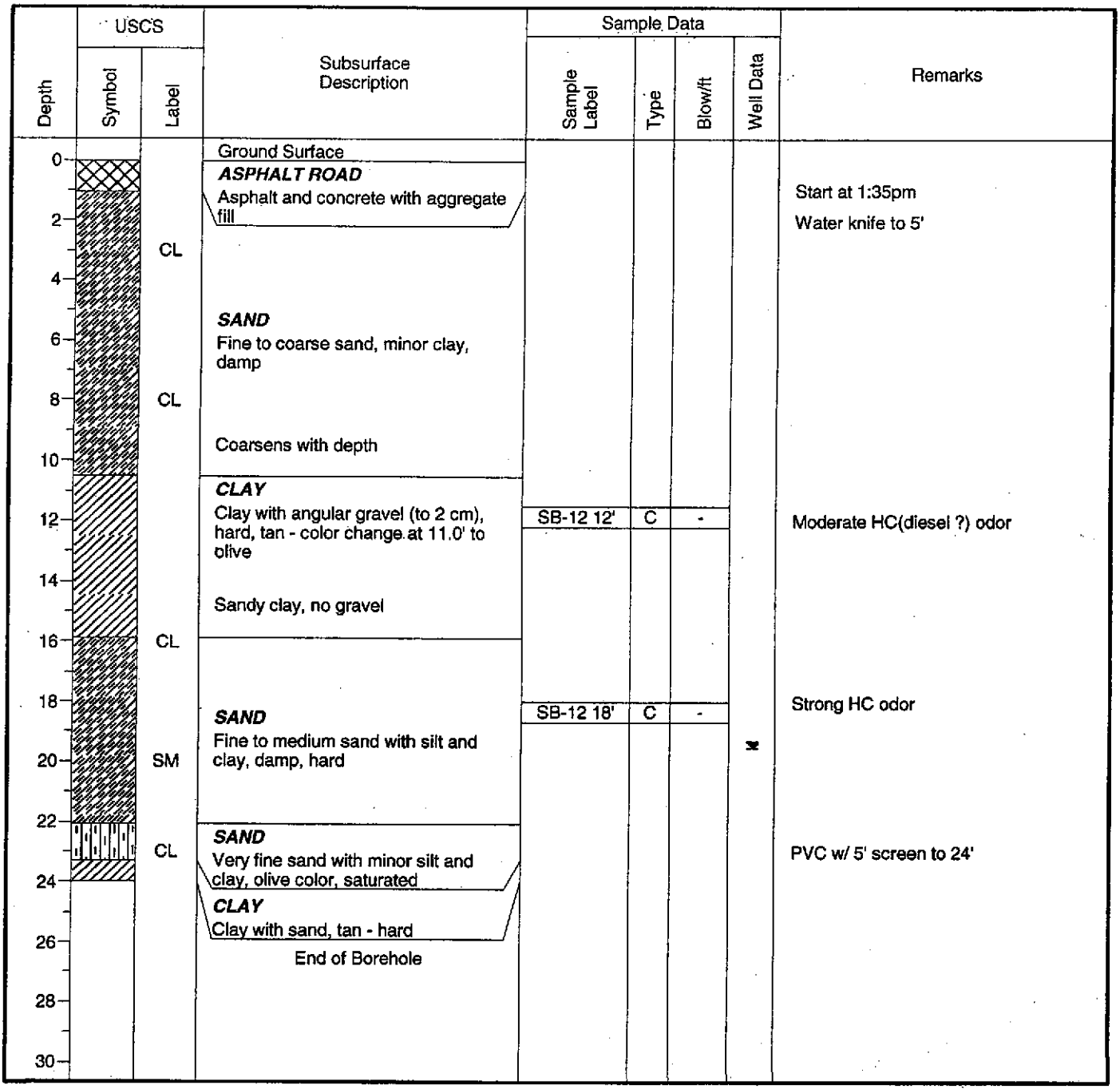
Project Name: Williamson

Client: J. Williamson

Location: 3635 13th Ave., Oakland

Sheet: 1 of 1

Log of Borehole: SB-12



Drill Date: 10/9/03

Drill Method: Direct Push

Total Depth (ft): 24

Depth to Water (ft): 19.5

Reviewed by: LMS

Logged by: PJM

AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597
(925) 283-6000

Project No: 6906

Sheet: 1 of 1

Project Name: Williamson

Log of Borehole: SB-13

Client: J. Williamson

Location: 3635 13th Ave., Oakland

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Label	Type	Blow/ft	Well Data	Remarks
0			Ground Surface					
			ASPHALT ROAD Asphalt and concrete with aggregate fill					Start at 10am Water knife to 5'
2								
4								
6		SC	***SAND*** Clayey sand, slightly damp					
8								
10			***CLAY*** Stiff clay with low sand					
		CL		SB-13 11'	C	-		
12								
14			Sand increases with depth				▼	No HC odor
16				SB-13 16'	C	-		
			SAND Very fine to fine sand with clay, damp, olive colored streaks					
18		SC						
20		SW	V. fine to med sand, saturated	SB-13 20'	C	-		Slight HC odor
22			***CLAY*** Clay with sand, tan - hard					PVC w/ 5' screen to 24'
		CL						
24			End of Borehole					
26								
28								
30								

Drill Date: 10/10/03

Drill Method: Direct Push

Total Depth (ft): 24

Depth to Water (ft): 15.2

Reviewed by: LMS

Logged by: PJM

AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597
(925) 283-6000

Project No: 6906

Sheet: 1 of 1

Project Name: Williamson

Log of Borehole: SB-14

Client: J. Williamson

Location: 3635 13th Ave., Oakland

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Label	Type	Blow/ft	Well Data	Remarks
0			Ground Surface					
			Concrete					Start at 9:30am
2								Water knife to 6'
4								
6		SW	***SAND*** Loose well graded sand with few fines					
8								
10								
12		CL	***CLAY*** Moderately plastic clay with minor fine sand, tan with olive streaking	SB-14 12'	C	-		
14			***SAND*** Loose well graded sand, angular to sub-angular clasts					Color change to lt. olive @14'
16		SW		SB-14 16'	C	-		Moderate HC odor below 16'
18			wet but not saturated					
20				SB-14 19'	C	-		
22		CL	***CLAY*** Stiff clay with minor sand, tan					
24				SB-14 23'	C	-		PVC w/ 10' screen to 25.5'
26			End of Borehole					Liner jam - no recovery 24-26'
28								
30								

Drill Date: 10/10/03

Drill Method: Direct Push

Total Depth (ft): 26

Depth to Water (ft): Dry

Reviewed by: LMS

Logged by: PJM

AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597
(925) 283-6000

Project No: 6906

Project Name: Williamson

Client: J. Williamson

Location: 3635 13th Ave., Oakland

Sheet: 1 of 1

Log of Borehole: SB-15

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Data: Sample Label	Sample Data: Type	Sample Data: Blow/ft	Sample Data: Well Data	Remarks
0			Ground Surface					
			Concrete					
			SAND Sand with gravel and clay, pipe present at 2' and at 5'					Start at 8:30am Water knife to 7'
2								
4								
6		SW						
8								
10			Fine to coarse sand, sm gravel					
12								
14								Color change to lt. olive @13.5'
			SAND Very fine to fine sand with clay	SB-15 15'	C	-		Slight HC odor (diesel?)
16		SC						
18								
				SB-15 19'	C	-		No HC odor
20								
22			***CLAY*** Stiff clay with minor sand					
		CL						PVC w/ 5' screen to 27'
24								
								Liner jam - no recovery 24-27'
26								
			End of Borehole					
28								
30								

Drill Date: 10/10/03

Drill Method: Direct Push

Total Depth (ft): 27

Depth to Water (ft): 24.8

Reviewed by: LMS

Logged by: PJM

AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597
(925) 283-6000

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Williamson	Date of Sampling:	1/24/2002
Job Number:	6906	Name of Sampler:	PJM
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	194.75		
Depth of Well	23.50		
Depth to Water (from top of casing)	9.53		
Water Elevation (feet above msl)	185.22		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**6.7**		
Actual Volume Purged (gallons)			
Appearance of Purge Water	clear quikly		
Free Product Present?		Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	62.4					
	4	62.6		1641			
	6	63.1		1620			
	8	63.5		1690			

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

initially beige and no hc odors

pH out of calibration

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Williamson	Date of Sampling:	1/24/2002
Job Number:	6906	Name of Sampler:	PJM
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	196.44		
Depth of Well	36.00		
Depth to Water (from top of casing)	9.72		
Water Elevation (feet above msl)	186.72		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**12.6**		
Actual Volume Purged (gallons)	12.0		
Appearance of Purge Water			
Free Product Present?	yes	Thickness (ft):	sheen present

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	65.7	6.5				
	4	66.8	6.5				clear at 4.5 gall
	7	66.9	6.5				
	10	67.0	7.3				
	12	68.1					

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

strong hc odors

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Williamson	Date of Sampling:	1/24/2002
Job Number:	6906	Name of Sampler:	PJM
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	Replaced lock and cap		
Elevation of Top of Casing (feet above msl)	198.93		
Depth of Well	35.50		
Depth to Water (from top of casing)	10.08		
Water Elevation (feet above msl)	188.85		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**12.2**		
Actual Volume Purged (gallons)	12.0		
Appearance of Purge Water	clear quikly		
Free Product Present?	Yes / No	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	66.2		760			
	4	66.4		658			
	6	66.2		745			
	9	66.9		744			
	12	64.2		751			clear

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

pH out of calibration

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Williamson	Date of Sampling:	7/15/2003
Job Number:	6906	Name of Sampler:	A Nieto
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	194.75		
Depth of Well	23.50		
Depth to Water (from top of casing)	12.85		
Water Elevation (feet above msl)	181.90		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**5.1**		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	clear at 2.5 gallons		
Free Product Present?		Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	19.11	6.81	1512	-	-3.0	
	4	19.02	6.76	1562	-	-4.5	
	6	19.01	6.73	1652	-	-4.4	

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

Brown and no odors

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Williamson	Date of Sampling:	7/15/2003
Job Number:	6906	Name of Sampler:	A Nieto
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	196.44		
Depth of Well	36.00		
Depth to Water (from top of casing)	12.42		
Water Elevation (feet above msl)	184.02		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**11.3**		
Actual Volume Purged (gallons)	12.0		
Appearance of Purge Water	clear at 1.0 gallons		
Free Product Present?	yes	Thickness (ft):	light sheen

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	3	20.10	6.68	1291	5.5	-183.9	
	6	20.16	6.68	1195	5.6	-172.3	
	9	20.12	6.64	1268	3.0	-163.3	
	12	20.07	6.60	1346	2.1	-174.2	

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

Initially grey and strong hydrocarbon odors

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Williamson	Date of Sampling:	7/15/2003
Job Number:	6906	Name of Sampler:	A Nieto
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	198.93		
Depth of Well	35.50		
Depth to Water (from top of casing)	12.45		
Water Elevation (feet above msl)	186.48		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**11.1**		
Actual Volume Purged (gallons)	12.0		
Appearance of Purge Water	clear at 2 gallons		
Free Product Present?	no	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	3	19.67	7.27	814	10.4	20.9	
	6	19.75	7.23	816	10.8	30.8	
	9	19.5	7.18	824	3.8	38.7	
	12	19.56	7.18	826	3.1	41.7	

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

Start grey and slihgt odors

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Williamson	Date of Sampling:	10/10/2003
Job Number:	6906	Name of Sampler:	A Nieto
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	194.75		
Depth of Well	23.50		
Depth to Water (from top of casing)	14.58		
Water Elevation (feet above msl)	180.17		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**4.3**		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	clear at 2.5 gallons		
Free Product Present?	no	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	19.58	6.80	1876	0.55	-75.0	
	4	19.58	6.81	1937	0.78	-68.1	
	6	19.52	6.84	1940	1.25	-50.9	

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

Initially brown and slight hc odors

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Williamson	Date of Sampling:	10/10/2003
Job Number:	6906	Name of Sampler:	A Nieto
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	196.44		
Depth of Well	36.00		
Depth to Water (from top of casing)	13.79		
Water Elevation (feet above msl)	182.65		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**10.7**		
Actual Volume Purged (gallons)	12.0		
Appearance of Purge Water	clear at 2.5 gallons		
Free Product Present?	Yes / No	Thickness (ft):	slighty sheen

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	3	19.82	6.96	1169	1.04	-231.7	
	6	20.72	6.87	1109	0.32	-213.9	
	9	20.73	6.77	1201	0.18	-220.6	
	12	20.47	6.77	1195	0.14	-213.6	

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

Start grey and strong hydrocarbon odors

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Williamson	Date of Sampling:	10/10/2003
Job Number:	6906	Name of Sampler:	A Nieto
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	198.93		
Depth of Well	35.50		
Depth to Water (from top of casing)	14.00		
Water Elevation (feet above msl)	184.93		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**10.3**		
Actual Volume Purged (gallons)	12.0		
Appearance of Purge Water	clear at 1.5 gallons		
Free Product Present?	no	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	3	19.50	7.73	732	1.42	-138.9	
	6	20.02	7.56	733	1.34	-141.6	
	9	19.96	7.45	745	1.35	-141.1	
	12	19.78	7.39	739	1.44	-138.9	

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

Start grey and slightly hydrocarbon odors

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc. 3210 Old Tunnel Road, Suite B Lafayette, CA 94549-4157	Client Project ID: #4575; Williamson	Date Sampled: 01/24/02
		Date Received: 01/25/02
	Client Contact: Peter McIntyre	Date Extracted: 01/25/02
	Client P.O:	Date Analyzed: 01/25/02

02/01/02

Dear Peter:

Enclosed are:

1). the results of **3** samples from your **#4575; Williamson** project,

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

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Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #4575; Williamson	Date Sampled: 01/24/02
3210 Old Tunnel Road, Suite B		Date Received: 01/25/02
Lafayette, CA 94549-4157	Client Contact: Peter McIntyre	Date Extracted: 01/28/02
	Client P.O:	Date Analyzed: 01/28/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	% Recovery Surrogate
88979	MW-1	W	60,a	ND	3.3	2.8	2.0	6.0	105
88980	MW-2	W	34,000,a,h	ND<200	3100	1100	1100	2900	111
88981	MW-3	W	58,a	ND	4.0	2.7	2.3	6.7	113
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #4575; Williamson	Date Sampled: 01/24/02
3210 Old Tunnel Road, Suite B		Date Received: 01/25/02
Lafayette, CA 94549-4157	Client Contact: Peter McIntyre	Date Extracted: 01/25-01/28/02
	Client P.O:	Date Analyzed: 01/25-01/28/02

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
88979	MW-1	W	ND	111
88980	MW-2	W	5300,d,h	110
88981	MW-3	W	ND	106
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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QC REPORT

EPA 8015m + 8020

Date: 01/27/02-01/28/02 **Matrix:** Water

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 12402	Extraction: EPA 5030				Instrument: GC-12		
Surrogate1	ND	98.0	100.0	100.00	98	100	2.0
Xylenes	ND	32.1	30.8	30.00	107	103	4.1
Ethylbenzene	ND	10.5	10.4	10.00	105	104	1.0
Toluene	ND	10.3	10.1	10.00	103	101	2.0
Benzene	ND	10.0	10.0	10.00	100	100	0.0
MTBE	ND	9.0	8.9	10.00	90	89	1.1
TPH (gas)	ND	95.6	90.5	100.00	96	91	5.5
SampleID: 12402	Extraction: EPA 3510				Instrument: GC-11 A		
Surrogate1	ND	105.0	106.0	100.00	105	106	0.9
TPH (diesel)	ND	6900.0	6925.0	7500.00	92	92	0.4

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 200$$

RPD means Relative Percent Deviation

2978

Sale 499

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553
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CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: Peter McIntyre Bill To:
Company: All Environmental
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549-4157
Tele: (925) 283-6000 Fax: (925) 283-6121
Project #: 1575 Project Name: Williamson
Project Location:
Sampler Signature:

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 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)	RCI
MW-1		1/24/02	1000	3	VL	X					X	X			X	X													
MW-2		↓	↓	3	↓	X					X	X			X	X													
MW-3		↓	↓	3	↓	X					X	X			X	X													

(+) 88979
+ 88980
+ 88981

Relinquished By:	Date:	Time:	Received By:
	1/25/02	2:00	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks:

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATION APPROPRIATE ✓
CONTAINERS ✓

VOAS	O&G	METALS	OTHER
✓			

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

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #6906; Williamson	Date Sampled: 07/15/03
		Date Received: 07/15/03
	Client Contact: Brandi Kiel-Reese	Date Reported: 07/17/03
	Client P.O.:	Date Completed: 07/17/03

WorkOrder: 0307234

July 17, 2003

Dear Brandi:

Enclosed are:

1). the results of **3** analyzed samples from your **#6906; Williamson project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
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Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #6906; Williamson	Date Sampled: 07/15/03
2500 Camino Diablo, Ste. #200		Date Received: 07/15/03
Walnut Creek, CA 94597	Client Contact: Brandi Kiel-Reese	Date Extracted: 07/15/03
	Client P.O.:	Date Analyzed: 07/15/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0307234

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	87,a	ND	15	4.9	3.3	9.2	1	91.1
002A	MW-2	W	18,000,a,h	ND<1000	2300	310	690	1600	200	90.8
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	89.3
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	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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All Environmental, Inc.	Client Project ID: #6906; Williamson	Date Sampled: 07/15/03
2500 Camino Diablo, Ste. #200		Date Received: 07/15/03
Walnut Creek, CA 94597	Client Contact: Brandi Kiel-Reese	Date Extracted: 07/15/03
	Client P.O.:	Date Analyzed: 07/16/03

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0307234

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0307234-001B	MW-1	W	ND	1	103
0307234-002B	MW-2	W	6600,d,h	1	112
0307234-003B	MW-3	W	ND	1	102

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

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0307234

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 7803 Spiked Sample ID: 0307218-001A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	98.5	98.5	0	99.8	98.1	1.68	70	130
MTBE	ND	10	113	109	3.36	101	101	0	70	130
Benzene	ND	10	98.5	96.4	2.14	100	99.9	0.481	70	130
Toluene	ND	10	99.3	97.9	1.47	101	101	0	70	130
Ethylbenzene	ND	10	100	98.9	1.57	103	102	0.685	70	130
Xylenes	ND	30	100	100	0	103	103	0	70	130
%SS:	106	100	102	102	0	103	103	0	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

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

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

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

£ 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 = 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.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0307234

EPA Method: SW8015C	Extraction: SW3510C			BatchID: 7800		Spiked Sample ID: N/A				
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	101	89.8	12.1	70	130
%SS:	N/A	100	N/A	N/A	N/A	116	118	1.77	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

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

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

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

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

A2C

03007234

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☐ Yes ☐ No

Report To: Brandi K. Reese Bill To:
Company: AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek 94597 E-Mail: breese@aeiconsultants.com
Tele: ( )925-283-6000 Fax: ( )925-944-2895
Project #: 6906 Project Name: WILLIAMSON
Project Location: OAKLAND
Sampler Signature: Adrian Nieto

	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	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 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)	RCI	Other	Comments
+	MW-1		7/15		3	VOA	X					X	X			X	X															
+	MW-2		"		3	VOA	X					X	X			X	X															
+	MW-3		"		3	VOA	X					X	X			X	X															

Relinquished By:	Date:	Time:	Received By:
Relinquished By: Adrian Nieto	Date: 7/15	Time:	Received By: 7-15-03 3:00
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ____ PERSERVED IN LAB ____

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓			

APPROPRIATE CONTAINERS ✓

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0307234

Client:

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

TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #6906; Williamson
PO:

Date Received: 7/15/03
Date Printed: 7/15/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests						
					SW8015C	V8021B/8015C					
0307234-001	MW-1	Water	7/15/03	☐	B	A					
0307234-002	MW-2	Water	7/15/03	☐	B	A					
0307234-003	MW-3	Water	7/15/03	☐	B	A					

Prepared by: Michelle Miller

Comments:

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

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All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #6906; Williamson	Date Sampled: 08/21/03
		Date Received: 08/21/03
	Client Contact: Peter McIntyre	Date Reported: 08/28/03
	Client P.O.:	Date Completed: 08/28/03

WorkOrder: 0308341

August 28, 2003

Dear Peter:

Enclosed are:

1). the results of 7 analyzed samples from your **#6906; Williamson project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

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All Environmental, Inc.	Client Project ID: #6906; Williamson	Date Sampled: 08/21/03
2500 Camino Diablo, Ste. #200		Date Received: 08/21/03
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 08/21/03
	Client P.O.:	Date Analyzed: 08/23/03-08/29/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0308341

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
003A	SB-10 12'	S	100,a	ND<1.0	0.39	ND<0.10	0.88	1.4	20	---#
004A	SB-10 19'	S	66,m	ND	ND	0.075	0.047	0.13	1	89.3
005A	SB-11 8'	S	1.8,a	ND	0.10	0.012	ND	ND	1	92.6
006A	SB-11 12'	S	1.3,a	ND	0.050	ND	ND	ND	1	86.4
007A	SB-11 19'	S	150,a	ND<0.50	0.13	0.11	0.25	0.18	10	107
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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

All Environmental, Inc.	Client Project ID: #6906; Williamson	Date Sampled: 08/21/03
2500 Camino Diablo, Ste. #200		Date Received: 08/21/03
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 08/25/03-08/27/03
	Client P.O.:	Date Analyzed: 08/25/03-08/27/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0308341

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
008A	SB-10W	W	3500,a	ND<25	110	2.9	120	410	5	112
009A	SB-11W	W	3800,a,i	ND<50	140	9.5	23	11	10	125

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	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

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All Environmental, Inc.	Client Project ID: #6906; Williamson	Date Sampled: 08/21/03
2500 Camino Diablo, Ste. #200		Date Received: 08/21/03
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 08/21/03
	Client P.O.:	Date Analyzed: 08/22/03-08/29/03

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0308341

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0308341-003A	SB-10 12'	S	38,d	1	113
0308341-004A	SB-10 19'	S	6.3,d	1	97.2
0308341-005A	SB-11 8'	S	1.1,d	1	97.3
0308341-006A	SB-11 12'	S	2.1,d	1	93.8
0308341-007A	SB-11 19'	S	27,d	1	104

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

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All Environmental, Inc.	Client Project ID: #6906; Williamson	Date Sampled: 08/21/03
2500 Camino Diablo, Ste. #200		Date Received: 08/21/03
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 08/21/03
	Client P.O.:	Date Analyzed: 08/22/03

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0308341

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0308341-008B	SB-10W	W	1400,d	1	94.9
0308341-009B	SB-11W	W	2400,d,i	1	116

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

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

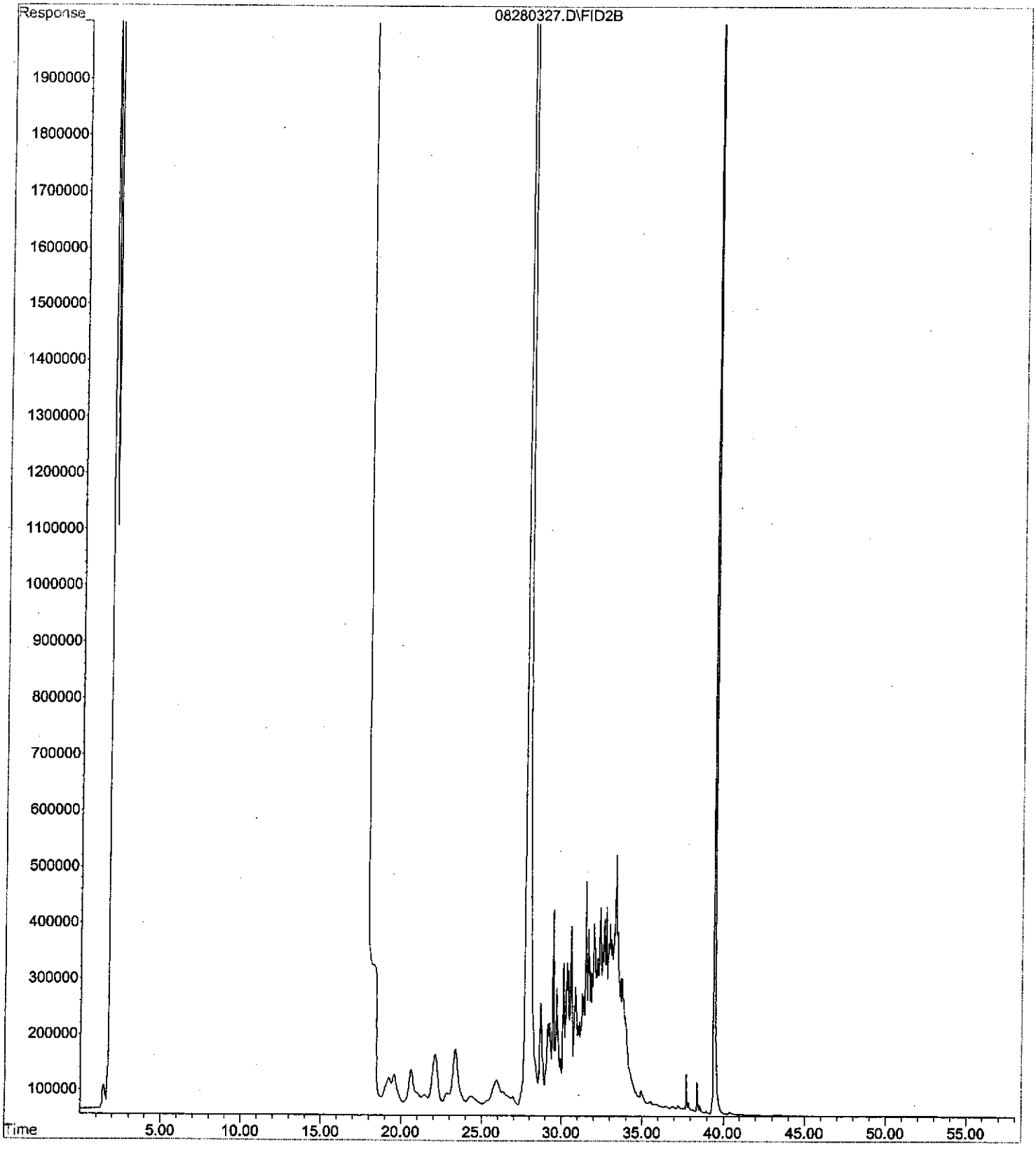
cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

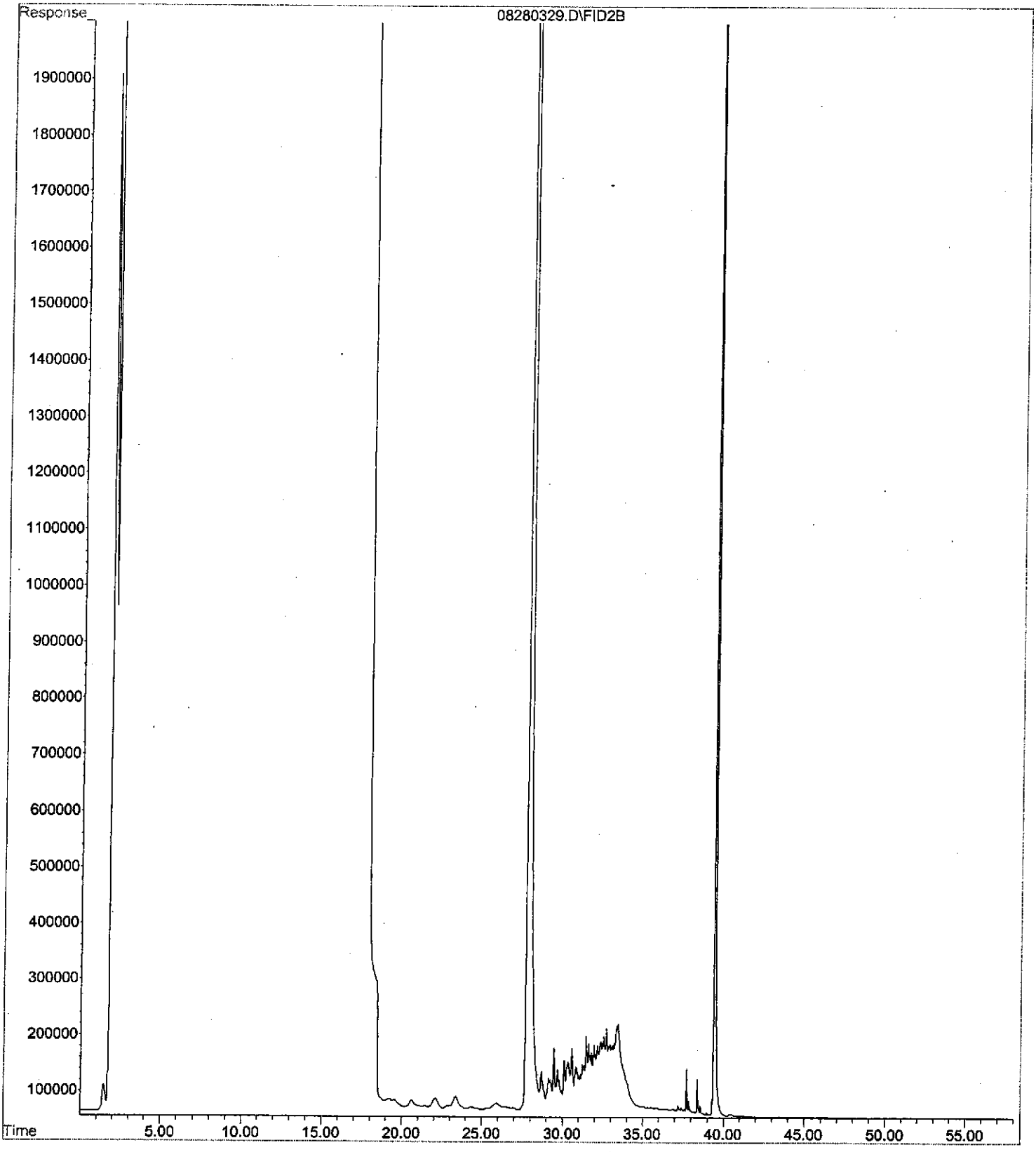
DHS Certification No. 1644

Angela Rydelius, Lab Manager

File : D:\HPCHEM\GC11\DATAB\08280327.D
Operator : Thu
Acquired : 29 Aug 2003 1:47 am using AcqMethod GC11AR.M
Instrument : GC-11
Sample Name: 0308341-004A S RE
Misc Info : TPH(D)_S
Vial Number: 64



File : D:\HPCHEM\GC11\DATAB\08280329.D
Operator : Thu
Acquired : 29 Aug 2003 2:55 am using AcqMethod GC11AR.M
Instrument : GC-11
Sample Name: 0308341-006A S RE
Misc Info : TPH(D)_S
Vial Number: 65



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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0308341

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 8237 Spiked Sample ID: 0308307-002A

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)[£]	ND	0.60	102	105	2.72	108	108	0	70	130
MTBE	ND	0.10	83.6	86.6	3.53	91.9	92.7	0.805	70	130
Benzene	ND	0.10	100	102	1.78	110	108	1.90	70	130
Toluene	ND	0.10	99.3	101	1.83	110	109	1.36	70	130
Ethylbenzene	ND	0.10	99.9	101	0.913	107	107	0	70	130
Xylenes	ND	0.30	103	103	0	110	110	0	70	130
%SS:	89.6	100	96	99.3	3.38	99.7	99.2	0.503	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

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

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

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

£ 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 = 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.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0308341

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 8255 Spiked Sample ID: 0308351-001A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	101	100	0.674	98.6	94.1	4.67	70	130
MTBE	57.25	10	NR	NR	NR	99.3	97.9	1.47	70	130
Benzene	ND	10	104	98.8	4.95	98.1	95.2	3.07	70	130
Toluene	ND	10	103	99.5	3.19	100	96.9	3.29	70	130
Ethylbenzene	ND	10	106	103	2.65	101	97.7	3.68	70	130
Xylenes	ND	30	107	103	3.17	103	99.7	3.61	70	130
%SS:	106	100	104	104	0	99.9	100	0.391	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

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

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

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

£ 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 = 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.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0308341

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 8263 Spiked Sample ID: 0308341-003A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	25.54	0.60	NR	NR	NR	109	105	3.88	70	130
MTBE	ND	0.10	92.2	93	0.873	93.1	103	9.76	70	130
Benzene	0.3945	0.10	NR	NR	NR	106	120	11.5	70	130
Toluene	ND	0.10	95.3	93	2.37	107	120	11.3	70	130
Ethylbenzene	0.8826	0.10	NR	NR	NR	105	113	7.24	70	130
Xylenes	1.37	0.30	NR	NR	NR	110	113	2.99	70	130
%SS:	—#	100	88.4	88.3	0.0975	101	114	11.7	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

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

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

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

£ 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 = 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.

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QC SUMMARY REPORT FOR SW8015C

Matrix: S WorkOrder: 0308341

EPA Method: SW8015C	Extraction: SW3550C			BatchID: 8261		Spiked Sample ID: 0308341-003A				
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	37.55	150	103	106	2.02	121	119	1.19	70	130
%SS:	113	100	95.5	96.6	1.12	117	116	0.888	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

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

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

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

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

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0308341

EPA Method: SW8015C Extraction: SW3510C BatchID: 8249 Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	112	114	1.37	70	130
%SS:	N/A	100	N/A	N/A	N/A	121	118	2.56	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

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

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

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

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

0308341

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☐ Yes ☒ No

Report To: Peter McIntyre Bill To:
Company: AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597 E-Mail: -
Tele: ( )925/283-6000 Fax: ( ) 925/283-6121
Project #: 6906 Project Name: Williamson
Project Location: 3rd Ave @ Excelsior
Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 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)	RCI	Other	Comments
SB-10 5'		8/2/1	9m	1	Acet		X				X				X	X															Hold
SB-10 8'				1			X				X																				Hold
SB-10 12'				1			X				X				X	X															
SB-10 19'				1			X				X				X	X															
SB-11 8'				1			X				X				X	X															
SB-11 12'				1			X				X				X	X															
SB-11 19'				1			X				X				X	X															
TB-10W			11-	3		X					X	X			X	X															
+5 SB-11W			9:10	3		X					X	X			X	X															

Relinquished By:	Date:	Time:	Received By:
	8/2/01	2:10	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

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

PRESERVATION ✓
APPROPRIATE
CONTAINERS ✓
PERSERVED IN LAB ___

VOAS	O&G	METALS	OTHER

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0308341

Client:
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #6906; Williamson
PO:

Date Received: 8/21/03
Date Printed: 8/21/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests						
					SW8015C	V8021B/8015C					
0308341-001	SB-10 5'	Soil	8/21/03 9:00:00 AM	☑	A	A					
0308341-002	SB-10 8'	Soil	8/21/03 9:00:00 AM	☑	A	A					
0308341-003	SB-10 12'	Soil	8/21/03 9:00:00 AM	☐	A	A					
0308341-004	SB-10 19'	Soil	8/21/03 9:00:00 AM	☐	A	A					
0308341-005	SB-11 8'	Soil	8/21/03 9:00:00 AM	☐	A	A					
0308341-006	SB-11 12'	Soil	8/21/03 9:00:00 AM	☐	A	A					
0308341-007	SB-11 19'	Soil	8/21/03 9:00:00 AM	☐	A	A					
0308341-008	SB-10W	Soil	8/21/03 11:00:00 AM	☐	A	A					
0308341-009	SB-11W	Soil	8/21/03 9:00:00 AM	☐	A	A					

Prepared by: Sonia Valles

Comments:

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

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All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #6906; Williamson	Date Sampled: 10/08/03
		Date Received: 10/10/03
	Client Contact: Peter McIntyre	Date Reported: 10/16/03
	Client P.O.:	Date Completed: 10/16/03

WorkOrder: 0310169

October 16, 2003

Dear Peter:

Enclosed are:

1). the results of **13** analyzed samples from your **#6906; Williamson project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

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All Environmental, Inc.	Client Project ID: #6906; Williamson	Date Sampled: 10/08/03-10/10/03
2500 Camino Diablo, Ste. #200		Date Received: 10/10/03
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 10/11/03-10/15/03
	Client P.O.:	Date Analyzed: 10/11/03-10/15/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0310169

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	SB-12 12'	S	ND	ND	ND	ND	ND	ND	1	87.6
002A	SB-12 18'	S	ND	ND	ND	ND	ND	ND	1	88.4
005A	SB-13 20'	S	ND	ND	ND	ND	ND	ND	1	93.4
007A	SB-14 16'	S	74,b,m	ND<0.50	ND<0.050	ND<0.050	ND<0.050	0.12	10	79.0
009A	SB-14 23'	S	ND	ND	ND	ND	ND	ND	1	98.6
010A	SB-15 15'	S	660,b,m	ND<2.0	ND<0.20	5.6	1.3	1.9	40	—#
011A	SB-15 19'	S	ND	ND	ND	ND	ND	ND	1	91.4
012A	SB-12 W	W	680,g,m,i	ND	ND	2.3	ND	3.5	1	106
013A	SB-13 W	W	270,g,i	ND	ND	ND	ND	2.0	1	102
014A	SB-15 W	W	1600,b,m,i	ND	ND	3.0	25	8.8	1	113
015A	MW-1	W	81,m	ND	ND	0.62	0.57	0.50	1	109
016A	MW-2	W	19,000,a	ND<500	2700	460	850	1800	50	119
017A	MW-3	W	350,a	ND	14	16	23	60	1	103
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	1	µg/L
		S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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All Environmental, Inc.	Client Project ID: #6906; Williamson	Date Sampled: 10/08/03-10/10/03
2500 Camino Diablo, Ste. #200		Date Received: 10/10/03
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 10/10/03
	Client P.O.:	Date Analyzed: 10/11/03-10/14/03

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0310169

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0310169-001A	SB-12 12'	S	ND	1	88.6
0310169-002A	SB-12 18'	S	ND	1	90.3
0310169-005A	SB-13 20'	S	ND	1	88.5
0310169-007A	SB-14 16'	S	98,d	1	105
0310169-009A	SB-14 23'	S	ND	1	90.4
0310169-010A	SB-15 15'	S	100,d,b	1	106
0310169-011A	SB-15 19'	S	ND	1	89.4
0310169-012B	SB-12 W	W	420,d,f,g,b,i	1	107
0310169-013B	SB-13 W	W	1200,d,b,i	1	106
0310169-014B	SB-15 W	W	1900,d,b,i	1	110
0310169-015B	MW-1	W	110,d,b	1	109
0310169-016B	MW-2	W	1800,d,b	1	110
0310169-017B	MW-3	W	75,d,b	1	110

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

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0310169

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 8893 Spiked Sample ID: 0310158-001A

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	0.26	0.60	65.9, F1	76.1	8.94	109	107	1.09	70	130
MTBE	ND	0.10	103	102	0.500	110	112	1.76	70	130
Benzene	0.01	0.10	99.4	98.1	1.25	111	113	2.23	70	130
Toluene	0.04	0.10	56.5, F1	57.3, F1	0.829	93.9	95.9	2.08	70	130
Ethylbenzene	0.01	0.10	97	97.2	0.108	111	112	1.20	70	130
Xylenes	0.08	0.30	72.3	73	0.669	100	100	0	70	130
%SS:	86.0	100	107	102	4.78	86.9	91.2	4.83	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

F1 = MS / MSD exceed acceptance criteria. LCS - LCSD validate prep batch.

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

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

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

£ 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 = 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.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0310169

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 8891 Spiked Sample ID: 0310169-015A

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	99.1	98	1.20	100	101	0.647	70	130
MTBE	ND	10	102	100	1.70	101	101	0	70	130
Benzene	ND	10	101	101	0	99.3	98.8	0.422	70	130
Toluene	0.62	10	94.4	95.2	0.811	99.3	99.2	0.0499	70	130
Ethylbenzene	0.57	10	98.1	98.9	0.772	103	103	0	70	130
Xylenes	0.50	30	105	105	0	107	103	3.17	70	130
%SS:	109	100	99.7	101	1.61	99.4	99.1	0.300	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

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

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

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

£ 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 = 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.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0310169

EPA Method: SW8015C Extraction: SW3510C BatchID: 8878 Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	89.1	89.7	0.729	70	130
%SS:	N/A	100	N/A	N/A	N/A	102	102	0	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

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

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

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

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

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QC SUMMARY REPORT FOR SW8015C

Matrix: S WorkOrder: 0310169

EPA Method: SW8015C	Extraction: SW3550C			BatchID: 8892			Spiked Sample ID: 0310157-001A			
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	2.85	150	87.4	88.4	1.06	92	92.1	0.0158	70	130
%SS:	87.6	100	101	102	1.29	101	101	0	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

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

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

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

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

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310169

Client:
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #6906; Williamson
PO:

Date Received: 10/10/03
Date Printed: 10/10/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests			
					SW8015C	SW8021B/8015Cm		
0310169-001	SB-12 12'	Soil	10/9/03	☐	A	A		
0310169-002	SB-12 18'	Soil	10/9/03	☐	A	A		
0310169-003	SB-13 11'	Soil	10/10/03	☑	A	A		
0310169-004	SB-13 16'	Soil	10/10/03	☑	A	A		
0310169-005	SB-13 20'	Soil	10/10/03	☐	A	A		
0310169-006	SB-14 12'	Soil	10/10/03	☑	A	A		
0310169-007	SB-14 16'	Soil	10/10/03	☐	A	A		
0310169-008	SB-14 19'	Soil	10/10/03	☑	A	A		
0310169-009	SB-14 23'	Soil	10/10/03	☐	A	A		
0310169-010	SB-15 15'	Soil	10/10/03	☐	A	A		
0310169-011	SB-15 19'	Soil	10/10/03	☐	A	A		
0310169-012	SB-12 W	Water	10/8/03	☐	B	A		
0310169-013	SB-13 W	Water	10/10/03	☐	B	A		
0310169-014	SB-15 W	Water	10/10/03	☐	B	A		
0310169-015	MW-1	Water	10/10/03	☐	B	A		
0310169-016	MW-2	Water	10/10/03	☐	B	A		

Prepared by: Melissa Valles

Comments:

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

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0310169

Client:

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

TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #6906; Williamson
PO:

Date Received: 10/10/03
Date Printed: 10/10/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests			
					SW8015C	SW8021B/8015Cm		
0310169-017	MW-3	Water	10/10/03	☐	B	A		

Prepared by: Melissa Valles

Comments:

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

031009

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY ☒
EDF Required? ☐ Yes ☒ No

Report To: Peter McIntyre Bill To:
Company: AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597 E-Mail:
Tele: ( )925/283-6000 Fax: ( ) 925/283-6121
Project #: 6906 Project Name: Williamson
Project Location: 13th Ave / Oakland
Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 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)	RCI	Other	Comments
SB-12 12'		10/9/03		1	tedlar		X				X				X	X															
SB-12 18'		10/9/03		1	"		X				X				X	X															
SB-13 11'		10/10/03		1	"		X				X																				
SB-13 16'				1			X				X																				Hold
SB-13 20'				1			X				X				X	X															Hold
SB-14 12'				1			X				X																				
SB-14 16'				1			X				X				X	X															Hold
SB-14 19'				1			X				X																				
SB-14 23'				1			X				X				X	X															Hold
SB-15 15'				1			X				X																				
SB-15 19'			(0091)	1			X				X				X	X															
+2 SB-12 W		10/9/03	2:12	3	VOA	X					X	X			X	X															
+2 SB-13 W		10/10/03	12:00	3	VOA	X					X	X			X	X															
+2 SB-15 W		10/10/03	12:20	3	VOA	X					X	X			X	X															

Relinquished By:	Date:	Time:	Received By:
Adrian Nieto	10/10/03	1:90	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

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

other mal

0310169

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☐ Yes ☒ No

Report To: Peter McIntyre Bill To:

Company: AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597 E-Mail:

Tele: ( )925/283-6000 Fax: ( ) 925/283-6121

Project #: 6906 Q3 2003 Project Name: Williamson

Project Location: 13th Ave Oakland

Sampler Signature: Adrian Niela

	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	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 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)	RCI	Other	Other	Other	Other	Comments
+	MW-1		10/10/03	11am	3	V/A	X					X	X			X	X																		
+	MW-2		↓	↓	3	↓	X					X	X			X	X																		
+	MW-3		↓	↓	3	↓	X					X	X			X	X																		

Relinquished By:	Date:	Time:	Received By:
Adrian Niela	10/10/03	1:20	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVATION APPROPRIATE ✓
CONTAINERS ✓
PERSERVED IN LAB

VOAS	O&G	METALS	OTHER
✓			

Sg: Mol.