AEI CONSULTANTS
Environmental & Civil Engineering

2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597
Phone: (925) 283-6000 Fax: (925) 944-2895

RO 2449
DH

August 29, 2005

Mr. Amir Gholami
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94501

Subject: 796 66th Avenue
Oakland, CA
AEI Project No. 5526
ACHCSA Case No. RO0002449

Dear Mr. Gholami:

Enclosed is the Groundwater Monitoring Report prepared by AEI on behalf of Cruise America, Inc. for the 3rd Quarter 2005 monitoring at the above referenced property.

I can be reached at (925) 283-6000, extension 104, or at pmcintyre@aeiconsultants.com if you have any questions or would like to discuss this site.

Sincerely,
AEI Consultants

Jeremy for

Peter McIntyre, PG
Project Manager

August 29, 2005

GROUNDWATER MONITORING REPORT
3rd Quarter, 2005

796 66th Avenue
Oakland, California 94621

AEI Project No. 8262
ACHCSA Case No. RO0002449

Prepared For

Cruise America, Inc.
11 West Hampton Avenue
Mesa, AZ 85210

Prepared By

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

AEI

2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597
Phone: (925) 283-6000 Fax: (925) 944-2895

August 29, 2005

Mr. Cory Kauffman
Cruise America, Inc.
11 West Hampton Avenue
Mesa, AZ 85210

Subject: **Quarterly Groundwater Monitoring Report**
3rd Quarter, 2005
796 66th Avenue
Oakland, California
AEI Project No. 8262
ACHCSA Case No. RO0002449

Dear Mr. Kauffman:

AEI Consultants (AEI) has prepared this report on behalf of Cruise America, Inc. to document to groundwater monitoring activities performed at the above referenced site (Figure 1: Site Location Map). The mitigation and monitoring has been required by the Alameda County Health Care Services Agency (ACHCSA) to document groundwater quality associated with the release of gasoline fuel from the former underground storage tank (UST) located on the property. This report documents the monitoring and sampling event conducted during the 3rd Quarter 2005 on July 6, 2005.

I Background

The site is currently occupied by Cruise America, a recreational vehicle (RV) rental facility. The property is approximately five acres in size. Currently, two buildings exist on the site, surrounded by paved vehicle storage areas. The buildings consist of an office building located on the eastern side of the property and a service building located centrally on the property. Cruise America acquired the property from McGuire Huster in August 1988.

In July 2001, AEI performed a Phase II investigation on the site that included advancing six (6) soil borings (SB-1 through SB-6). The investigation was performed to assess whether the soil or groundwater beneath the site was impacted by two former UST locations on the property (Figure 2). Although low concentrations of Total Petroleum Hydrocarbons as gasoline (TPH-g) and diesel (TPH-d) were reported in the groundwater beneath the site, high levels of Methyl tertiary-Butyl Ether (MTBE) were detected in boring SB-1.

In September of 2001, AEI advanced five (5) additional soil borings (SB-7 through SB-11) in order to determine the source of the high levels of MTBE found in SB-1. Samples collected from SB-7 and SB-8 did not contain MTBE above laboratory reporting limits. MTBE

concentrations ranged from 630 micrograms per liter (µg/L) in SB-9 to 13,000 µg/L in SB-10. These data indicated a leak in the remaining 10,000-gallon gasoline UST on the southern portion of the property as the most likely source of the MTBE.

AEI removed the 10,000-gallon gasoline UST in November of 2001. Concentrations of TPH-g in four of the five soil samples ranged from 4.1 milligrams per kilogram (mg/kg) to 280 mg/kg. Concentrations of MTBE and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) were also detected in the five soil samples. The highest concentrations of MTBE and Benzene detected in the soil during the tank removal were 53 mg/kg and 13 mg/kg, respectively, detected along the southern and eastern sidewalls of the excavation at approximately 6.5 feet below ground surface (bgs). Elevated concentrations of TPH-g and MTBE were present in the groundwater sample at concentrations of 44,000 µg/L and 42,000 µg/L, respectively.

Following removal of the tank, the ACHCSA requested further investigation of the release from the 10,000 gallon UST. On September 6, 2002, six (6) soil borings (SB-12 through SB-17) were advanced. The data from these soil borings was used to determine the placement of five (5) groundwater monitoring wells, which were installed on September 19, 2002. These five wells have been monitored on a quarterly basis since installation. The locations of these borings and wells are shown on Figures 2 and 3.

Based on the findings of the investigation and monitoring activities, the ACHCSA required that corrective action be undertaken. AEI prepared and submitted an *Interim Corrective Action Plan*, dated April 5, 2004, outlining an evaluation and scope of work to implement a treatment program for the release. A sparging system was installed around the release area in July 2004, major features of which are shown on Figure 4. Implementation of the plan was documented in the *Interim Corrective Action Progress Report*, February 11, 2005, to which the reader is referred for details.

II Summary of Activities

AEI measured depth to groundwater in five (5) wells (MW-1 to MW-5) on July 6, 2005. Wells were first opened and water levels allowed to equilibrate with atmospheric pressure. The depth to water from the top of the well casings was measured prior to sampling with an electric water level indicator. The wells were then purged of at least three well volumes using a battery powered submersible pump.

Temperature, pH, specific conductivity, dissolved oxygen, and oxidation-reduction potential (ORP) were measured and the turbidity was visually noted during the purging of the wells. Once the wells were allowed to recharge to a minimum of 90% of their original water volume, a water sample was collected. Groundwater samples were collected from each well using clean, disposable bailers.

Groundwater samples were collected from each well into three 40-milliliter (ml) volatile organic analysis (VOA) vials. The VOAs were capped so that neither head space nor air bubbles were visible within the sample containers. Samples were labeled with unique identifiers including time and date sampled, stored in a cooler over water ice, and placed under chain of custody. The samples were transported under chain of custody protocol to McCampbell Analytical, Inc. of Pacheco, California (Department of Health Services Certification #1644).

The five (5) groundwater samples were analyzed for TPH-g by EPA Method 8015Cm, BTEX and MTBE by EPA Method 8021B, and MTBE and tertiary-Butyl Alcohol (TBA) by EPA Method 8260B.

III Field Results

No sheen or free product was encountered during monitoring activities. Groundwater levels for the current monitoring episode ranged from 3.94 to 6.29 feet above mean sea level (amsl). These groundwater elevations were an average of 0.06 feet higher than the previous episode. However, water levels actually decreased slightly in all wells except MW-3, which increased 0.53 feet since the previous episode. The direction of the groundwater flow at the time of measurement was towards east. Based on these measurements, hydraulic gradient is estimated at approximately 0.024 feet per foot. This flow direction and gradient observed during this episode is generally consistent with previous monitoring events.

Groundwater elevation data is summarized in Table 2. A summary of historical average water table elevations and hydraulic gradients is presented in Table 1a. The groundwater elevation contours and the groundwater flow direction are shown in Figure 5. Refer to Appendix A for the Groundwater Monitoring Well Field Sampling Forms.

IV Groundwater Quality

TPH-g was only detected in one sample above laboratory reporting limits (50 µg/L), in MW-1 at 200 µg/L. No concentrations of Benzene, Ethylbenzene, or Xylenes were detected above laboratory reporting limits of 0.5 µg/L in any of the samples analyzed. Toluene was only detected in one sample, MW-1 at 8.3 µg/L. MTBE was detected in three samples; MW-1 at 50 µg/L, MW-4 at 290 µg/L; and MW-5 at 51 µg/L. TBA was detected in three samples, MW-1 at 1,600 µg/L, MW-4 at 330 µg/L, and MW-5 at 4,900 µg/L.

A summary of groundwater sample analytical data is presented in Table 1 and on Figure 6. Laboratory analytical and chain of custody documentation are included in Appendix B.

V Sparging Operations

Due to re-occurring and inexplicable power outages, the ozone generator and sparging unit have operated at approximately 23% of the system's programmed up-time, which is set at 80% of each day. System components and safety features are operational and sparge pressures are normal. Programming may be adjusted to focus on residual hotspot areas as treatment progresses.

VI Summary

MTBE concentrations have decreased significantly since inception of the ozone and oxygen sparging program, with a 90% or greater reduction from each well's highest concentrations. TPH-g and BTEX concentrations have been reduced to non-detect or nearly so in all wells. The presence of TBA, an intermediary oxidation by-product of MTBE, further supports MTBE destruction. TBA concentrations are expected to decrease rapidly as oxidation progresses. The next quarterly monitoring episode is tentatively scheduled to occur in October 2005, although interim sampling of selected wells may occur prior to this time. Operation of the sparging system should continue to reduce TBA concentrations and ensure adequate treatment of the source area. Additionally, an investigation into power loss to the sparging system is underway, and is expected to be resolved prior to the next monitoring event.

VII Report Limitation

This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. 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 the required information, but it cannot be assumed that they are representative of areas not sampled. All conclusions and/or recommendations are based on these analyses and 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, which existed at the time and location of the work.

If you have any questions regarding our investigation, please do not hesitate to contact Mr. McIntyre at (925) 283-6000, extension 104.

Sincerely,
AEI Consultants

Jeremy Quick
Staff Geologist

Peter McIntyre, P.G.
Project Manager

PROFESSIONAL GEOLOGIST
ROBERT F. FLORY
No. 5825
STATE OF CALIFORNIA

Figures

Figure 1: Site Location Map
Figure 2: Property Map
Figure 3: Site Plan
Figure 4: Sparge Well Locations
Figure 5: Water Table Contours (7/6/05)
Figure 6: Groundwater Sample Analytical Data (7/6/05)

Tables

Table 1: Groundwater Sample Analytical Data
Table 2: Water Table Elevation Data
Table 2a: Average Water Table Elevation & Groundwater Flow Direction

Attachments

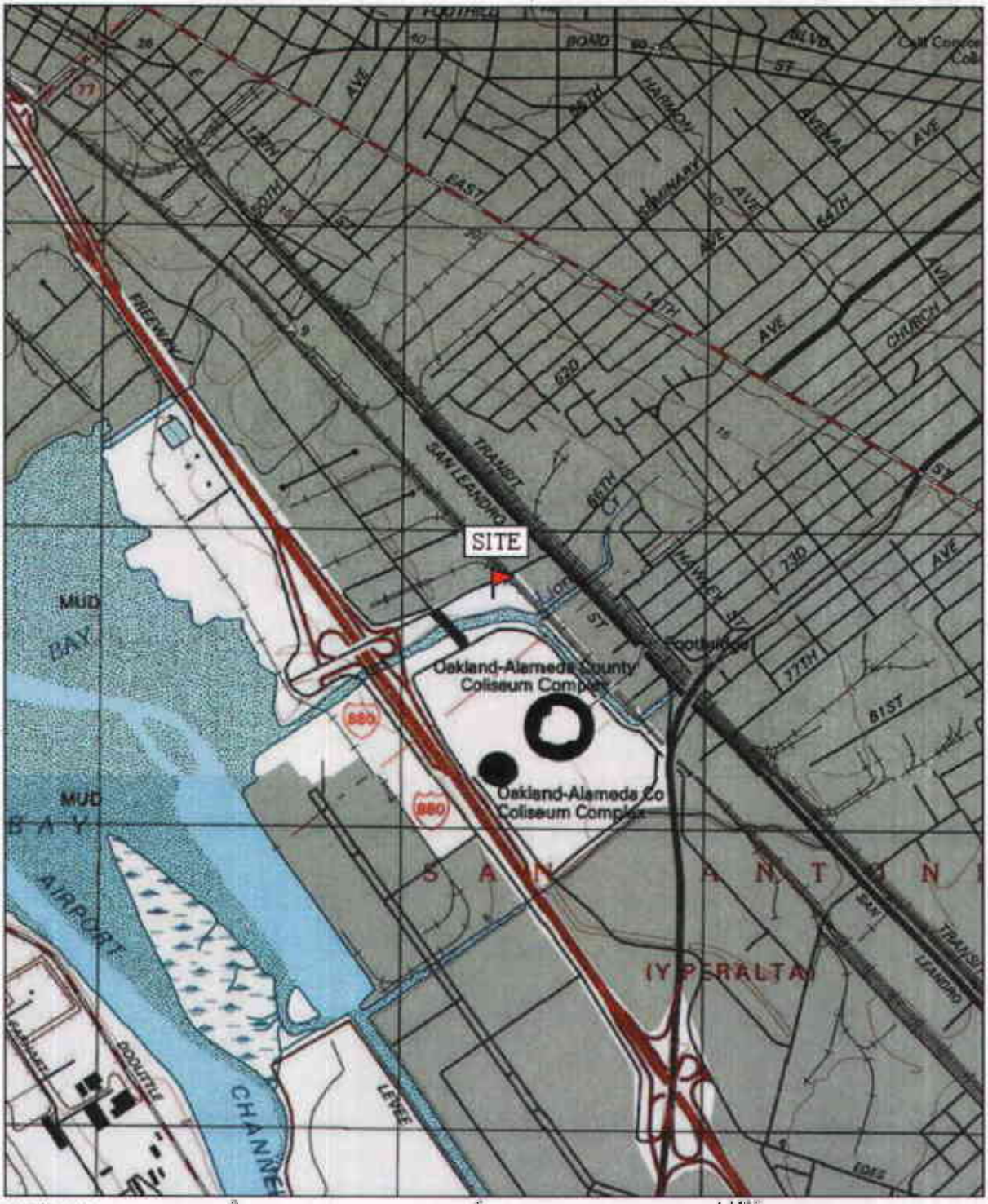
Appendix A: Monitoring Well Field Sampling Forms
Appendix B: Laboratory Analytical and Chain of Custody Documentation

Distribution: Cruise America, Inc.
11 West Hampton Avenue
Mesa, AZ 85210

Mr. Amir Gholami
ACHCSA
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94501

FIGURES

San Leandro 7.5' 37°45.309' N, 122°12.182' W WGS84



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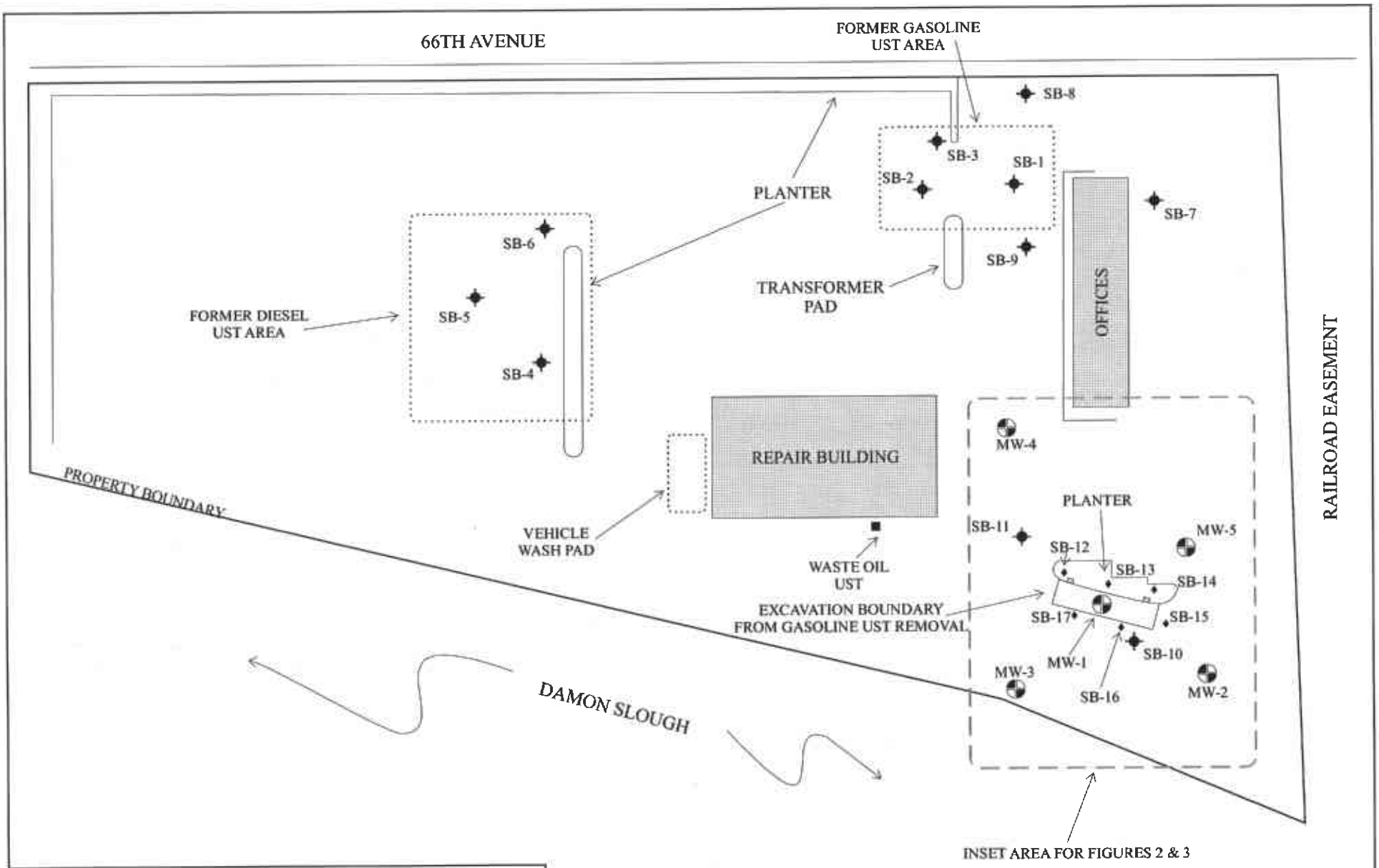
SITE LOCATION MAP

796 66th AVENUE
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 8262



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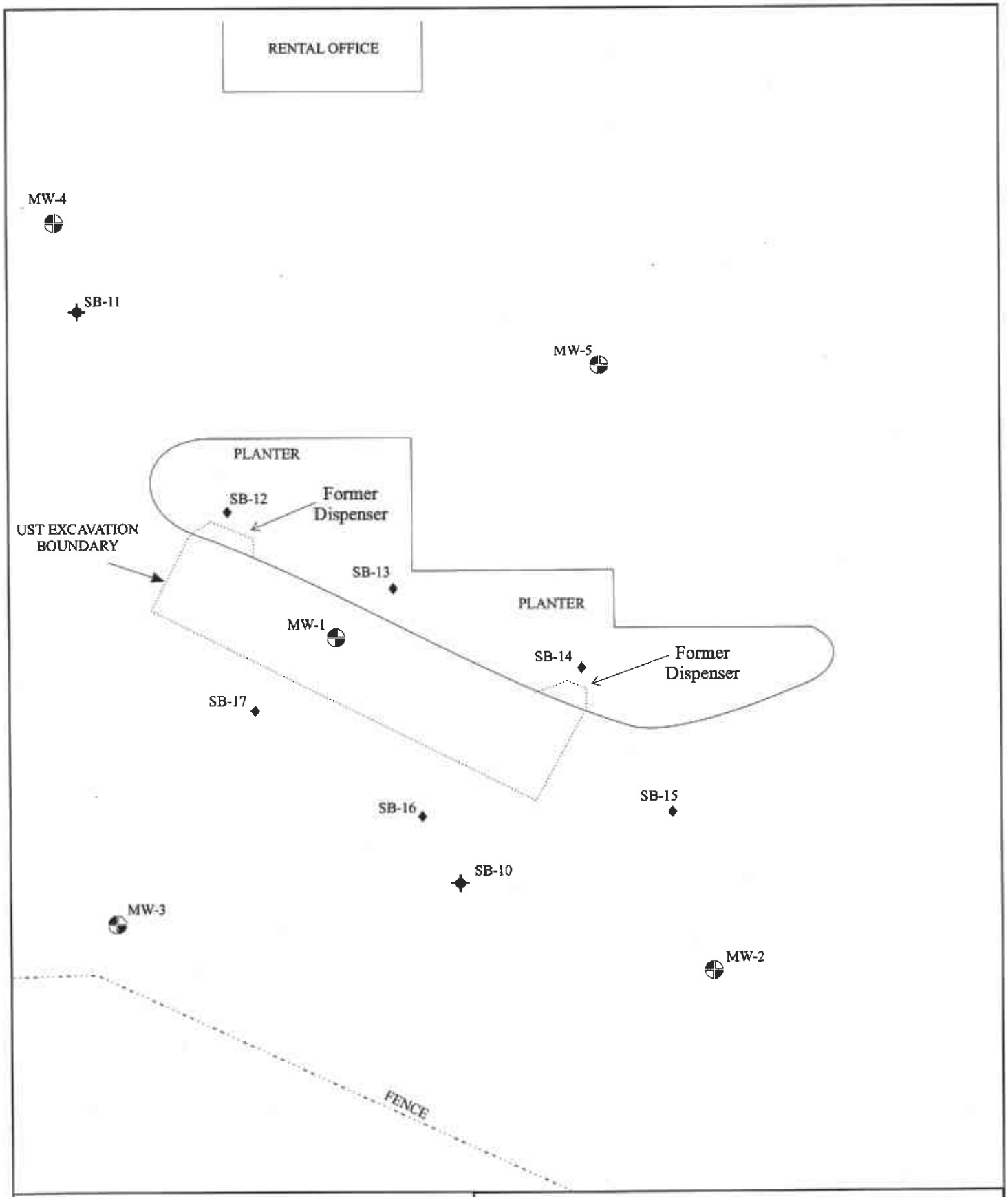
2500 CAMINO DIABLO BLVD, STE 200, WALNUT CREEK, CA

PROPERTY MAP

796 66th AVENUE
OAKLAND, CALIFORNIA

FIGURE 2
AEI PROJECT NO 8262



LEGEND

- Soil Boring: July & Sept. 2001
- Soil Boring: Sept. 2002
- Monitoring Wells

N

0' 10' 20'

SCALE: 1 in = 20 ft

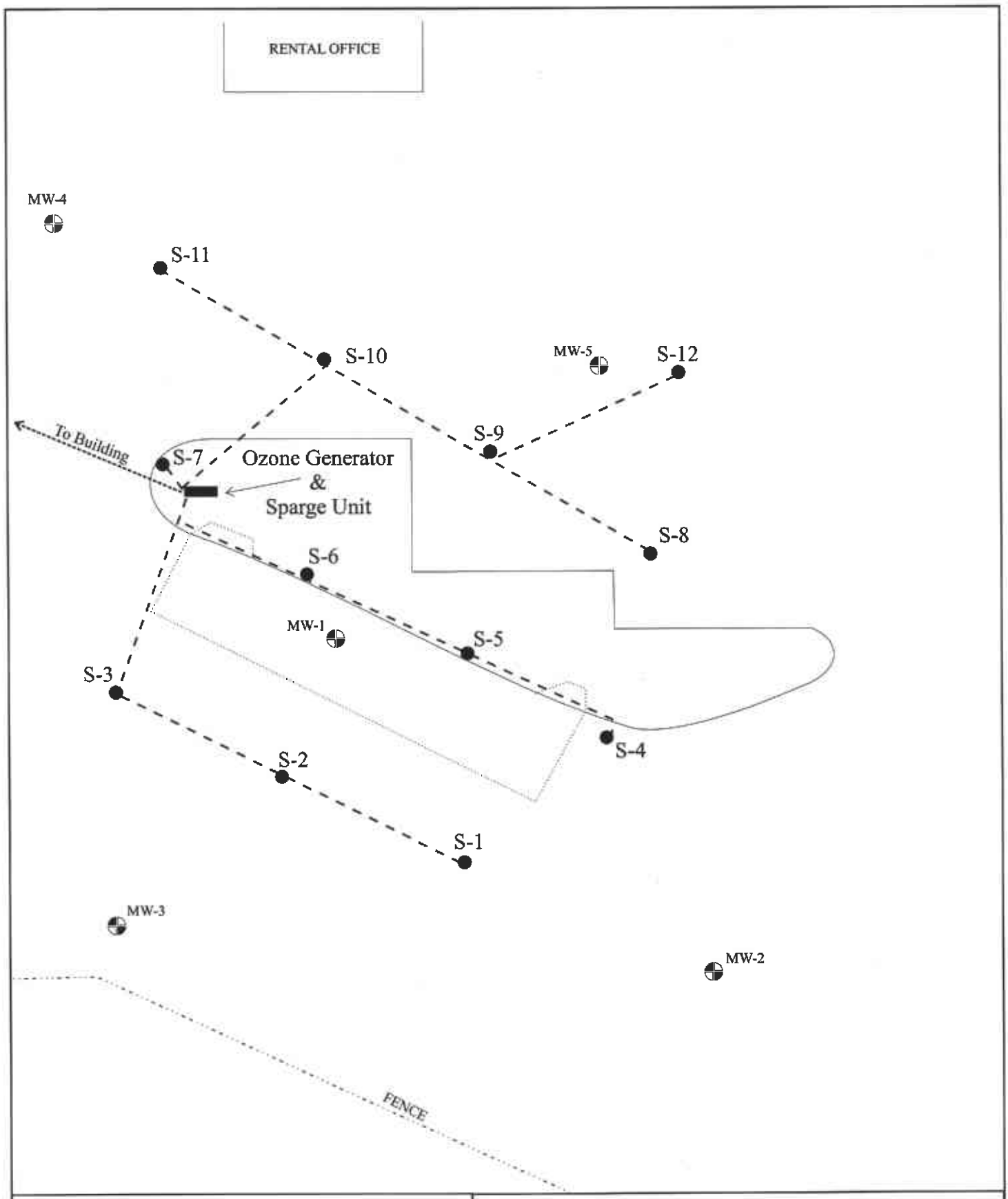
AEI Consultants

2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

Site Plan

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 3
AEI PROJECT NO 8262



LEGEND

- Monitoring Wells
- Sparge Well Points
- Sparge Lines and Conduit
- Electrical Conduit

N

0' 10' 20'

SCALE: 1 in = 20 ft

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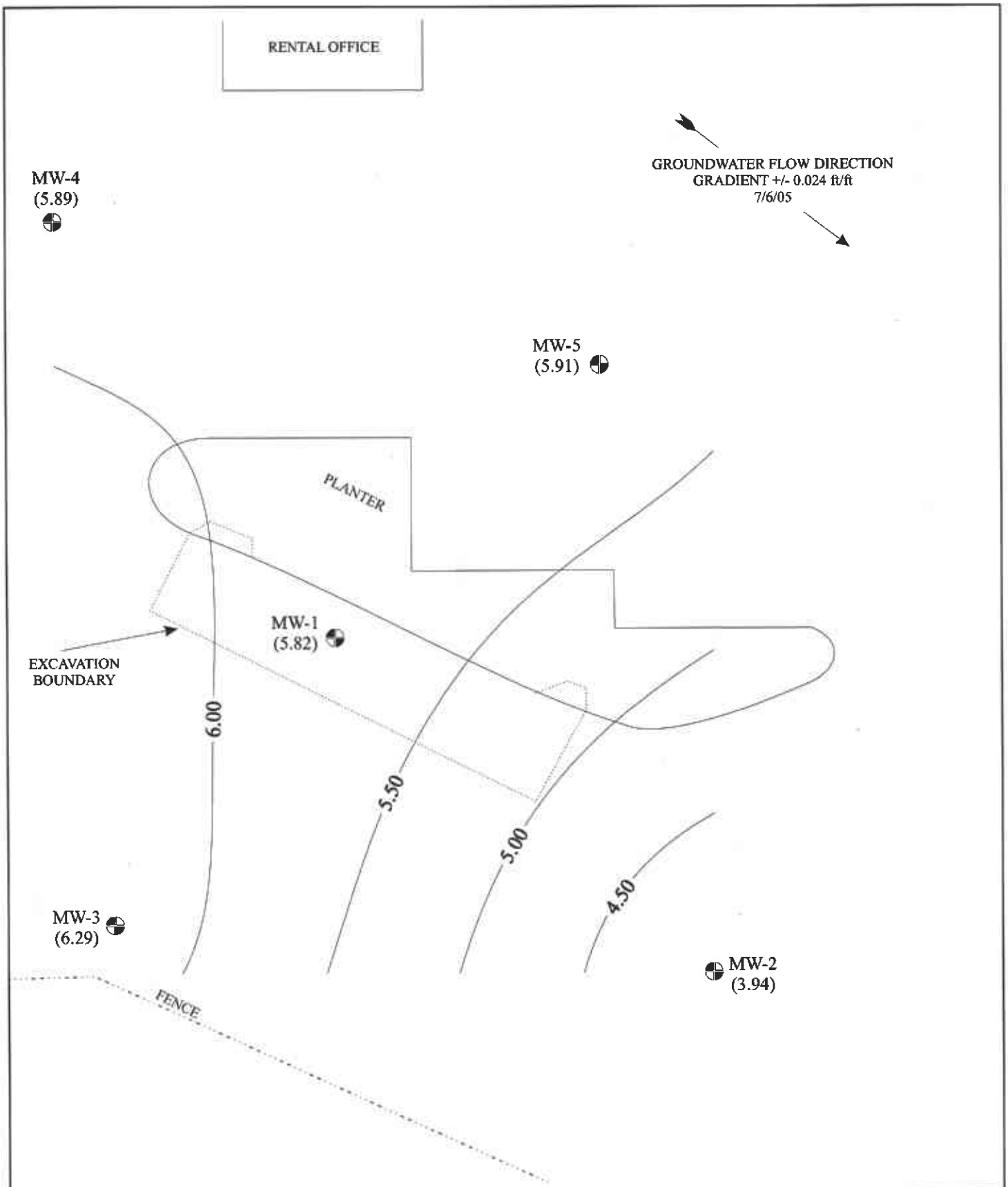
2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

Sparge Well Locations

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 4
AEI PROJECT NO 8262



LEGEND

MONITORING WELL LOCATION

Groundwater elevation data as of 7/6/05 in feet above mean sea level (amsl).
Contour drawn in Surfer (R) v. 7.0.
Contour Interval = 0.5
See Table 1 for details.

N

0' 10' 20'

SCALE: 1 in = 20 ft

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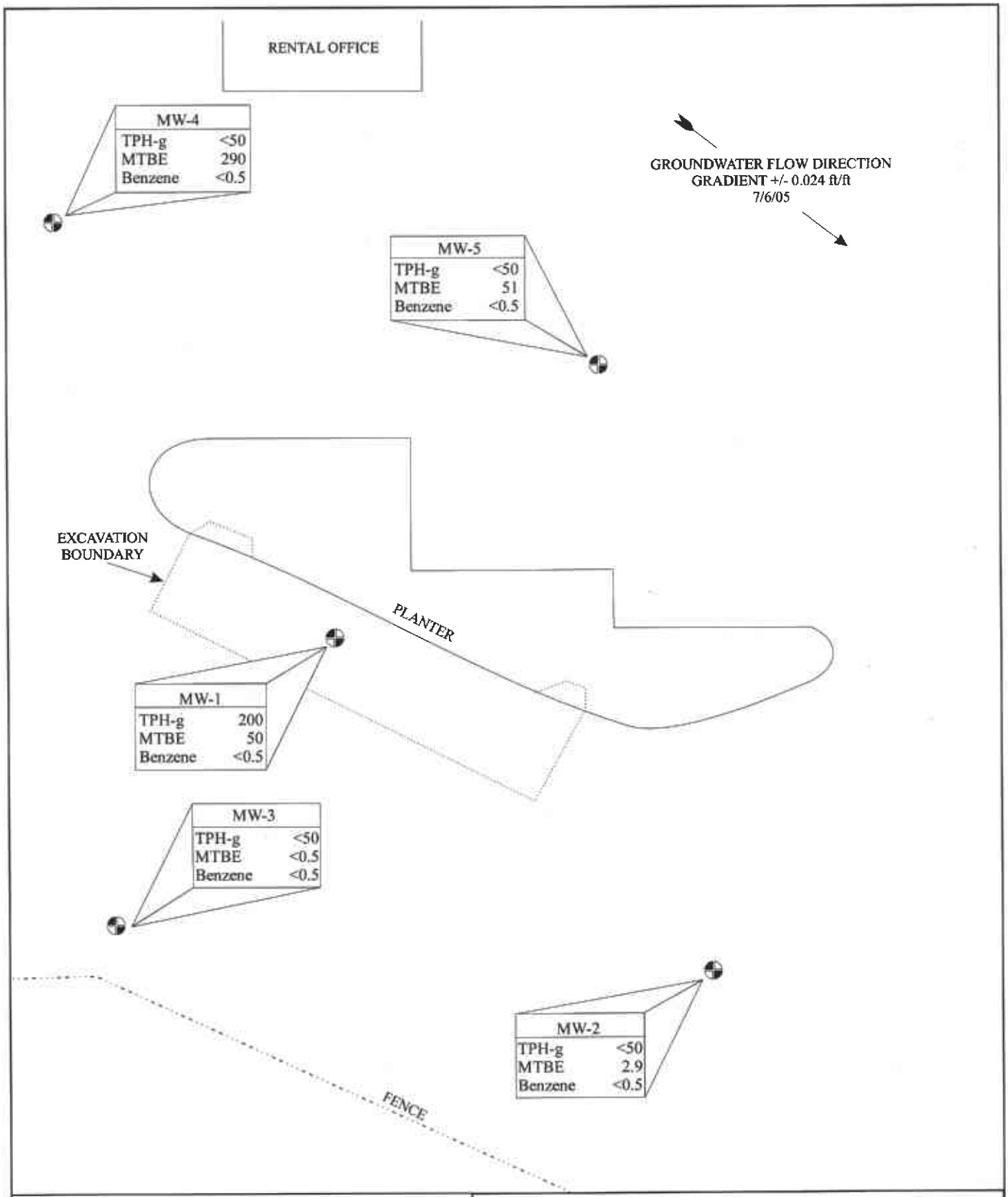
2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

Water Table Contours (7/6/05)

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 5
AEI PROJECT NO 8262



LEGEND

MONITORING WELL LOCATION

TPH-g = Total Petroleum Hydrocarbons as gasoline.
MTBE = Methyl tertiary-Butyl Ether (8260B).
Analytical data from 7/6/05 event with results in micrograms per liter (µg/L).
See Table 1 for details.

N

0' 10' 20'

SCALE: 1 in = 20 ft

AEI Consultants

2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

Groundwater Sample Analytical Data (7/6/05)

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 6
AEI PROJECT NO 8262

TABLES

Table 1
Groundwater Sample Analytical Data

Well ID (screen interval in ft bgs)	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC)	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene *(EPA method 8021B)* µg/L	Toluene *(EPA method 8021B)* µg/L	Ethylbenzene *(EPA method 8021B)* µg/L	Xylenes *(EPA method 8021B)* µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
MW-1	9/30/2002	10.88	5.41	5.47	1,800	50	15	16	18	19,000	13,000	<5,000
(4-14)	1/2/2003	10.88	4.77	6.11	660	24	6.4	<2.5	<2.5	7,800	8,900	-
	3/31/2003	10.88	4.95	5.93	660	11	6.4	<5.0	<5.0	16,000	20,000	-
	6/30/2003	10.88	4.54	6.34	830	<5.0	6.8	<5.0	<5.0	16,000	17,000	-
	10/1/2003	10.88	4.66	6.22	720	<5.0	<5.0	<5.0	<5.0	14,000	13,000	-
	1/5/2004	10.88	4.07	6.81	<300	7.8	2.9	<3.0	<3.0	-	8,700	-
	4/5/2004	10.88	4.33	6.55	100	2.8	3.0	<1.0	<1.0	2,300	3,000	<500
	7/7/2004	10.88	4.97	5.91	190	<1.7	2.0	<1.7	<1.7	4,900	5,500	<1,000
	7/19/2004	10.88	5.12	5.76	340	<2.5	4.0	<2.5	<2.5	8,000	9,200	<1,700
	8/6/2004	10.88	5.13	5.75	280	<0.5	5.6	<0.5	<0.5	7,200	5,900	<1,000
	8/20/2004	10.88	5.31	5.57	<250	<2.5	<2.5	<2.5	<2.5	4,600	-	-
	9/3/2004	10.88	5.22	5.66	<250	<2.5	<2.5	<2.5	<2.5	5,700	4,700	<1,000
	10/13/2004	10.88	5.23	5.65	170	<0.5	4.8	<0.5	<0.5	3,700	4,400	-
	1/11/2005	10.88	4.69	6.19	110	8.8	4.2	<0.5	<0.5	880	990	910
	4/13/2005	10.88	5.02	5.86	230	<0.5	9.0	<0.5	<0.5	140	100	2,600
	7/6/2005	**10.88**	**5.06**	**5.82**	**200**	**<0.5**	**8.3**	**<0.5**	**<0.5**	**<75**	**50**	**1,600**
MW-2	9/30/2002	10.77	8.00	2.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.84	<5.0
(4-14)	1/2/2003	10.77	5.91	4.86	<50	<0.5	<0.5	<0.5	<0.5	19	20	-
	3/31/2003	10.77	5.15	5.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.9	-
	6/30/2003	10.77	5.91	4.86	<50	<0.5	<0.5	<0.5	<0.5	7.0	9.6	-
	10/1/2003	10.77	6.69	4.08	<50	<0.5	<0.5	<0.5	<0.5	7.7	6.7	-
	1/5/2004	10.77	6.18	4.59	71	4.7	13	2.7	12	-	7.8	-
	4/5/2004	10.77	7.22	3.55	210	14	39	6.6	27	16	13	<5.0
	7/7/2004	10.77	6.83	3.94	<50	<0.5	<0.5	<0.5	<0.5	5.7	5.6	<5.0
	10/13/2004	10.77	7.18	3.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.6	-
	1/11/2005	10.77	7.27	3.50	74	2.6	11	2.1	10	<5.0	4.4	<5.0
	4/13/2005	10.77	6.66	4.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	7/6/2005	**10.77**	**6.83**	**3.94**	**<50**	**<0.5**	**0.77**	**<0.5**	**<0.5**	**<5.0**	**2.9**	**<5.0**

Table 1
Groundwater Sample Analytical Data

Well ID (screen interval in ft bgs)	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC)	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
						(EPA method 8021B)						
MW-3	9/30/2002	10.20	5.21	4.99	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
(4-14)	1/2/2003	10.20	5.31	4.89	<50	0.89	0.50	<0.5	0.72	15	14	-
	3/31/2003	10.20	4.58	5.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.62	-
	6/30/2003	10.20	3.83	6.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.6	-
	10/1/2003	10.20	4.02	6.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	-
	1/5/2004	10.20	6.18	4.02	71	4.7	13	2.7	12	-	7.8	-
	4/5/2004	10.20	3.79	6.41	120	8.8	22	3.2	13	<5.0	<0.5	<5.0
	7/7/2004	10.20	3.76	6.44	<50	<0.5	<0.5	<0.5	<0.5	<5.0	4.0	<5.0
	10/13/2004	10.20	4.45	5.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	-
	1/11/2005	10.20	5.21	4.99	68	2.2	9.0	1.7	8.5	<5.0	<0.5	<5.0
	4/13/2005	10.20	4.44	5.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	7/6/2005	**10.20**	**3.91**	**6.29**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**<0.5**	**<5.0**
MW-4	9/30/2002	11.07	5.50	5.57	<100	<0.5	<0.5	<0.5	<0.5	790	750	<100
(4-14)	1/2/2003	11.07	4.90	6.17	<50	<0.5	<0.5	<0.5	<0.5	420	460	-
	3/31/2003	11.07	4.81	6.26	<50	<0.5	<0.5	<0.5	<0.5	1,500	1,400	-
	6/30/2003	11.07	4.61	6.46	<50	<0.5	<0.5	<0.5	<0.5	1,600	1,200	-
	10/1/2003	11.07	4.76	6.31	<50	<0.5	<0.5	<0.5	<0.5	1,800	1,400	-
	1/5/2004	11.07	4.32	6.75	<50	3.0	6.7	1.4	6.1	-	1,200	-
	4/5/2004	11.07	4.43	6.64	<50	0.79	2.0	<0.5	2.2	800	840	<250
	7/7/2004	11.07	5.08	5.99	<50	<0.5	<0.5	<0.5	<0.5	1,400	2,100	<250
	7/19/2004	11.07	5.19	5.88	<50	<0.5	<0.5	<0.5	<0.5	1,200	1,300	<500
	8/6/2004	11.07	5.20	5.87	<50	0.76	<0.5	<0.5	<0.5	1,300	1,200	<500
	8/20/2004	11.07	5.37	5.70	<50	<0.5	<0.5	<0.5	<0.5	460	-	-
	9/3/2004	11.07	5.35	5.72	<50	<0.5	<0.5	<0.5	<0.5	440	370	<50
	10/13/2004	11.07	5.35	5.72	<50	<0.5	<0.5	<0.5	<0.5	330	360	-
	1/11/2005	11.07	4.99	6.08	<50	1.0	2.1	<0.5	1.8	450	430	<100
	4/13/2005	11.07	5.17	5.90	<50	<0.5	<0.5	<0.5	<0.5	340	200	<50
	7/6/2005	**11.07**	**5.18**	**5.89**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**300**	**290**	**330**

Table 1
Groundwater Sample Analytical Data

Well ID (screen interval in ft bgs)	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC)	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene *(EPA method 8021B)* µg/L	Toluene *(EPA method 8021B)* µg/L	Ethylbenzene *(EPA method 8021B)* µg/L	Xylenes *(EPA method 8021B)* µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
MW-5	9/30/2002	11.18	5.62	5.56	<2,000	<5.0	<5.0	<5.0	<5.0	19,000	18000	<2,500
(4-14)	1/2/2003	11.18	5.12	6.06	<50	<0.5	<0.5	<0.5	<0.5	7,000	7,000	-
	3/31/2003	11.18	4.93	6.25	<500	<5.0	<5.0	<5.0	<5.0	14,000	12,000	-
	6/30/2003	11.18	4.75	6.43	<500	<5.0	<5.0	<5.0	<5.0	13,000	15,000	-
	10/1/2003	11.18	4.88	6.30	<500	<5.0	<5.0	<5.0	<5.0	12,000	11,000	-
	1/5/2004	11.18	4.19	6.99	<1,000	<10	<10	<10	<10	-	11,000	-
	4/5/2004	11.18	4.57	6.61	<250	<2.5	<2.5	<2.5	<2.5	9,400	13,000	<2,500
	7/7/2004	11.18	5.19	5.99	<500	<5.0	<5.0	<5.0	<5.0	15,000	19,000	<2,000
	7/19/2004	11.18	5.32	5.86	<500	<5.0	<5.0	<5.0	<5.0	16,000	14,000	<2,500
	8/6/2004	11.18	5.33	5.85	110	<0.5	<0.5	<0.5	<0.5	12,000	11,000	<2,500
	8/20/2004	11.18	5.49	5.69	<500	<5.0	<5.0	<5.0	<5.0	7,200	-	-
	9/3/2004	11.18	5.48	5.70	<500	<2.5	<2.5	<2.5	<2.5	8,500	7,200	<1,700
	10/13/2004	11.18	5.49	5.69	<250	<2.5	<2.5	<2.5	<2.5	6,700	7,700	-
	1/11/2005	11.18	5.08	6.10	<100	1.5	3.3	<1.0	2.3	3,000	4,800	1,200
	4/13/2005	11.18	5.24	5.94	<50	<0.5	<0.5	<0.5	<0.5	510	320	2,600
	7/6/2005	**11.18**	**5.27**	**5.91**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**43**	**51**	**4,900**

Notes:

bgs = below ground surface

ft amsl = feet above mean sea level

TOC = Top of Casing; all well elevations and depths to water are measured from TOC

TPH-g = Total Petroleum Hydrocarbons as gasoline

µg/L = micrograms per liter

MTBE = Methyl tertiary-Butyl Ether

TBA = tertiary-Butyl Alcohol

- = Sample not analyzed by this method

Table 2
Water Table Elevation Data

Well ID (screen interval in ft bgs)	Date Sampled	Well Elevation at TOC (ft amsl)	Depth to Water (ft from TOC)	Water Table Elevation (ft amsl)
MW-1	9/30/2002	10.88	5.41	5.47
(4-14)	1/2/2003	10.88	4.77	6.11
	3/31/2003	10.88	4.95	5.93
	6/30/2003	10.88	4.54	6.34
	10/1/2003	10.88	4.66	6.22
	1/5/2004	10.88	4.07	6.81
	4/5/2004	10.88	4.33	6.55
	7/7/2004	10.88	4.97	5.91
	7/19/2004	10.88	5.12	5.76
	8/6/2004	10.88	5.13	5.75
	8/20/2004	10.88	5.31	5.57
	9/3/2004	10.88	5.22	5.66
	10/13/2004	10.88	5.23	5.65
	1/11/2005	10.88	4.69	6.19
	4/13/2005	10.88	5.02	5.86
	7/6/2005	**10.88**	**5.06**	**5.82**
MW-2	9/30/2002	10.77	8.00	2.77
(4-14)	1/2/2003	10.77	5.91	4.86
	3/31/2003	10.77	5.15	5.62
	6/30/2003	10.77	5.91	4.86
	10/1/2003	10.77	6.69	4.08
	1/5/2004	10.77	6.18	4.59
	4/5/2004	10.77	7.22	3.55
	7/7/2004	10.77	6.83	3.94
	10/13/2004	10.77	7.18	3.59
	1/11/2005	10.77	7.27	3.50
	4/13/2005	10.77	6.66	4.11
	7/6/2005	**10.77**	**6.83**	**3.94**
MW-3	9/30/2002	10.20	5.21	4.99
(4-14)	1/2/2003	10.20	5.31	4.89
	3/31/2003	10.20	4.58	5.62
	6/30/2003	10.20	3.83	6.37
	10/1/2003	10.20	4.02	6.18
	1/5/2004	10.20	5.03	5.17
	4/5/2004	10.20	3.79	6.41
	7/7/2004	10.20	3.76	6.44
	10/13/2004	10.20	4.45	5.75
	1/11/2005	10.20	5.21	4.99
	4/13/2005	10.20	4.44	5.76
	7/6/2005	**10.20**	**3.91**	**6.29**

Table 2
Water Table Elevation Data

Well ID (screen interval in ft bgs)	Date Sampled	Well Elevation at TOC (ft amsl)	Depth to Water (ft from TOC)	Water Table Elevation (ft amsl)
MW-4	9/30/2002	11.07	5.50	5.57
(4-14)	1/2/2003	11.07	4.90	6.17
	3/31/2003	11.07	4.81	6.26
	6/30/2003	11.07	4.61	6.46
	10/1/2003	11.07	4.76	6.31
	1/5/2004	11.07	4.32	6.75
	4/5/2004	11.07	4.43	6.64
	7/7/2004	11.07	5.08	5.99
	7/19/2004	11.07	5.19	5.88
	8/6/2004	11.07	5.20	5.87
	8/20/2004	11.07	5.37	5.70
	9/3/2004	11.07	5.35	5.72
	10/13/2004	11.07	5.35	5.72
	1/11/2005	11.07	4.99	6.08
	4/13/2005	11.07	5.17	5.90
	7/6/2005	**11.07**	**5.18**	**5.89**
MW-5	9/30/2002	11.18	5.62	5.56
(4-14)	1/2/2003	11.18	5.12	6.06
	3/31/2003	11.18	4.93	6.25
	6/30/2003	11.18	4.75	6.43
	10/1/2003	11.18	4.88	6.30
	1/5/2004	11.18	4.19	6.99
	4/5/2004	11.18	4.57	6.61
	7/7/2004	11.18	5.19	5.99
	7/19/2004	11.18	5.32	5.86
	8/6/2004	11.18	5.33	5.85
	8/20/2004	11.18	5.49	5.69
	9/3/2004	11.18	5.48	5.70
	10/13/2004	11.18	5.49	5.69
	1/11/2005	11.18	5.08	6.10
	4/13/2005	11.18	5.24	5.94
	7/6/2005	**11.18**	**5.27**	**5.91**

Notes:

bgs = below ground surface

ft amsl = feet above mean sea level

TOC = Top of Casing; all well elevations and depths to water are measured from TOC

Table 2a
Average Water Table Elevation & Groundwater Flow Data

Episode	Date Sampled	Average Water Table Elevation*	Change From Previous Episode	Gradient (direction)
1	9/30/2002	4.87	-	0.005 (S)
2	1/2/2003	5.62	0.75	0.022 (SSE)
3	3/31/2003	5.94	0.32	0.006 (SSE)
4	6/30/2003	6.09	0.16	0.020 (SE)
5	10/1/2003	5.82	-0.27	0.029-0.001 (SE)
6	1/5/2004	6.06	0.24	0.03 (SE)
7	4/5/2004	5.95	-0.11	0.02 (E)
8	7/7/2004	5.65	-0.30	0.02 (E)
9	7/19/2004	5.83	0.18	nc
10	8/6/2004	5.82	-0.01	nc
11	8/20/2004	5.65	-0.17	nc
12	9/3/2004	5.69	0.04	nc
13	10/13/2004	5.28	-0.41	0.02 (E)
14	1/11/2005	5.37	0.09	0.02 (E)
15	4/13/2005	5.51	0.14	0.02 (E)
16	**7/6/2005**	**5.57**	**0.06**	**0.024 (E)**

Notes:

*Average Water Table Elevation value calculated in Microsoft Excel

nc = not calculated

APPENDIX A

MONITORING WELL FIELD SAMPLING FORMS

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Cruise America	Date of Sampling:	7/6/2005
Job Number:	8262	Name of Sampler:	Adrian Nieto
Project Address:	796 - 66th Avenue, Oakland, CA 94621		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	10.88		
Depth of Well	14.00		
Depth to Water (from top of casing)	5.06		
Water Elevation (feet above msl)	5.82		
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)	**17.4**		
Actual Volume Purged (gallons)	18.0		
Appearance of Purge Water	Initially light-brown, cleared quickly.		
Free Product Present?	No	Thickness (ft):	n/a

GROUNDWATER SAMPLES

Number of Samples/Container Size: 4 40-ml VOA vials

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	3	22.00	6.82	2136	0.12	-108.9	
	6	22.14	6.80	2066	0.09	-106.8	
	9	22.22	6.76	2035	0.08	-106.2	
	12	22.23	6.75	2032	0.08	-106.7	
	15	22.23	6.77	2030	0.04	-108.7	
	18	22.23	6.76	2025	0.04	-109.6	

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

Purge water was initially light-brown, and cleared quickly. No noted hydrocarbon odor.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Cruise America	Date of Sampling:	7/6/2005
Job Number:	8262	Name of Sampler:	Adrian Nieto
Project Address:	796 - 66th Avenue, Oakland, CA 94621		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	10.77		
Depth of Well	14.00		
Depth to Water (from top of casing)	6.83		
Water Elevation (feet above msl)	3.94		
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)	**3.4**		
Actual Volume Purged (gallons)	4.0		
Appearance of Purge Water	Light-yellow.		
Free Product Present?	No	Thickness (ft):	n/a

GROUNDWATER SAMPLES

Number of Samples/Container Size: 4 40-ml VOA vials

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	21.24	7.12	9564	0.46	-144.7	
	4	21.30	7.10	9115	0.6	-125.4	

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

Well dried out at 11:32 AM, after 2.5 gallons purged. Sufficiently recharged by 11:45 AM.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Cruise America	Date of Sampling:	7/6/2005
Job Number:	8262	Name of Sampler:	Adrian Nieto
Project Address:	796 - 66th Avenue, Oakland, CA 94621		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	10.20		
Depth of Well	14.00		
Depth to Water (from top of casing)	3.91		
Water Elevation (feet above msl)	6.29		
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)	**4.8**		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	Light-yellow.		
Free Product Present?	No	Thickness (ft):	n/a

GROUNDWATER SAMPLES

Number of Samples/Container Size: 4 40-ml VOA vials

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	21.55	6.69	7185	0.18	-148.1	
	4	21.58	6.70	7251	0.16	-149.3	
	6	20.01	6.75	8557	0.14	-152.8	

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

No noted hydrocarbon odor.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Cruise America	Date of Sampling:	7/6/2005
Job Number:	8262	Name of Sampler:	Adrian Nieto
Project Address:	796 - 66th Avenue, Oakland, CA 94621		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	11.07		
Depth of Well	14.00		
Depth to Water (from top of casing)	5.18		
Water Elevation (feet above msl)	5.89		
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)	**4.2**		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Initially dark, cleared at 1.5 gallons.		
Free Product Present?	No	Thickness (ft):	n/a

GROUNDWATER SAMPLES

Number of Samples/Container Size: 4 40-ml VOA vials

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	1	22.39	7.68	1222	0.1	-194.8	
	3	22.60	8.00	1209	0.06	-237.9	
	5	22.63	8.08	1197	0.05	-248.8	

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

Purge water was initially dark, and cleared after 1.5 gallons was purged. Strong hydrocarbon odor noted.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Cruise America	Date of Sampling:	7/6/2005
Job Number:	8262	Name of Sampler:	Adrian Nieto
Project Address:	796 - 66th Avenue, Oakland, CA 94621		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	11.18		
Depth of Well	14.00		
Depth to Water (from top of casing)	5.27		
Water Elevation (feet above msl)	5.91		
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)	**4.2**		
Actual Volume Purged (gallons)	5.0		
Appearance of Purge Water	Initially dark, cleared after 0.5 gallon.		
Free Product Present?	No	Thickness (ft):	n/a

GROUNDWATER SAMPLES

Number of Samples/Container Size: 4 40-ml VOA vials

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	1	23.30	6.97	2643	0.23	-129.2	
	3	23.90	7.04	2268	0.12	-135.3	
	5	23.97	7.05	2190	0.09	-140.1	

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

Purge water was initially dark, and cleared after 0.5 gallon was purged. Strong hydrocarbon odor noted.

APPENDIX B

LABORATORY ANALYTICAL AND CHAIN OF CUSTODY DOCUMENTATION

McCampbell Analytical, Inc.

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

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8262; Cruise AM	Date Sampled: 07/06/05
		Date Received: 07/06/05
	Client Contact: Peter McIntyre	Date Reported: 07/12/05
	Client P.O.:	Date Completed: 07/12/05

WorkOrder: 0507070

July 12, 2005

Dear Peter:

Enclosed are:

1). the results of **5** analyzed samples from your **#8262; Cruise AM 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.

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

AEI Consultants	Client Project ID: #8262; Cruise AM	Date Sampled: 07/06/05
		Date Received: 07/06/05
2500 Camino Diablo, Ste. #200	Client Contact: Peter McIntyre	Date Extracted: 07/08/05
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed: 07/08/05

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0507070

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	200,m	ND<75	ND	8.3	ND	ND	1	102
002A	MW-2	W	ND	ND	ND	0.77	ND	ND	1	108
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	108
004A	MW-4	W	ND	300	ND	ND	ND	ND	1	117
005A	MW-5	W	ND	43	ND	ND	ND	ND	1	117
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 ~1 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; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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

AEI Consultants	Client Project ID: #8262; Cruise AM	Date Sampled: 07/06/05
2500 Camino Diablo, Ste. #200		Date Received: 07/06/05
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 07/09/05-07/11/05
	Client P.O.:	Date Analyzed: 07/09/05-07/11/05

t-Butyl alcohol and Methyl tert-Butyl Ether*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0507070

Lab ID	Client ID	Matrix	t-Butyl alcohol (TBA)	Methyl-t-butyl ether (MTBE)	DF	% SS
0507070-001B	MW-1	W	1600	50	20	108
0507070-002B	MW-2	W	ND	2.9	1	108
0507070-003B	MW-3	W	ND	ND	1	108
0507070-004B	MW-4	W	330	290	10	111
0507070-005B	MW-5	W	4900	51	100	110

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	5.0	0.5	µg/L
	S	NA	NA	NA

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

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

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0507070

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 17019 Spiked Sample ID: 0507069-006A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex)£	ND	60	112	104	7.95	104	110	6.02	70 - 130	70 - 130
MTBE	ND	10	102	95.4	6.62	104	105	1.12	70 - 130	70 - 130
Benzene	ND	10	109	110	1.11	115	119	3.69	70 - 130	70 - 130
Toluene	ND	10	106	105	1.02	106	112	4.95	70 - 130	70 - 130
Ethylbenzene	ND	10	111	110	0.906	110	114	3.89	70 - 130	70 - 130
Xylenes	ND	30	96.7	96.3	0.345	96.3	100	3.74	70 - 130	70 - 130
%SS:	107	10	111	110	0.764	114	116	1.77	70 - 130	70 - 130

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

NONE

BATCH 17019 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507070-001A	7/06/05	7/08/05	7/08/05 7:01 AM	0507070-002A	7/06/05	7/08/05	7/08/05 8:00 AM
0507070-003A	7/06/05	7/08/05	7/08/05 8:30 AM	0507070-004A	7/06/05	7/08/05	7/08/05 9:00 AM
0507070-005A	7/06/05	7/08/05	7/08/05 9:30 AM				

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

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

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

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or 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.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

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

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0507070

EPA Method: SW8260B **Extraction: SW5030B** **BatchID: 17009** **Spiked Sample ID: 0507069-005B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
Methyl-t-butyl ether (MTBE)	ND	10	105	103	1.51	104	103	1.34	70 - 130	70 - 130
%SS1:	111	10	97	97	0	102	100	2.70	70 - 130	70 - 130

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

NONE

BATCH 17009 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507070-001B	7/06/05	7/11/05	7/11/05 7:36 PM	0507070-002B	7/06/05	7/09/05	7/09/05 9:06 PM
0507070-003B	7/06/05	7/09/05	7/09/05 9:50 PM				

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

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

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

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

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

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

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

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Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0507070

EPA Method: SW8260B **Extraction: SW5030B** **BatchID: 17027** **Spiked Sample ID: 0507072-004B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
Methyl-t-butyl ether (MTBE)	ND	10	106	102	3.98	102	107	4.89	70 - 130	70 - 130
%SS1:	104	10	95	94	0.958	95	100	4.81	70 - 130	70 - 130

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

NONE

BATCH 17027 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507070-004B	7/06/05	7/09/05	7/09/05 10:34 PM	0507070-005B	7/06/05	7/11/05	7/11/05 5:57 PM

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

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

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

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

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

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

DHS Certification No. 1644

QA/QC Officer

aei 0507070

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: same
Company: AEI Consultants	
2500 Camino Diablo, Suite 200	
Walnut Creek, CA 94597	E-Mail: pmcintyre@aeiconsultants.com
Tele: (925) 944-2899	Fax: (925) 944-2895
Project #: 8262	Project Name: Cruise Am
Project Location: 66th Oakland	
Sampler Signature: Adrian Niehus	

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 B&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 / 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: MTBE + TBA (8260)	Comments
MW-1		7/6/5				X					X	X			X															X	
MW-2						X					X	X			X															X	
MW-3						X					X	X			X															X	
MW-4						X					X	X			X															X	
MW-5						X					X	X			X															X	

Relinquished By:	Date:	Time:	Received By:
Adrian Niehus	7/6/05	3:55	Mel Vall
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0507070 **ClientID: AEL**

Report to:
Peter McIntyre
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #8262; Cruise AM
PO:

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

Requested TAT: 5 days
Date Received: 07/06/2005
Date Printed: 07/06/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0507070-001	MW-1	Water	7/6/05	☐	A	B	A												
0507070-002	MW-2	Water	7/6/05	☐	A	B													
0507070-003	MW-3	Water	7/6/05	☐	A	B													
0507070-004	MW-4	Water	7/6/05	☐	A	B													
0507070-005	MW-5	Water	7/6/05	☐	A	B													

Test Legend:

1	G-MBTEX_W	2	MTBE_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12		13		14		15	

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.