RO2449

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February 15, 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 Interim Corrective Action Progress Report prepared by AEI on behalf of Cruise America, Inc. for 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,

Peter McIntyre
Project Manager

February 11, 2005

INTERIM CORRECTIVE ACTION PROGRESS REPROT

796 66th Avenue
Oakland, California

AEI Project No. 8262
ACHCSA Case No. RO0002449

Prepared For:

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

Prepared By

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AEI

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1.0 INTRODUCTION

AEI Consultants (AEI) has prepared report to on behalf of Cruise America, Inc., the owner of the property located at 796 66th Avenue in the City of Oakland, California (Figure 1). AEI has been retained by Cruise America to provide environmental engineering and consulting services related to the release of fuel hydrocarbons from the former 10,000 gallon gasoline underground storage tank (UST).

Following the discovery and investigation of the release, the Alameda County Health Care Services Agency (ACHCSA) requested that corrective action be taken to reduce the level of contaminants present at the site. Between May and July 2004, AEI installed an ozone sparge system around the release location with the primary purpose of reducing methyl tert butyl ether (MTBE) concentrations. This report documents the installation of the system and the findings of testing conducted since system startup. In addition, this report serves to report the results of quarterly groundwater monitoring conducted for the 3rd and 4th Quarters 2004 and the 1st Quarter 2005.

2.0 SITE DESCRIPTION AND BACKGROUND

The site is currently occupied by Cruise America, a recreational vehicle rental facility. The property is approximately 5 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 (labeled 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 TPH as gasoline (TPH-g) and TPH as 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 (labeled 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 varied from 630 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 mg/kg to 280 mg/kg. Concentrations of MTBE and benzene, toluene, ethyl benzene, 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 bgs. Elevated concentrations of TPH as gasoline and MTBE were present in the groundwater sample at 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) borings (labeled SB-12 through SB-17) were advanced. The data from these soil borings was used to determine the placement of five groundwater-monitoring wells, which were installed on September 19, 2002. The wells have been monitored on a quarterly basis since installation.

Based on the findings of the investigation and monitoring activities, the ACHCSA required that corrective action be undertaken. AEI prepared and submitted *Interim Corrective Action Plan*, April 5, 2004 outlining an evaluation and scope of work to implement a treatment program for the release.

Historical soil sample analytical data is summarized in Table 1. Groundwater sample analytical data from soil borings is presented in Tables 2 and groundwater monitoring data in Table 3 and 4. A summary of groundwater flow direction and hydraulic gradient is presented in Table 5. Refer to Figures 2 and 3 for the former location of the USTs and for boring and existing well locations.

3.0 GEOLOGY AND HYDROLOGY

The site is located at an elevation of approximately 10 feet above mean sea level (amsl). The Damon Slough is located approximately 150 feet south of the former UST location. The site is level, and the local topography slopes very gently to the southwest.

The top 3 to 6 feet of soils appears to consist of imported fill of varying gravels, sand, and clay with brick and wood debris encountered locally. Beneath this fill, sediments encountered consisted of sandy and gravely clays to approximately 7 to 10 feet below ground surface (bgs), underlain by black clay with thin sand beds. Gravel content varies, but generally decreased with depth. Groundwater has been observed at the time of drilling soil borings at between approximately 5 and 13 feet bgs. Soil boring SB-17 was advanced to a depth of 50 feet bgs, and revealed an apparent aquitard, consisting of stiff sandy clay from 29 to 45 feet bgs. Below this clay, saturated well-graded gravely sand was encountered.

Water level measurements collected since monitoring began have revealed that the water table exists at between 4 and 6 feet below ground surface. Based on these measurements, it appears that groundwater beneath the site generally flows in a southeasterly direction, with a hydraulic gradient of 10^{-2} to 10^{-3} feet/feet. This flow direction is consistent with information AEI reviewed for a site on the north side of 66th Avenue. Despite these flow direction measurements, the MTBE plume appears to have migrated primarily in a northerly direction from the former UST location. This contaminant plume may be held back by a "wedge" of saline water hydraulically connected to the tidal slough located to the south of the tank hold, as evidenced by the high conductivity readings in wells MW-2 and MW-3 as compared to the more northerly wells. Water table contours for the

three quarterly monitoring events (7/7/04, 10/13/04, and 1/1//05) documented herein are presented on Figures 5, 6, and 7.

4.0 SPARGE WELL INSTALLATION

A sparge well network of twelve wells was installed, surrounding the former tank hold and in the areas of the most highly impacted groundwater. The well installation work was conducted on May 17 and 18, 2004.

4.1. Well Permits and Clearances

Prior to installation of the wells, well construction permits were obtained from Alameda County Public Works Agency (permit # W04-0541). A copy of the permit is included in Appendix A. Underground Service Alert North was notified prior to drilling work to notify public utilities of the planned drilling activities (ticket # 172-478).

4.2. Well Drilling and Sampling

On May 17 and 18, 2004, AEI installed twelve (12) sparge wells (labeled S-1 to S-12). Refer to Figure 4 for sparge well locations. The drilling and well construction work was performed by HEW Drilling (CA C57 License # 604 987) of East Palo Alto, CA. The soil borings were advanced with a hydraulic rotary drill rig running 8½-inch O.D. diameter hollow-stem augers. Drill cuttings were stockpiled onsite and covered, and later transported under manifest to Keller Canyon Landfill in Pittsburg, CA.

The borings were drilled to depths of 15 to 20 feet below ground surface (bgs). Soil samples were collected at approximately five feet intervals, or as needed, from each boring to characterize the sediments of the site and for chemical analysis. The samples were collected with a California modified split spoon sampler into brass liners. The samples and auger returns were logged by an AEI geologist using the Unified Soil Classification System.

Selected soil samples were sealed with Teflon tape, plastic end caps, labeled and stored over ice for analyses. A total of six soil samples were retained and analyzed for TPH-g and BTEX (benzene, toluene, ethyl-benzene, and xylenes) and MTBE by EPA method 8015 & 8021 at McCampbell Analytical Inc. (DOHS Certification Number 1644) of Pacheco, California. Soil sample analytical data is included in Table 1.

4.3. Well Construction

Each well was constructed with ¾" diameter flush threaded PVC well casing equipped with an 30" microporous sparge points supplied by Kerfoot Technologies, Inc (KVA). The sparge points were set to depths ranging from 15 to 18 feet bgs. The annulus of each well was backfilled with 2/16 sand to 2 feet above to top of the sparge point. Bentonite was emplaced above the sand back and hydrated. The remainder of the annulus was

backfilled with neat cement grout slurry to just below ground surface. Following installation of air lines, each well was finished with a flush mount traffic rated well box. Refer to Appendix B for logs of the borings and well construction details.

5.0 SYSTEM INSTALLATION AND OPERATION

The sparge system and associated equipment was installed between May and July 2004. The ozone generator and compressor unit was installed at the western end of the planter area, adjacent to the former tank hold. PVC conduits and supply lines were installed from the compressor location, in the shortest runs possible to each of the twelve sparge wells. Refer to Figure 4 for locations of the sparge unit and sparge lines. Each line was equipment with two (2) one-way check valves, one installed at the well head and one installed at the base of the sparge unit, just after the solenoid valve assembly.

The sparge unit and controller were provided by KVA and consist of an ozone generator, oxygen concentrator unit, air compressor, and controller and valve assembly. The unit box is equipped with an ozone detector and shut-off switch. Electrical service was provided from the house panel located in the service building to the west of the treatment unit. The system controller was programmed to sparge on each of the wells sequentially for 6 minutes per well for a total of 16 cycles per day, for a total of 96 minutes per well per day. This program allows the system 20% rest time, per the manufacturers recommendations. The system flow rate is approximately 3 standard cubic feet per minute of oxygen and ozone rich air.

The system was started on July 15, 2004. Prior to startup, all lines and connections were checked. A portable ozone detector was utilized at each of the well heads and within the unit housing to ensure that no leaks were occurring. Since startup, system inspections have been performed on a regular basis to ensure property operation. Manifold pressures are monitored to ensure that clogging of sparge points or line leakage is not occurring. Pressures on individual wells have been steady since startup. Two periods of unscheduled downtime have occurred; one in mid August for approximately 6 days and again in late October for approximately 19 days, both due to the electrical circuit breaker being turned off inadvertently at the panel within the repair shop building. Pressure differences between wells are attributed to differences in hydrostatic pressure above the sparge points and backpressure caused by different distances from the sparge unit to the wellheads.

6.0 GROUNDWATER MONITORING

Monitoring of the all existing monitoring wells (MW-1 to MW-5) was performed on July 7, 2004, prior to startup to provide a baseline for treatment progress. Monitoring of selected wells (MW-1, MW-4, and MW-5) was performed on a periodic basis for several months following startup (July 19, August 6, August 20, and September 3, 2004). Monitoring of all wells were performed on October 13, 2004 and January 11, 2005, which corresponds with the previously established quarterly monitoring schedule.

During each sampling event, AEI staff first opened the wells to allowed water levels 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 of water using a battery powered submersible pump.

During purging, groundwater quality parameters were measure and the turbidity was visually noted. The wells were allowed to recharge prior to collection of samples. Groundwater samples were collected from each well using clean, disposable plastic bailers. Refer to Appendix C for well sampling forms, which include water quality data and observations made during each monitoring event.

The samples were collected into 40 ml volatile organic analysis (VOA) vials. The samples were capped so that neither head space nor air bubbles were visible within the sample containers. Samples were labeled with unique identifiers, stored over water ice, and placed under chain of custody. The samples were transported on the day of collection to McCampbell Analytical, Inc. of Pacheco, California (Department of Health Services Certification #1644). Samples were analyzed for TPH-g and BTEX (benzene, toluene, ethyl-benzene, and xylenes) and MTBE by EPA method 8015 & 8021 and for MTBE and tert butyl alcohol (TBA) by EPA method 8260B. Copies of laboratory reports and chain of custody documents are included in Appendix D.

7.0 ANALYTICAL RESULTS

7.1. Soil Samples

TPH-g was detected in four of the six soil samples, up to 360 mg/kg (S-6 6'). MBTE was detected in four samples, ranging from 1.1 mg/kg to 2.7 mg/kg, although an elevated detection limit is noted on several of the samples. Benzene was detected in two samples, up to 0.61 mg/kg (S-6 6'). Toluene, ethylbenzene, and xylenes were also detected in several samples, up to 1.8 mg/kg, 5.0 mg/kg, and 5.2 mg/kg, respectively, all in S-6 6'. Refer to Table 1 for soil sample analytical data.

7.2. Baseline Results

The baseline monitoring of the five wells was conducted on July 7, 2004. MTBE was detected in MW-1 at 4,900 µg/l; MW-4 at 1,400 µg/l; and MW-5 at 15,000 µg/l (EPA method 8021). Low to non-detect concentrations of TPH-g and BTEX were detected in the wells.

7.3. Progress Monitoring

MTBE concentrations have exhibited a steady decrease in wells MW-1, MW-4, and MW-5 since the July 19, 2004 sampling episode. In these wells MTBE was detected at 880 µg/l, 450 µg/l, and 3,000 µg/l, respectively, in January 2005. Concentrations of TPH-g and

BTEX have remained near or below detection limits in all of the wells. TBA was detected for the first time at the site in wells MW-1 (910 µg/l) and MW-5 (1,200 µg/l) during the January 11, 2005 event.

Refer to Table 3 for detailed groundwater sample analytical data and to Figure 8 for most recent analytical results.

8.0 SUMMARY AND CONCLUSIONS

An ozone sparge system was installed at the site between May and July 2004 as an interim corrective action measure to reduce contaminants, particularly MTBE, at the site. The sparge well network consists of 12 sparge points installed around the former tank hold and areas of most highly impacted soil and groundwater. The goal of this treatment is oxidize fuel hydrocarbon contaminants, particularly MTBE, in the groundwater and capillary fringe soils.

Based on monitoring data, the sparging has been effective at reducing contaminant concentrations. MTBE concentrations have decreased appreciably since startup, as can be seen in Figures 9 and 10 which show plots of MTBE concentrations in wells MW-1, MW-4, and MW-5. MTBE concentrations have decreased in these wells by 82%, 68%, and 80% in these wells, respectively, between July 7, 2004 and January 11, 2005, using EPA method 8021 data.

The appearance of TBA, which is an intermediate degradation product of MTBE oxidation, in MW-1 and MW-5, is an added indicator of MTBE degradation; however, it is possible that TBA has been present in groundwater since before treatment began. Due to elevated detection limits for TBA during previous sampling events, the concentrations of TBA detected in January 2005 would not have been previously reported. TBA will continue to be analyzed for during future monitoring events.

9.0 RECOMMENDATIONS

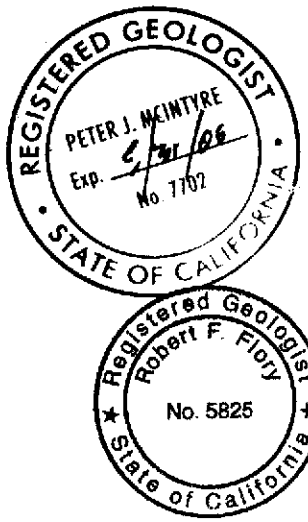
Based on the observed decrease in dissolved contaminant concentrations, primarily MTBE, since initiation of sparging, continued operation is recommended. Sampling of the five monitoring wells should continue on a quarterly basis, with the next event scheduled for early April 2005. Treatment progress updates will be included with the quarterly reporting. If contaminant concentration decreases become asymptotic, a period of system downtime should be considered to evaluate rebound that may occur.

10.0 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 consulting field that existed at the time and location of the work.

Sincerely,
AEI Consultants



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Robert F. Flory, R.G.
Senior Project Geologist

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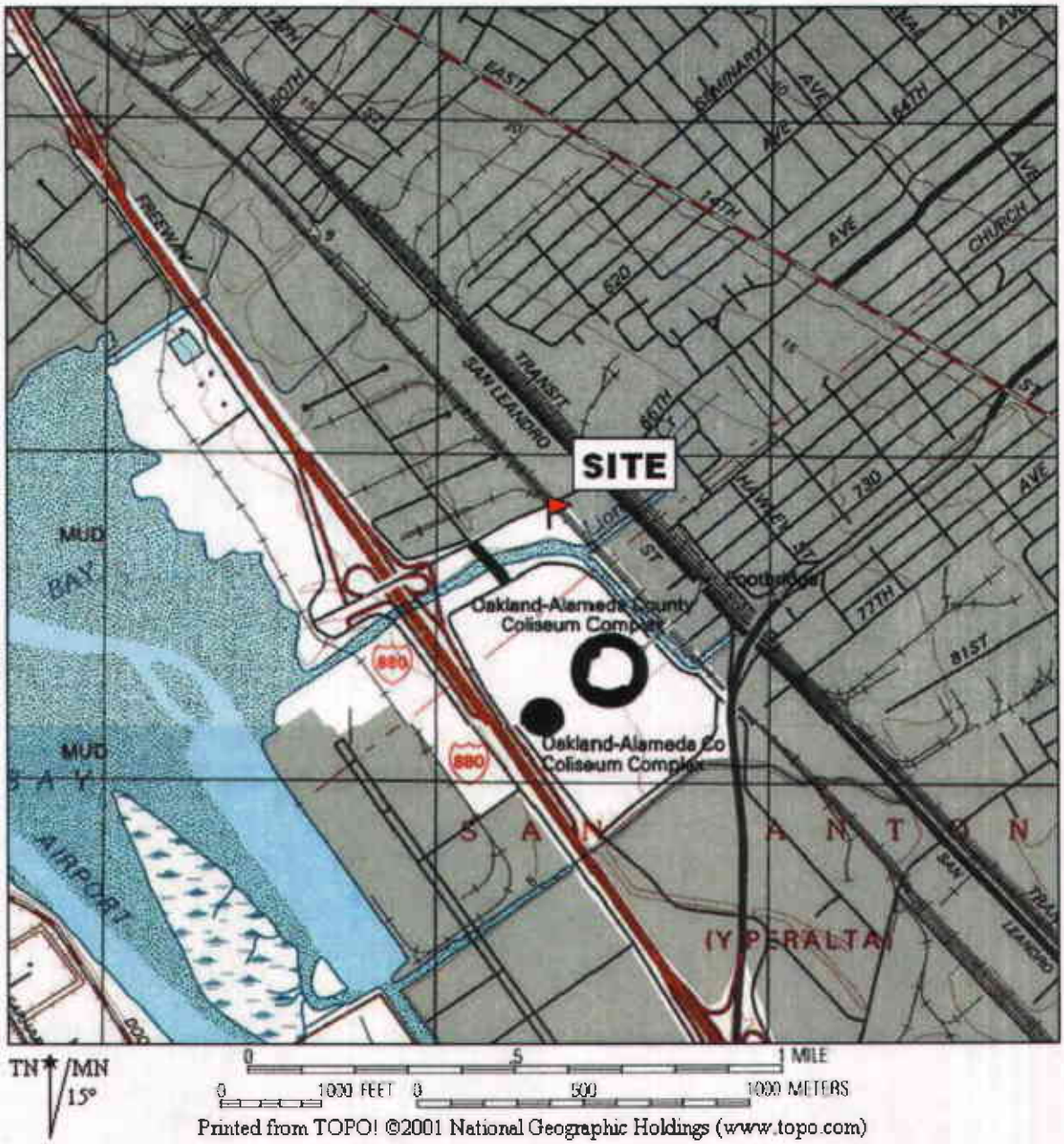
Alameda, CA 94501



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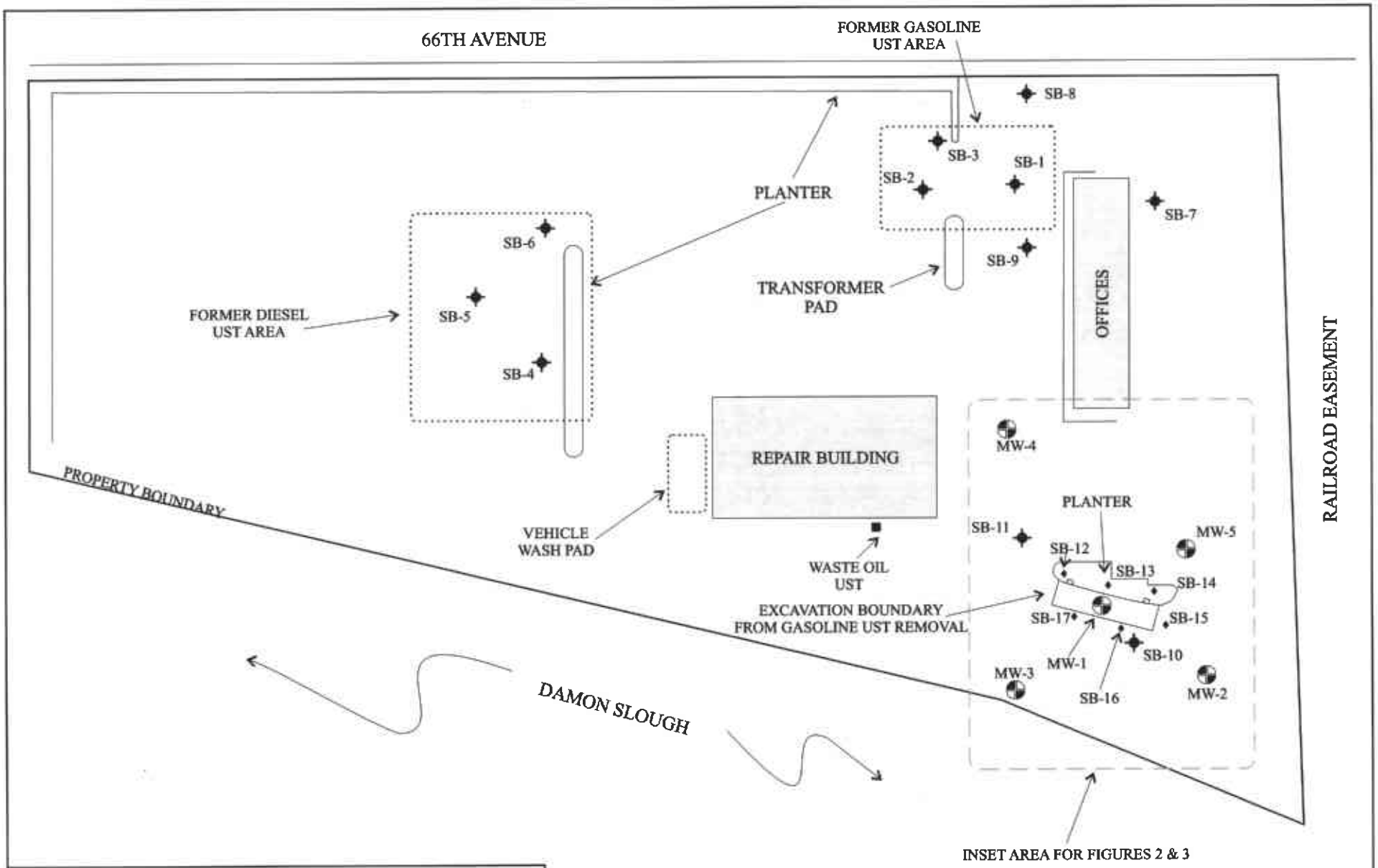
SITE LOCATION MAP

796 66th AVENUE
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 8262



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

SITE PLAN

796 66th AVENUE
OAKLAND, CALIFORNIA

FIGURE 2
AEI PROJECT NO 5526

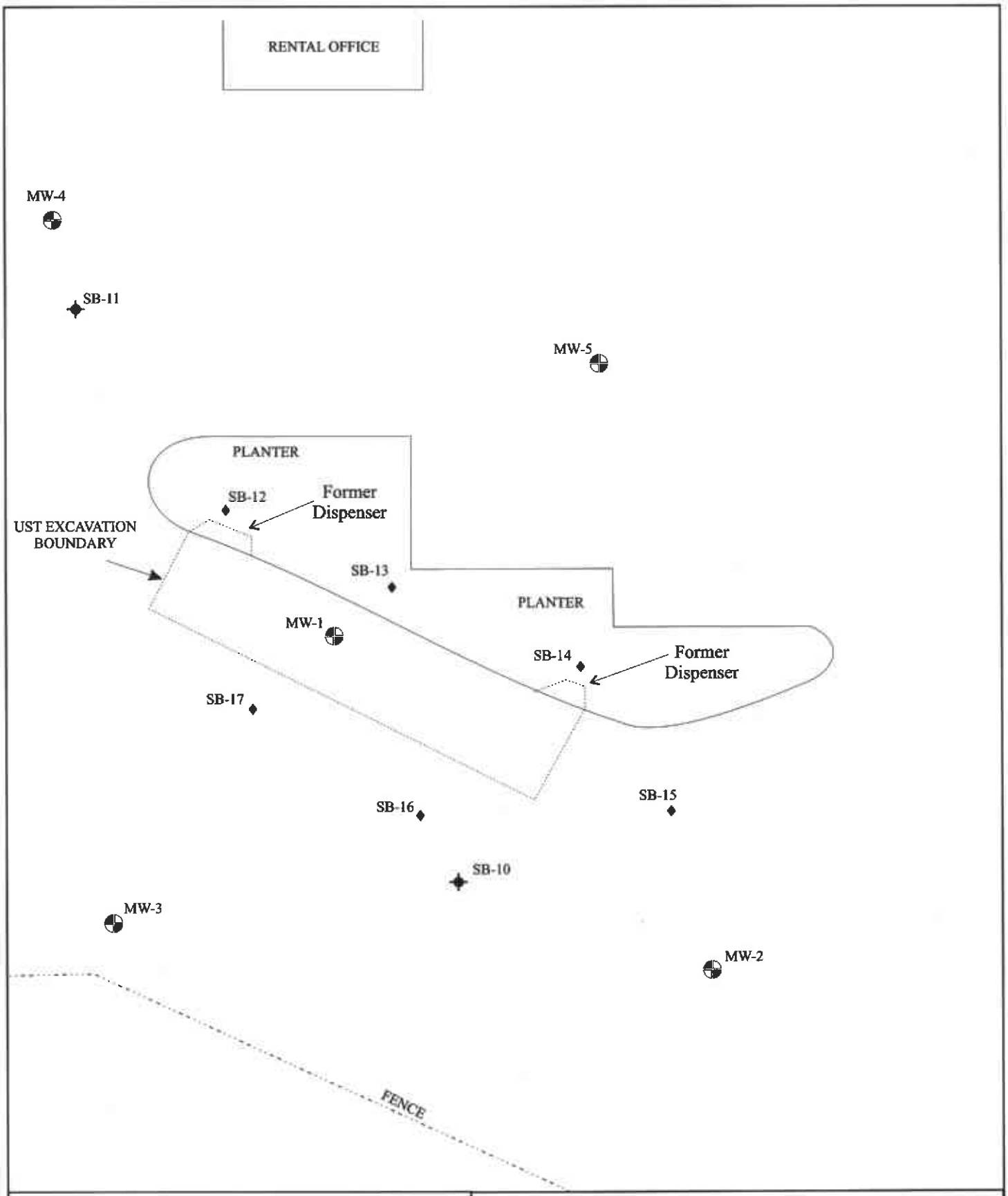
SB-X ✦ LOCATION OF BORINGS ADVANCED 7-9/2001

MW-1 ◔ LOCATION OF MONITORING WELLS INSTALLED 9/2002

SB-X • LOCATION OF BORINGS ADVANCED 9/2002

0' 25' 50' 75'

N



LEGEND

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

N

0' 10' 20'

SCALE: 1 in = 20 ft

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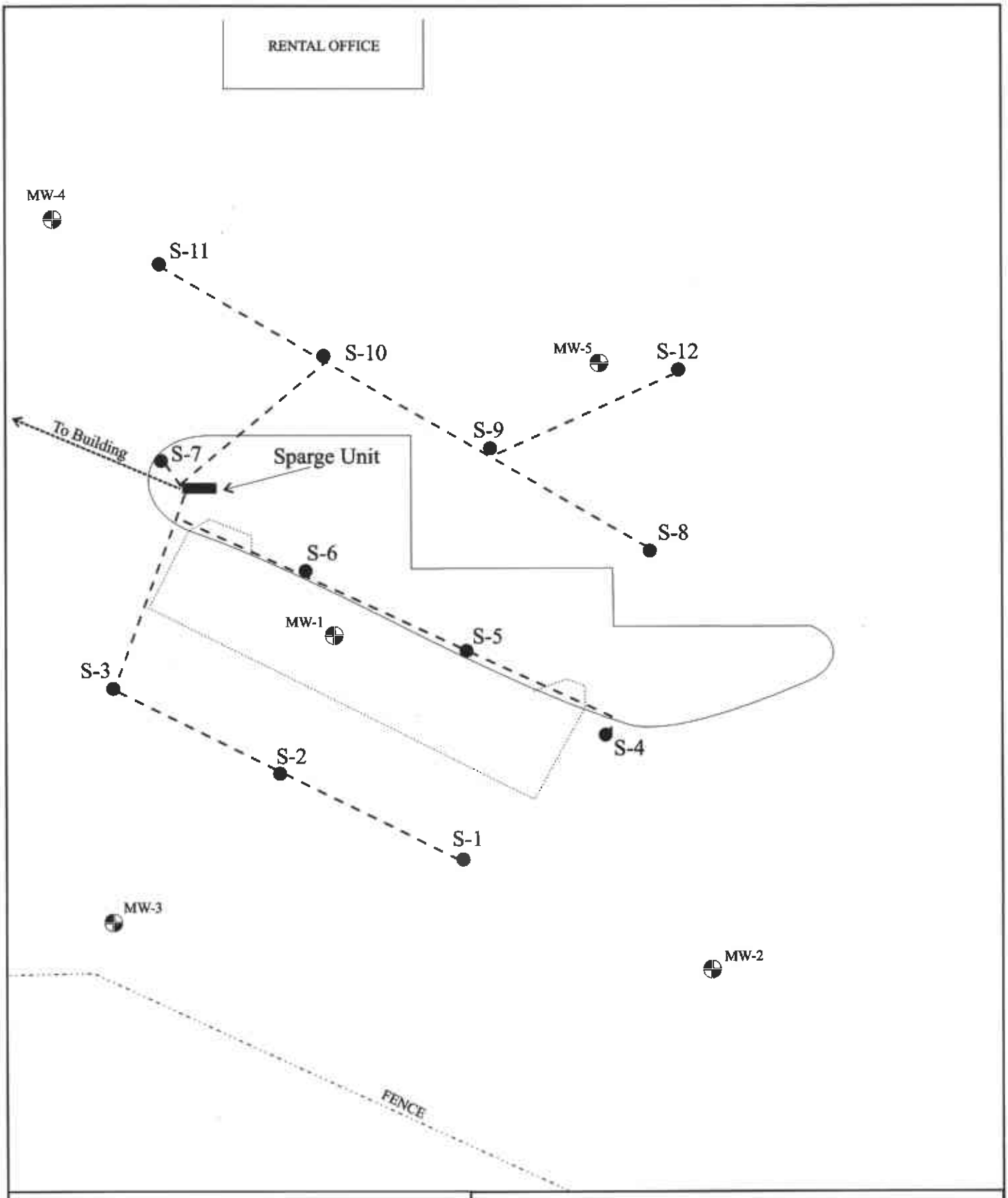
2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

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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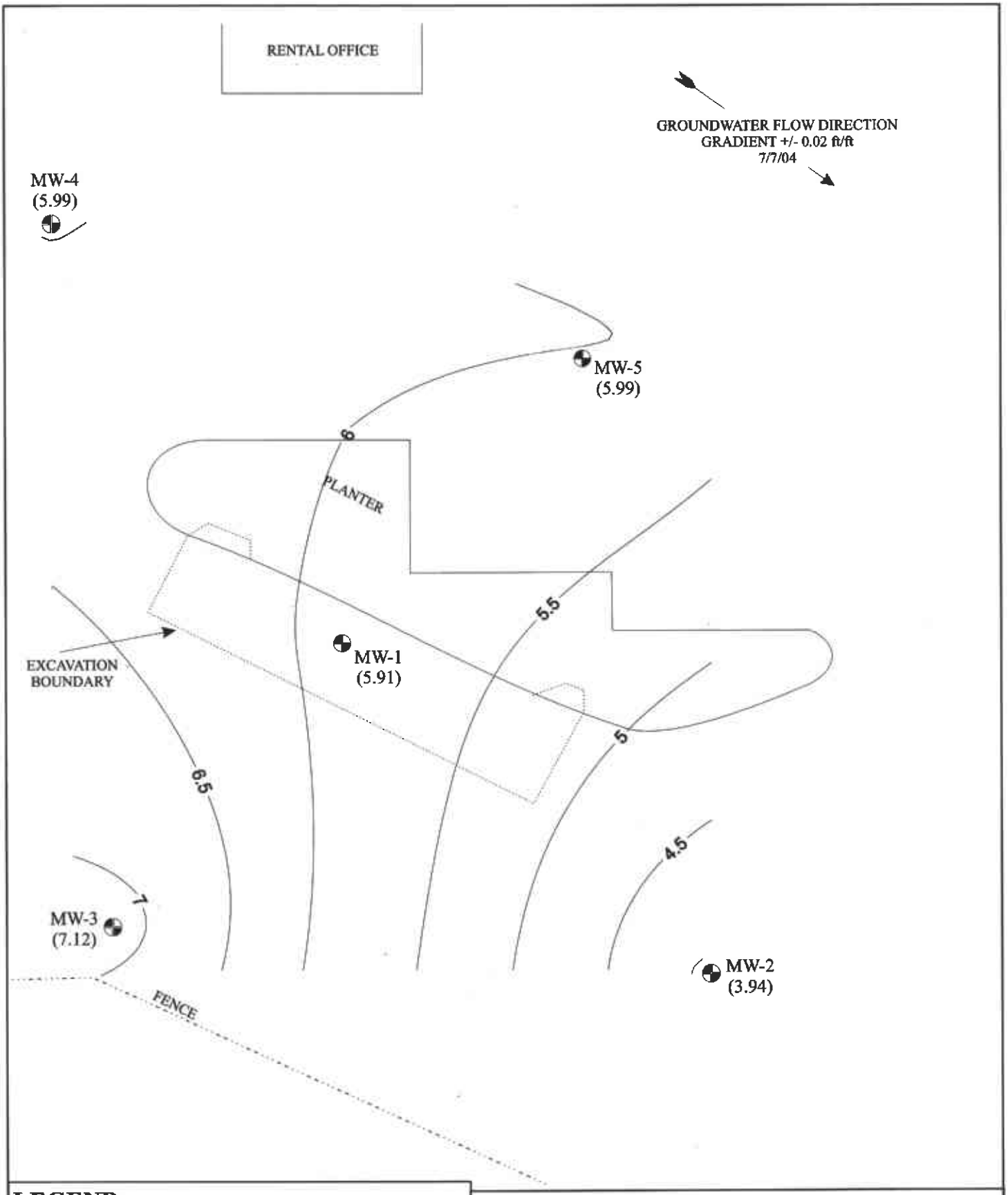
2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

SPARGE WELL LOCATIONS

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 4
AEI PROJECT NO 8262



LEGEND

MONITORING WELL LOCATION

Water level elevation data as of 7/7/04 in feet above msl
Contour drawn in Surfer (R) v. 7.0
Contour Interval = 0.5 ft above msl
See Table 3 for details

N

SCALE: 1" = 20'

0' 10' 20'

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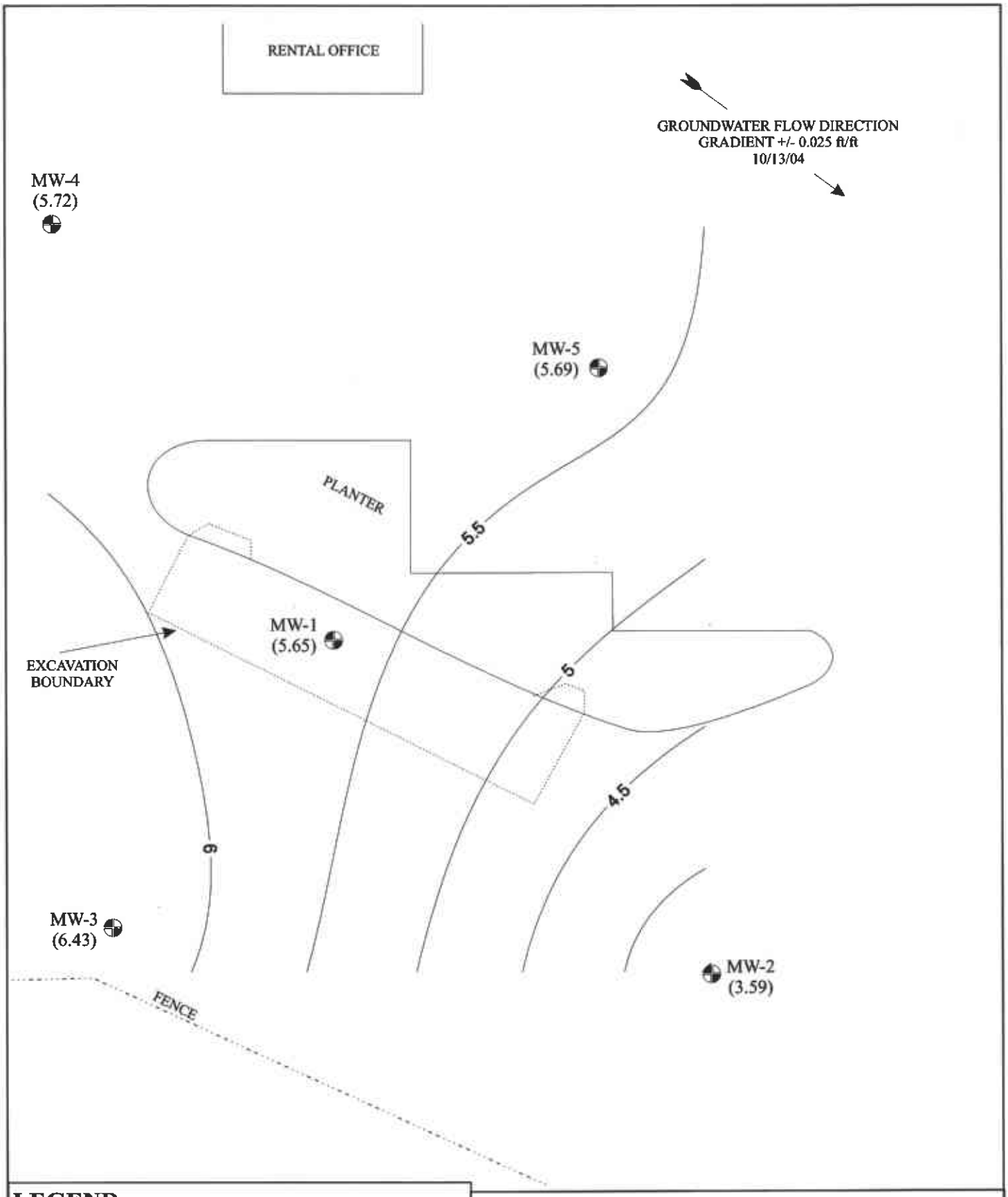
2500 CAMINO DIABLO, STE 200, WALNUT CREEK, CA

WATER TABLE CONTOURS: 7/7/04

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 5
AEI PROJECT NO 8262



LEGEND

MONITORING WELL LOCATION

Water level elevation data as of 10/13/04 in feet above msl
Contour drawn in Surfer (R) v. 7.0
Contour Interval = 0.5 ft above msl
See Table 3 for details

N

SCALE: 1" = 20'

0' 10' 20'

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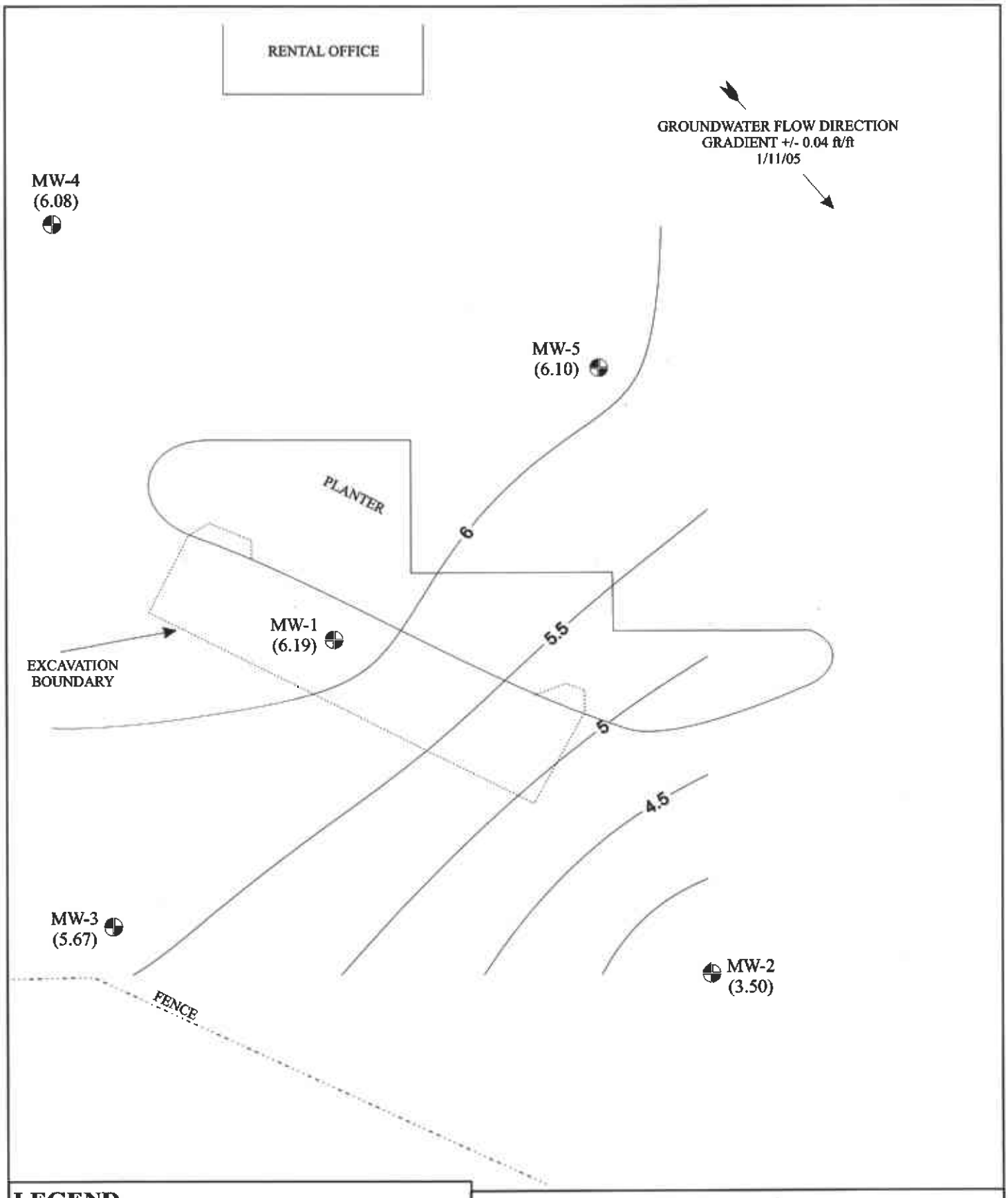
WATER TABLE CONTOURS: 10/13/04

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 6
AEI PROJECT NO 8262



LEGEND

MONITORING WELL LOCATION

Water level elevation data as of 1/11/05 in feet above msl
Contour drawn in Surfer (R) v. 7.0
Contour Interval = 0.5 ft above msl
See Table 3 for details

SCALE: 1" = 20'
0' 10' 20'

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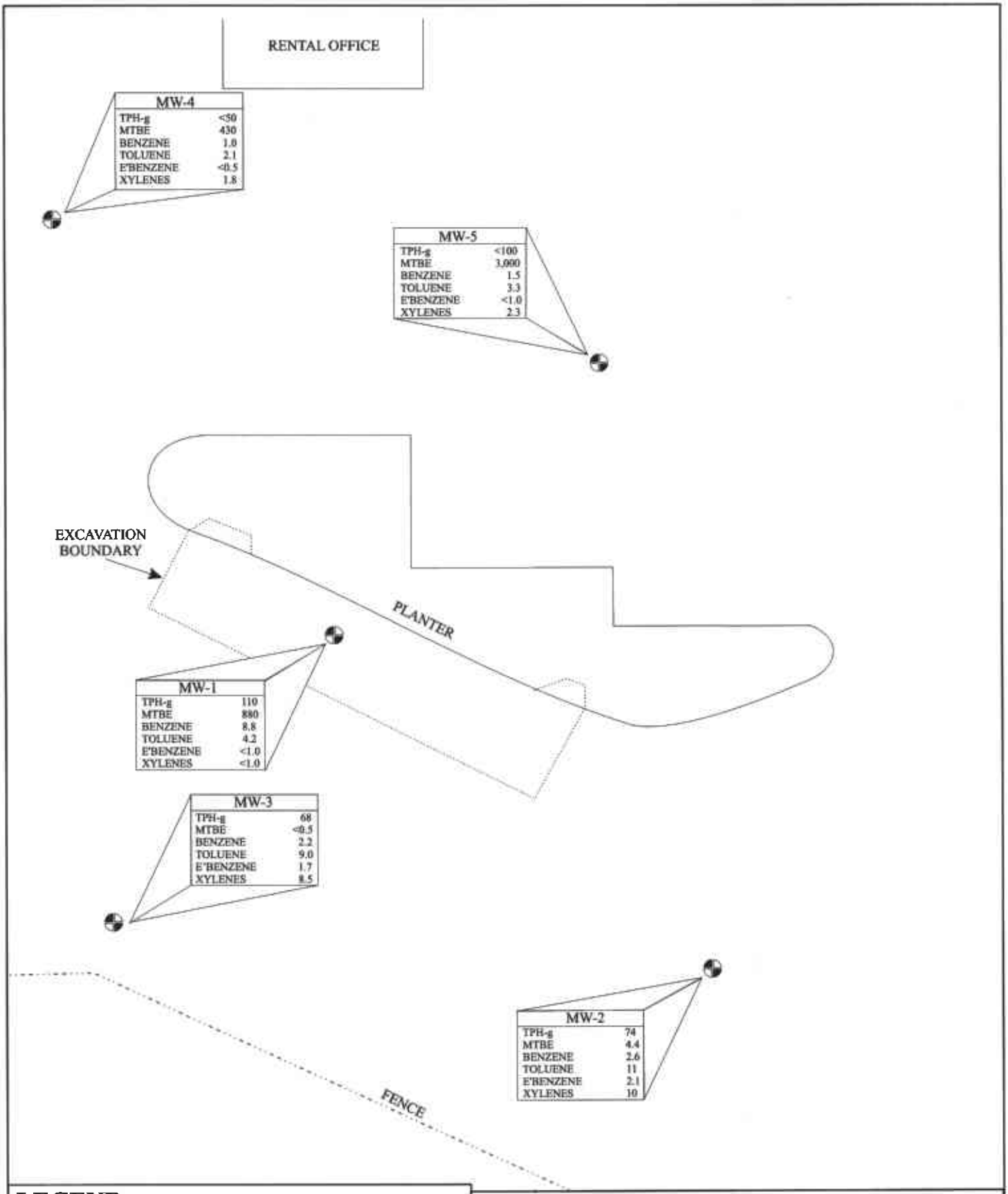
2500 CAMINO DIABLO, STE 200, WALNUT CREEK, CA

WATER TABLE CONTOURS: 1/11/05

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 7
AEI PROJECT NO 8262



LEGEND

MONITORING WELL LOCATION

Analytical data from 1/11/05 event with results in µg/L.
See Table 3 for details

N

SCALE: 1" = 20'
0' 10' 20'

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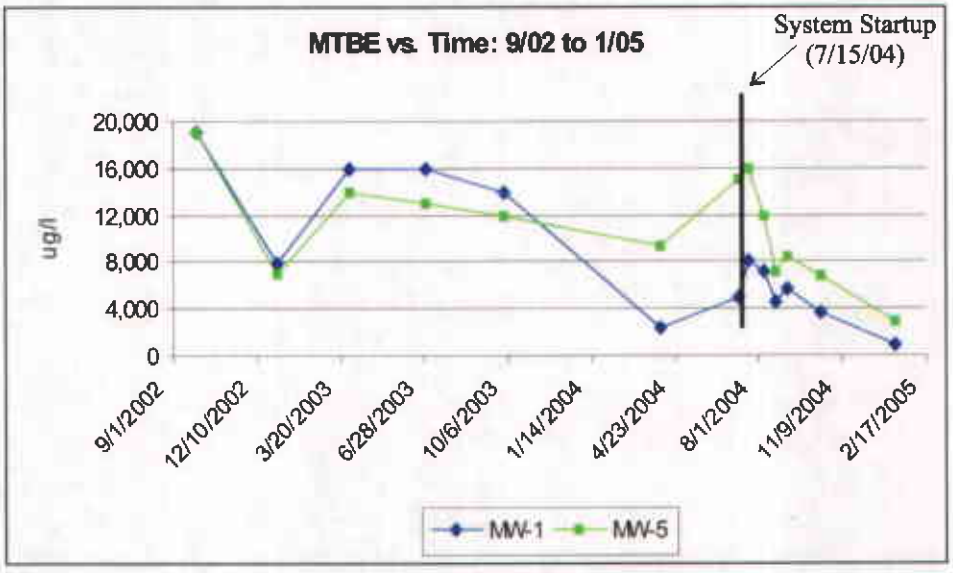
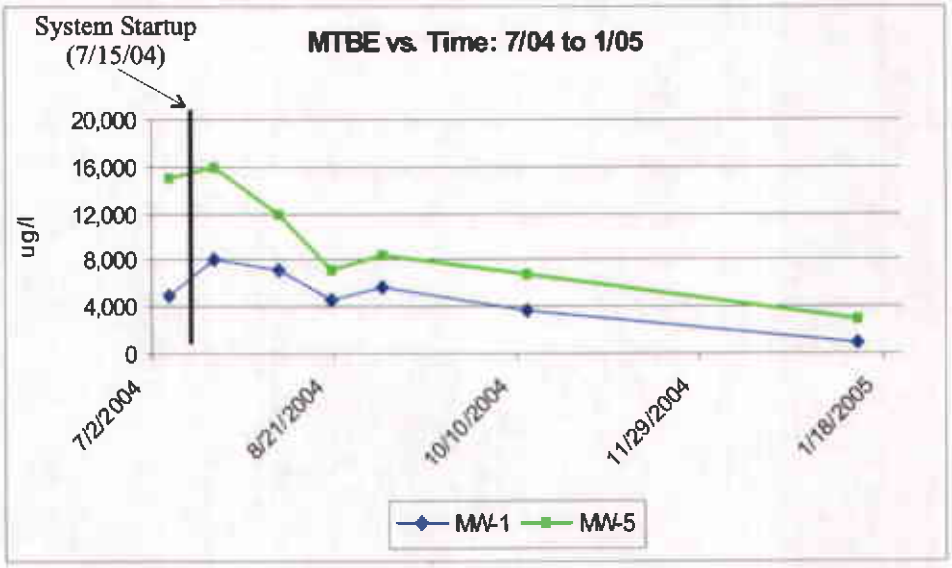
2500 CAMINO DIABLO, STE 200, WALNUT CREEK, CA

GROUNDWATER SAMPLE ANALYTICAL DATA: 1/11/05

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 8
AEI PROJECT NO 8262





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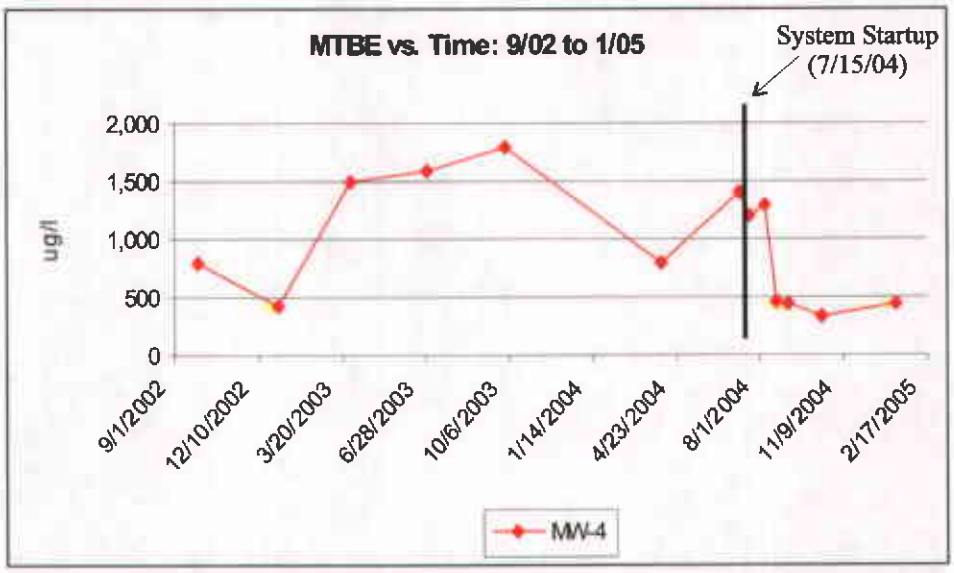
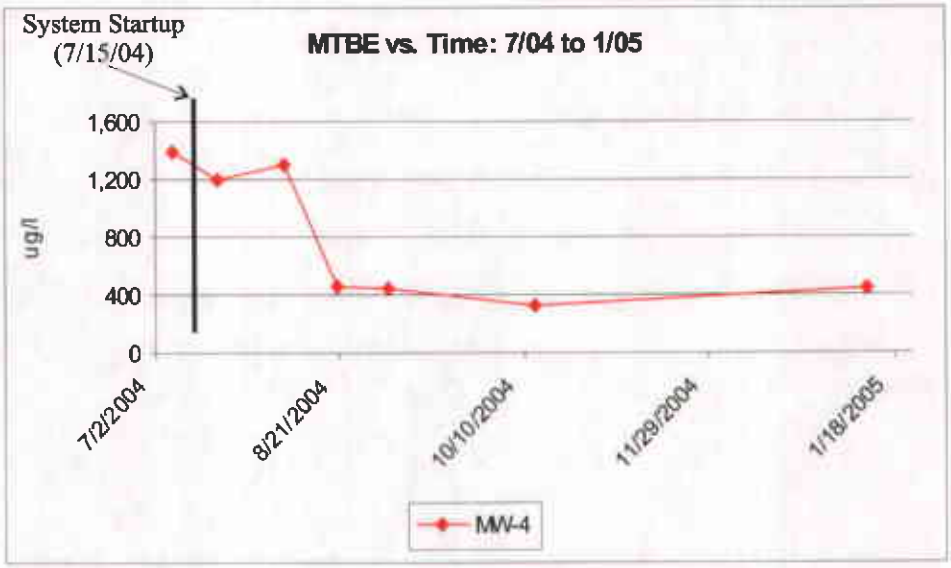
2500 CAMINO DIABLO, STE 200, WALNUT CREEK, CA

MTBE vs. TIME: MW-1 & MW-5

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 9
AEI PROJECT NO 8262





AEI Consultants 2500 CAMINO DIABLO, STE 200, WALNUT CREEK, CA	
MTBE vs. TIME: MW-4	
796 66TH AVENUE OAKLAND, CALIFORNIA	**FIGURE 10** AEI PROJECT NO 8262

Table 1
Soil Sample Analytical Data

Sample ID	Date	TPH-g mg/kg	TPH-d mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	Lead TTLC mg/kg	Lead STLC mg/l
SB-1 7'	7/17/2001	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-2 6'	7/17/2001	<1.0	26	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-2 10'	7/17/2001	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-3 4'	7/17/2001	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-4 6'	7/17/2001	<1.0	2.8	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-5 4'	7/17/2001	5.0	13	<0.05	0.1600	0.058	0.11	0.21	-	
SB-5 7'	7/17/2001	9.7	37	<0.05	0.059	0.012	0.007	0.056	-	-
SB-6 7'	7/17/2001	1.5	11	<0.05	0.008	0.018	<0.005	<0.005	-	-
SB-6 15'	7/17/2001	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	-	-
SB-8 4'	9/28/2001	16	-	<0.05	0.053	0.11	0.031	0.14	-	-
SB-8 11'	9/28/2001	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	-
Disp-East 3'	11/30/2001	110	-	<0.20	0.07	1.2	0.16	5.2	-	-
Disp-West 3'	11/30/2001	280	-	6	0.25	7.5	4.1	26	-	-
South 6 1/2	11/30/2001	4.1	-	53	0.038	0.16	0.034	0.19	-	-
West 6 1/2	11/30/2001	<50	-	0.99	<0.005	0.014	0.011	0.046	-	-
East 6 1/2	11/30/2001	140	-	50	13	3.9	7.9	18	-	-
SB-12 5'	9/6/2002	<50	-	<0.05	<0.005	<0.005	<0.005	<0.005	1200	23
SB-13 4'	9/6/2002	15,000	-	<50	21	840	300	1700	830	7.5
SB-14 4'	9/6/2002	<50	-	<0.05	<0.005	<0.005	<0.005	<0.005	110	2.7
SB-15 4'	9/6/2002	<50	-	<0.05	<0.005	<0.005	<0.005	<0.005	5	-
SB-16 4'	9/6/2002	73	-	1.5	<0.05	0.18	<0.05	<0.05	20	-
SB-17 4'	9/6/2002	1.2	-	2.1	0.0073	0.007	<0.005	0.011	3.2	-
SB-17 39'	9/6/2002	<50	-	<0.05	<0.005	<0.005	<0.005	<0.005	3.3	-
MW-1 4'	9/19/2002	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	5.9	-
MW-2 4"	9/19/2002	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	25	-
MW-3 4'	9/19/2002	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	25	-
MW-4 4'	9/19/2002	6.2	-	<0.05	<0.005	0.0080	0.0078	0.021	160	-
MW-5 4'	9/19/2002	<1.0	-	2.0	0.0053	0.0088	<0.005	0.010	190	-
S-1 6'	5/17/2004	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	-
S-2 6'	5/17/2004	31	-	2.7	0.035	0.32	0.082	0.27	-	-
S-5 6'	5/17/2004	1.2	-	2.1	<0.005	0.014	<0.005	0.020	-	-
S-6 6'	5/17/2004	360	-	<3.5	0.61	1.8	5.0	5.2	-	-
S-7 6'	5/18/2004	3.8	-	2.0	<0.005	0.016	<0.005	<0.005	-	-
S-12 11'	5/18/2004	<1.0	-	1.1	<0.005	<0.005	<0.005	<0.005	-	-
MDL		1.0	1.0	0.05	0.005	0.005	0.005	0.005	3	0.200

MDL = Method Detection Limit
- = Sample not analyzed by this method

mg/kg = milligrams per kilogram
mg/l = milligrams per liter

Table 2
Groundwater Sample Analytical Data: Soil Borings

Sample ID	Date	TPH-g µg/L	TPH-d µg/L	MTBE(µg/L) (EPA 8020)	MTBE(µg/L) (EPA 8260)	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	Lead mg/L
SB-1 W	7/17/2001	<50	-	650	-	0.63	<0.5	<0.5	<0.5	-
SB-2 W	7/17/2001	<50	-	<5.0	-	<0.5	<0.5	<0.5	<0.5	-
SB-3 W	7/17/2001	120	-	<5.0	-	<0.5	4.6	<0.5	<0.5	-
SB-4 W	7/17/2001	<50	990	<5.0	-	<0.5	<0.5	<0.5	<0.5	-
SB-5 W	7/17/2001	68	410	<5.0	-	<0.5	0.66	<0.5	<0.5	-
SB-6 W	7/17/2001	240	590	<5.0	-	<0.5	2.9	<0.5	<0.5	-
SB-7 W	9/28/2001	<50	-	<5.0	<0.5	<0.5	0.74	<0.5	<0.5	-
SB-9 W	9/28/2001	<50	-	670	630	<0.5	1.0	<0.5	<0.5	-
SB-10 W	9/28/2001	<500	-	15,000	13,000	<2.0	<2.0	2.5	<2.0	-
SB-11 W	9/28/2001	58	-	1,900	1,700	2.4	1.8	<0.5	0.79	-
GW*	11/30/2001	44,000	-	42,000	-	590	5100	640	3500	-
SB-12	9/6/2002	<1000	-	31,000	32,000	44	<10	<10	<10	<0.005
SB-13	9/6/2002	13,000	-	51,000	49,000	300	1700	320	1,800	<0.005
SB-14	9/6/2002	<500	-	11,000	9,500	<5.0	<5.0	<5.0	<5.0	<0.005
SB-15	9/6/2002	300	-	730	770	<0.5	3.2	0.71	3.5	0.039
SB-16	9/6/2002	<200	-	3,900	2,700	<1	2.1	<1	2.5	<0.005
SB-17	9/6/2002	<200	-	5,900	5,500	<1.7	3.8	<1.7	4.2	<0.005
SB-17-W 47'	9/6/2002	90	-	150	120	1.7	3.5	1.9	3.5	-
MDL		50	50	5.0		0.5	0.5	0.5	0.5	0.005

MDL = Method Detection Limit
µg/L = micrograms per liter (ppb)
mg/L = milligrams per liter (ppm)

- = Sample not analyzed by this method
* Sample GW was collected from standing water within the tank excavation

Table 3
Groundwater Monitoring Data

Well ID (screen interval in ft bgs)	Date	Well Elevation ft (amsl)	Depth to Water ft (TOC)	Water Table Elevation ft (amsl)	TPH-g µg/L (8015Cm)	Benzene µg/L	Toluene µg/L (EPA method 8021B)	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L (8021B)	MTBE µg/L (8260B)	TBA µg/L (8260B)
MW-1	9/30/2002	10.88	5.41	5.47	1,800	50	15	16	18	19,000	13,000	<5000
(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	<1000
	7/19/2004	10.88	5.12	5.76	340	<2.5	4.0	<2.5	<2.5	8,000	9,200	<1700
	8/6/2004	10.88	5.13	5.75	280	<0.5	5.6	<0.5	<0.5	7,200	5,900	<1000
	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	<1000
	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
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
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	10.77	6.18	4.59	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	10.88	3.76	7.12	<50	<0.5	<0.5	<0.5	<0.5	<5.0	4.0	<5.0
	10/13/2004	10.88	4.45	6.43	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	-
	1/11/2005	10.88	5.21	5.67	68	2.2	9.0	1.7	8.5	<5.0	<0.5	<5.0

Table 3 Continued

Well ID (screen interval in ft bgs)	Date	Well Elevation ft (amsl)	Depth to Water ft (TOC)	Water Table Elevation ft (amsl)	TPH-g µg/L *(8015Cm)*	Benzene µg/L	Toluene µg/L *(EPA method 8021B)*	Ethylbenzene µg/L *(EPA method 8021B)*	Xylenes µg/L *(EPA method 8021B)*	MTBE µg/L *(8021B)*	MTBE µg/L *(8260B)*	TBA µg/L *(8260B)*
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
MW-5	9/30/2002	11.18	5.62	5.56	<2,000	<5.0	<5.0	<5.0	<5.0	19,000	18000	<2500
(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	<1000	<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	<2500
	7/7/2004	11.18	5.19	5.99	<500	<5.0	<5.0	<5.0	<5.0	15,000	19,000	<2000
	7/19/2004	11.18	5.32	5.86	<500	<5.0	<5.0	<5.0	<5.0	16,000	14,000	<2500
	8/6/2004	11.18	5.33	5.85	110	<0.5	<0.5	<0.5	<0.5	12,000	11,000	<2500
	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	<1700
	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

ND = Not detected above the Method Detection Limit (unless otherwise noted)
µg/L = micrograms per liter (ppb)
mg/L = milligrams per liter (ppm)
- = Sample not analyzed by this method

Table 4
Fuel Oxygenate and Lead Scavenger Data

Sample ID	Date	Diisopropyl ether (DIPE) µg/L	Ethyl tert-butyl ether (ETBE) µg/L	Methyl-t-butyl ether (MTBE) µg/L	tert-Amyl methyl ether (TAME) µg/L	t-Butyl alcohol (TBA) µg/L	1,2-Dibromoethane (EDB) µg/L	1,2-Dichloroethane (1,2-DCA) µg/L
MW-1	9/30/2002	<500	<500	13,000	<500	<5000	<500	<500
MW-2	9/30/2002	<0.5	<0.5	0.84	<0.5	<5.0	<0.5	<0.5
MW-3	9/30/2002	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
MW-4	9/30/2002	<10	<10	750	<10	<100	<10	<10
MW-5	9/30/2002	<250	<250	18,000	<250	<2,500	<250	<250
MDL		0.5	0.5	0.5	0.5	5	0.5	0.5

MDL = Method Detection Limit

ND = Not detected above the Method Detection Limit (unless otherwise noted)

µg/L = micrograms per liter (ppb)

mg/L = milligrams per liter (ppm)

- = Sample not analyzed by this method

Table 5
Water Table Data Summary

Episode	Date	Average Water Table Elevation	Change From Previous	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	6.12	0.50	0.006 (SSE)
4	6/30/2003	6.09	-0.03	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	5.60	0.32	0.02 (E)

All well elevations and depths to water are measured from the top of the casing (TOC)
ft (amsl) = feet above mean sea level
Average Water Table calculated in Excel
nc = not calculated

APPENDIX A

WELL CONSTRUCTION PERMIT

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 796 66th Avenue Oakland

CLIENT
Name Cruise America Inc
Address 11 west Hayden Ave Phone 480/464-7395
City Mesa AZ Zip 85210

APPLICANT
Name AEI Consultants Fax 925/944-2895
Address 2500 Camino Diablo Phone 925/944-2877
City Walnut Creek Zip 94597

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	☐	Well Destruction	☐
Air Sparge ✓			

PROPOSED WATER SUPPLY WELL USE

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

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	X
Cable	☐	Other	☐		

DRILLER'S NAME HEW Drilling
DRILLER'S LICENSE NO. 604 989

WELL PROJECTS
Drill Hole Diameter 8 1/4 in. Maximum Depth 20 ft.
Casing Diameter 4 in.
Surface Seal Depth 2-12' ft. Owner's Well Number AS1 to AS-12

GEOTECHNICAL PROJECTS
Number of Borings ____ Maximum
Hole Diameter ____ in. Depth ____ ft.

STARTING DATE 5/17/04
COMPLETION DATE 5/19/04

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

APPLICANT'S SIGNATURE [signature] DATE 5/4/04
PLEASE PRINT NAME Peter McIntyre

Rev.9-18-02

FOR OFFICE USE
PERMIT NUMBER W04-0541
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
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode 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 —MW#3

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 5/3/04

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. W04-0541

WATER RESOURCES SECTION
GROUNDWATER PROTECTION ORDINANCE
MW#3-GENERAL CONDITIONS: Vapor and Extraction wells

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 or agreements 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) The minimum surface seal thickness two inches of cement grout placed by tremie.

3) All monitoring wells shall have a minimum surface cement seal depth of five (5) feet, approved seal depth or the maximum depth practicable or twenty (20) feet.

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

5) 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.

6) No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.

7) 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. **Permit is valid from May 17-May 19, 2003**. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

8) Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). **Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including: permit number and site map.**

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

APPENDIX B

BORING / WELL LOGS

Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-1

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **20 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0				SC		Clayey sand with gravel			
5	5		S-1 6'	13				<0.5		slight HC odor
0	10		x	2	CL		Clay, very soft, saturated, dark grey-black, thin sand streaks in 10' and 15' samples, sand increasing with depth, very stiff below 19'5'			
-5	15		x	2						slight sulfide odor
-10	20		x	10			Bottom of Boring at 20 feet bgs			

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Project: Cruise America **Project Location: 796 66th Avenue, Oakland** **Project Number: 8262**	**Log of Boring S-2** Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0				GP-GC		Angular gravel with clay and sand, wood debris			
5	5		S-2'	7						Slight HC odor
					CL		Clay, very soft, saturated, sand streaks present at 15', minor sand and gravel present at 17'			
0	10		x	3						
-5	15		x	2						
-10	20						Bottom of Boring at 18 feet bgs			

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Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-3

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18.5 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	**Location**	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0				GP		Gravel and sand mix (likely fill)			
5	5		x	4	CL		Clay with very fine sand, dry, tan			Cardboard / wood (?)
					CL		Very soft clay with minor v. fine sand, grey			
0	10		x	4						
-5	15		x	2						
			x	6	SW		Well graded sand with small gravels, clean, saturated			
-10	20						Bottom of Boring at 18.5 feet bgs			

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Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-4

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0				GP		Mixed gravel with sand, fill			
5	5		x	4	SC-CL		Clay and sand mix, black with tan streaks, soft			
					CL		Clay, very soft, black			
0	10		x	2	SP		Coarse sand, black, saturated			
					SC-CL		Clay, very soft, very fine sand and minor gravel at 15', interbedded sand and clay at TD			
-5	15		x	2						
			x	2						
-10	20						Bottom of Boring at 18 feet bgs			

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Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-5

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0				SP		Sand with gravel, fill			
5	5		x	12						
					CL		Clay, very soft, minor sand			
0	10		x	2						
-5	15		x	1	SP		Very fine to medium sand, saturated			
					CL		Soft clay			
-10	20						Bottom of Boring at 18 feet bgs			

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Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-6

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0				GP		Gravel fill with sand and clay			
5	5		S-6 6'	16	CL		Sandy clay grading downward to soft clay, grey, fossil leaf at 10'			
0	10		x	2						
-5	15		x	1	SP		Very fine to medium sand, saturated, clean			
			x	3	CL		Clay, stiff, grey-blue			
-10	20						Bottom of Boring at 18 feet bgs			

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Project: Cruise America Project Location: 796 66th Avenue Project Number: 8262	**Log of Boring S-7** Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **16.5 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	**Location**	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0						Gravel fill, brick debris present			
5	5		S-7 6'		CL		Sandy clay, sand decreasing with depth to very soft clay below +/-8', stiffens by 15'			low recovery
0	10		x	p						
-5	15		x	p						
-10	20						Bottom of Boring at 16.5 feet bgs			

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Project: Cruise America
Project Location: 796 66th Avenue
Project Number: 8262

Log of Boring S-8

Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **15 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	**Location**	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0						Gravel with clay, fill			
5	5		x							no recovery
					CL		Clay, beige to grey, very soft, leaf and organic detritis			
0	10		x	p						
					CL		Firm clay			
-5	15		x	p			Bottom of Boring at 15 feet bgs			
-10	20									

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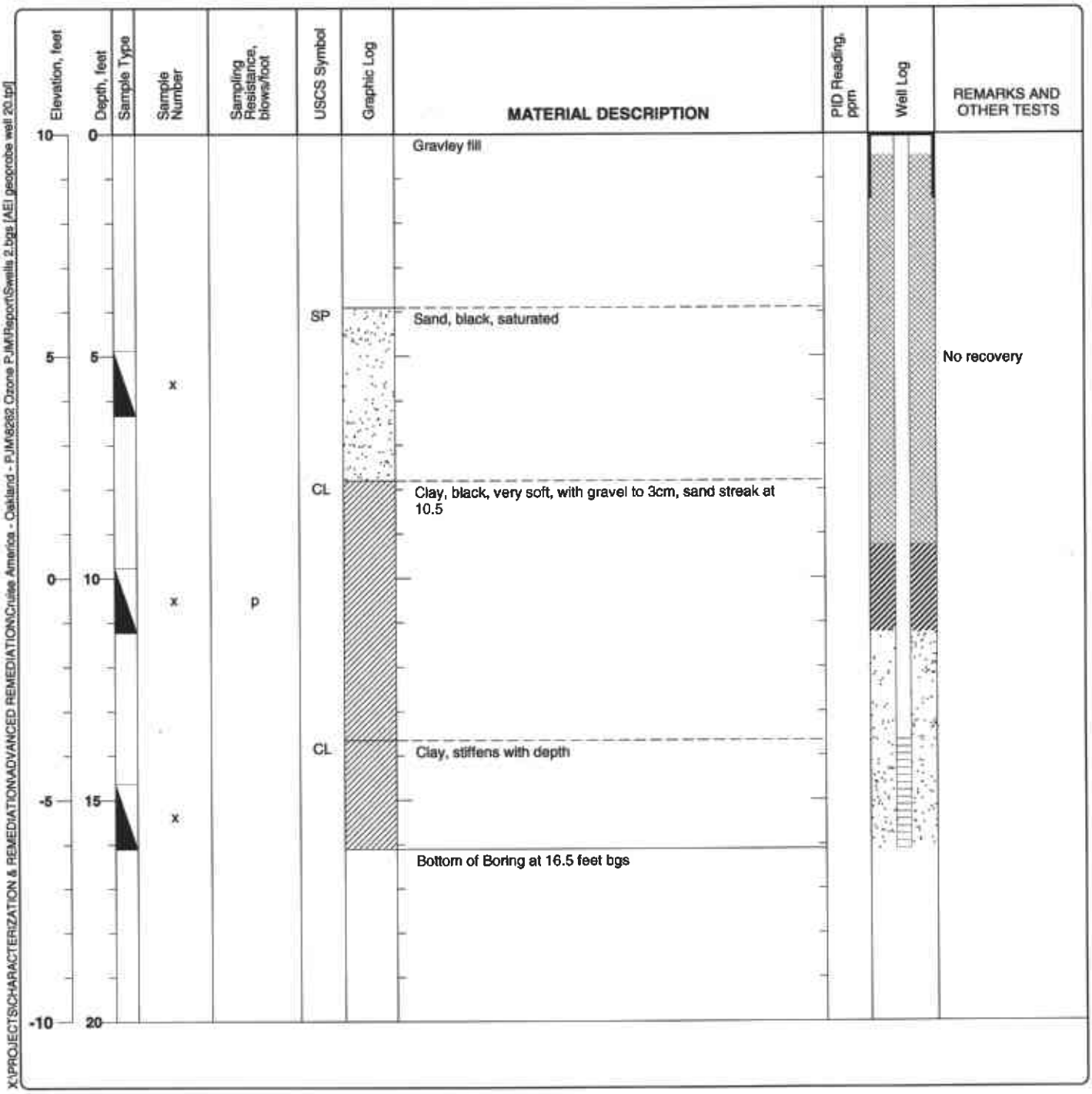
Project: Cruise America
Project Location: 796 66th Avenue
Project Number: 8262

Log of Boring S-9

Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **16.5 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	



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Project: Cruise America
Project Location: 796 66th Avenue
Project Number: 8262

Log of Boring S-10

Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0				SP		Sand, poorly graded, medium, grey to orange-tan, silt increasing downward			
5	5		x	5						
					CL		very soft clay, grey, leaf detritis,			
0	10		x	5						
							increasing sand and minor gravel to .25 cm			
-5	15		x	3	CL		Stiff brown clay, with minor sand			
			x	15						no recovery
							Bottom of Boring at 18 feet bgs			
-10	20									

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Project: Cruise America
Project Location: 796 66th Avenue
Project Number: 8262

Log of Boring S-11

Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **17 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0						Sand, rock, wood and wire debris, saturated			
5	5		x	22	CL		Clay, very soft with minor sand			
0	10		x	21						no recovery
-5	15		x	14						low recovery
-10	20						Bottom of Boring at 17 feet bgs			

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Project: Cruise America Project Location: 796 66th Avenue Project Number: 8262	**Log of Boring S-12** Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **15 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0						Rocks / fill material			
5	5		x	17	CL		Clay, tan, plant detritis, soft, color change to dark grey by 15'			
0	10		S-12 11'	1						no recovery
-5	15		x	2			Bottom of Boring at 15 feet bgs			low recovery
-10	20									

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APPENDIX C

WELL SAMPLING FORMS

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Cruise America	Date of Sampling:	1/11/2005
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	4.69		
Water Elevation (feet above msl)	6.19		
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)	**18.2**		
Actual Volume Purged (gallons)	20.0		
Appearance of Purge Water	Initially grey, clears at 3 gallons		
Free Product Present?		Thickness (ft):	light sheen

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	20.70	-	5022	0.02		
	6	20.36	-	3992	0.01		
	9	20.25	-	3825	0.01		
	12	20.24	-	3808	0.01		
	15	20.25	-	3822	0.01		
	18	20.23	-	3809	0.01		
	20	20.22	-	3807	0.01		

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

Initially grey with hydrocarbon odors. Clears at 3 gallons. Light sheen noted in initial 0.5 gallons.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Cruise America	Date of Sampling:	1/11/2005
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	7.27		
Water Elevation (feet above msl)	3.50		
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)	**3.3**		
Actual Volume Purged (gallons)	4.0		
Appearance of Purge Water	Yellow		
Free Product Present?	No	Thickness (ft):	na

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	19.25	6.99	19289	0.03		
	4	20.15	6.97	20253	0.31		

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

Yellow with no hydrocarbon odors.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Cruise America	Date of Sampling:	1/11/2005
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.21		
Water Elevation (feet above msl)	4.99		
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)	6.0		
Appearance of Purge Water	Yellow		
Free Product Present?	No	Thickness (ft):	na

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	19.58	6.95	16619	0.03		
	4	20.23	6.84	17049	0.02		
	6	20.55	6.71	17969	0.07		

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

Yellow with no hydrocarbon odors.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Cruise America	Date of Sampling:	1/11/2005
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	4.99			
Water Elevation (feet above msl)	6.08			
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	Initially dark, clears at 2 gallons			
Free Product Present?	No	Thickness (ft):	na	

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	18.60		1410	0.28		
	4	18.48		1392	0.03		
	6	18.40		1449	0.01		

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

Initially dark with strong hydrocarbon odors. Clears at 2 gallons.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Cruise America	Date of Sampling:	1/11/2005
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.08		
Water Elevation (feet above msl)	6.10		
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	Initially dark, clears at 1 gal.		
Free Product Present?	No	Thickness (ft):	na

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	19.17	6.66	6759	0.03		
	4	18.30	6.80	5180	0.01		
	6	18.24	6.85	4889	0.01		

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

Initially dark with strong hydrocarbon odors. Clears at 1 gallons.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Cruise America	Date of Sampling:	10/13/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.23		
Water Elevation (feet above msl)	5.65		
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)	**17.1**		
Actual Volume Purged (gallons)	20.0		
Appearance of Purge Water	Initially dark, clears at 1.5 gal.		
Free Product Present?		Thickness (ft):	

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	24.34	7.02	4480	3.26		
	6	24.52	6.97	4340	2.20		
	9	24.59	6.95	4160	1.70		
	12	24.61	6.94	4130	1.53		
	15	24.62	6.93	4110	1.42		
	18	24.61	6.92	4100	4.38		

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

Initially dark with strong hydrocarbon odors. Clears at 1.5 gallons.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Cruise America	Date of Sampling:	10/13/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	7.18		
Water Elevation (feet above msl)	3.59		
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)	**3.3**		
Actual Volume Purged (gallons)	4.0		
Appearance of Purge Water	Yellow		
Free Product Present?	No	Thickness (ft):	na

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	24.21	7.09	21300	5.62		
	4	23.07	7.12	21400	4.12		

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

Yellow with no hydrocarbon odors.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Cruise America	Date of Sampling:	10/13/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	4.45		
Water Elevation (feet above msl)	5.75		
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)	**4.6**		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	Yellow		
Free Product Present?	No	Thickness (ft):	na

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	24.01	6.77	17800	5.97		
	4	22.61	6.72	18500	4.49		
	6	22.54	6.83	18800	5.46		

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

Yellow with no hydrocarbon odors.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Cruise America	Date of Sampling:	10/13/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.35		
Water Elevation (feet above msl)	5.72		
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)	6.0		
Appearance of Purge Water	Initially dak, clears at 2 gallons		
Free Product Present?	No	Thickness (ft):	na

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	23.89	-	1030	3.03		
	4	23.93	-	1770	1.77		
	6	23.95	-	1060	1.06		

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

Initially dark with strong hydrocarbon odors. Clears at 2 gallons.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Cruise America	Date of Sampling:	10/13/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.49		
Water Elevation (feet above msl)	5.69		
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)	**4.1**		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	Initially dark, light grey at 2 gal., clears at 2.5 gal.		
Free Product Present?	No	Thickness (ft):	na

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	24.79	7.51	5350	3.36		
	4	24.85	7.31	4880	2.29		
	6	24.88	7.28	4700	1.95		

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

Initially dark with strong hydrocarbon odors. Light grey at 2 gallons, clears at 2.5 gallons.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Cruise America	Date of Sampling:	9/3/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.22		
Water Elevation (feet above msl)	5.66		
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)	**17.1**		
Actual Volume Purged (gallons)	18.0		
Appearance of Purge Water	Initially dark, clears at 3 gal.		
Free Product Present?		Thickness (ft):	light sheen

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	23.13	-	4929	0.16		
	6	23.88	-	4023	0.71		
	9	24.03	-	3892	0.55		
	12	24.09	-	3877	0.45		
	15	24.12	-	3876	0.36		
	18	24.13	-	3866	0.31		
	21	24.12	-	3868	0.26		

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

Initially dark with strong hydrocarbon odors. Clears at 3 gallons.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Cruise America	Date of Sampling:	9/3/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.35			
Water Elevation (feet above msl)	5.72			
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)	8.0			
Appearance of Purge Water	Initially dark, clears at 3 gallons			
Free Product Present?	No	Thickness (ft):	na	

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	23.66	-	1313	0.26		
	4	23.85	-	1335	0.17		
	6	23.90	-	1322	0.15		
	8	23.92	-	1308	0.08		

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

Initially dark with strong hydrocarbon odors. Clears at 3 gallons.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Cruise America	Date of Sampling:	9/3/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.48			
Water Elevation (feet above msl)	5.70			
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)	**4.1**			
Actual Volume Purged (gallons)	8.0			
Appearance of Purge Water	Dark			
Free Product Present?	No	Thickness (ft):	na	

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	25.31	-	4346	0.37		
	4	25.43	-	4265	0.30		
	6	25.59	-	4200	0.20		
	8	25.66	-	4168	0.15		

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

Dark with strong hydrocarbon odors.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Cruise America	Date of Sampling:	8/20/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.31		
Water Elevation (feet above msl)	5.57		
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)	**16.9**		
Actual Volume Purged (gallons)	18.0		
Appearance of Purge Water	Initially grey, clears quickly		
Free Product Present?		Thickness (ft):	light sheen

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	23.61	7.22	3998	0.38		
	6	23.63	7.24	4045	0.27		
	9	23.60	7.35	4085	0.24		
	12	23.62	7.34	4128	0.23		
	15	23.59	7.34	4136	0.23		
	18	23.59	7.33	4129	0.22		

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

Initially light grey with strong hydrocarbon odors. Clears quickly

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Cruise America	Date of Sampling:	8/20/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.37		
Water Elevation (feet above msl)	5.70		
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)	**4.1**		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	Initially dark, clears at 3 gallons		
Free Product Present?	No	Thickness (ft):	na

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	22.74	-	1301	0.11		
	4	23.30	8.08	1246	0.04		
	6	23.46	8.10	1224	0.03		

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

Initially dark with strong hydrocarbon odors. Clears at 3 gallons.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Cruise America	Date of Sampling:	8/20/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.49			
Water Elevation (feet above msl)	5.69			
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)	**4.1**			
Actual Volume Purged (gallons)	6.0			
Appearance of Purge Water	Initially dark, clears quickly			
Free Product Present?	No	Thickness (ft):	na	

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	24.12	7.97	6619	0.20		
	4	24.78	7.81	5467	0.13		
	6	25.17	7.82	4776	0.08		

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

Initially dark with strong hydrocarbon odors. Clears quickly.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Cruise America	Date of Sampling:	8/6/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.13		
Water Elevation (feet above msl)	5.75		
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)	**17.3**		
Actual Volume Purged (gallons)	18.0		
Appearance of Purge Water	Initially grey, clears at 3.5 gal.		
Free Product Present?		Thickness (ft):	light sheen

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	23.16	-	4198	0.57		
	6	23.39	-	3904	0.57		
	9	23.44	7.80	3864	0.56		
	12	23.54	7.12	3850	0.56		
	15	23.54	7.19	3857	0.56		
	18	23.55	7.14	3848	0.55		

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

Initially grey with strong hydrocarbon odor present. Clears at 3.5 gallons.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Cruise America	Date of Sampling:	8/6/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.20		
Water Elevation (feet above msl)	5.87		
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)	6.0		
Appearance of Purge Water	Initialy dark, light dark at 2.5 gal., clears at 4.5 gal.		
Free Product Present?	No	Thickness (ft):	na

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	22.26	7.77	1801	0.60		
	4	23.20	7.91	1662	0.58		
	6	23.40	7.90	1511	0.57		

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

Initially dark with strong hydrocarbon odors. Light dark at 2.5 gallons, clears at 4.5 gallons.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Cruise America	Date of Sampling:	8/6/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.33		
Water Elevation (feet above msl)	5.85		
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)	6.0		
Appearance of Purge Water	clears at 3 gallons		
Free Product Present?	No	Thickness (ft):	na

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	23.49	-	4879	0.53		
	4	24.60	-	4362	0.52		
	6	24.72	-	4209	0.51		

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

Water dark and strong hydrocarbon odor present

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Cruise America	Date of Sampling:	7/19/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.12		
Water Elevation (feet above msl)	5.76		
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)	**17.3**		
Actual Volume Purged (gallons)	18.0		
Appearance of Purge Water	Initially grey, clears at 2 gallons		
Free Product Present?		Thickness (ft):	light sheen

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	22.37	7.27	4097	0.06	-378.7	
	6	22.74	7.15	3924	0.05	-394.1	
	9	22.80	7.07	3872	0.05	-399.8	
	12	22.86	7.02	3840	0.05	-405.2	
	15	22.85	6.98	3819	0.05	-409.4	
	18	22.86	6.99	3838	0.05	-411.4	

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

Initially grey with strong hydrocarbon odors. Clears at 2 gallons.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Cruise America	Date of Sampling:	7/19/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.19		
Water Elevation (feet above msl)	5.88		
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)	6.0		
Appearance of Purge Water	claers up quickly		
Free Product Present?	No	Thickness (ft):	na

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	22.24	-	2124	0.35	-273.9	
	4	23.14	6.65	1978	0.55	-284.8	
	6	23.26	6.77	1961	0.58	-285.6	

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

dark and strong hydrocarbon odor present

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Cruise America	Date of Sampling:	7/19/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.32			
Water Elevation (feet above msl)	5.86			
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)	6.0			
Appearance of Purge Water	clears at 2 gallons			
Free Product Present?	No	Thickness (ft):	na	

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	23.49	7.56	4871	0.08	-222.3	
	4	23.88	7.26	4343	0.07	-255.9	
	6	23.99	7.16	4071	0.07	-271.8	

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

dark and strong hydrocarbon odor present

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Cruise America	Date of Sampling:	7/7/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	4.97		
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)	**17.6**		
Actual Volume Purged (gallons)	18.0		
Appearance of Purge Water	clears at 1.5 gallons		
Free Product Present?		Thickness (ft):	

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	22.07	6.41	4688	0.04	-	
	6	22.41	7.66	4181	0.04	-	
	9	22.49	7.39	4039	0.04	-	
	12	22.53	7.22	4036	0.04	-	
	15	22.67	7.06	3993	0.17	-	
	18	22.59	7.01	4020	0.24	-	

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

Grey and strong hydrocarbon odor present, sheen noted.

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Cruise America	Date of Sampling:	7/7/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.0		
Appearance of Purge Water	clear		
Free Product Present?	No	Thickness (ft):	na

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	21.28	-	17824	0.25	-	
	3	22.48	-	16382	0.1	-	
	5	20.96	-	18333	0.43	-	

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

No hydrocarbon odor noted (8 minutes to completly recharge)

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Cruise America	Date of Sampling:	7/7/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	3.76		
Water Elevation (feet above msl)	6.44		
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)	**4.9**		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	Light yellow		
Free Product Present?	No	Thickness (ft):	na

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	21.08	7.23	14118	0.24	-	
	4	22.93	6.83	13651	0.32	-	
	6	20.89	7.05	16679	0.35	-	

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

No hydrocarbon odor noted

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Cruise America	Date of Sampling:	7/7/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.08		
Water Elevation (feet above msl)	5.99		
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	clears at 1,5 gallons		
Free Product Present?	No	Thickness (ft):	na

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	20.99	-	2682	0.05	-	
	3	22.64	-	2047	0.05	-	
	5	22.95	-	2057	0.07	-	

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

Show up dark and strong hydrocarbon odor present

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Cruise America	Date of Sampling:	7/7/2004
Job Number:	5526	Name of Sampler:	A Nieto
Project Address:	796 66th Avenue, Oakland		

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)	5.19		
Water Elevation (feet above msl)	5.99		
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	clears at 2 gallons		
Free Product Present?	No	Thickness (ft):	na

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	21.39	-	4679	0.44	-	
	3	23.71	7.05	4210	0.55	-	
	5	23.79	7.05	3960	0.55	-	

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

Water dark and strong hydrocarbon odor present

APPENDIX D

LABORATORY ANALYTICAL REPORTS

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

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8262; Cruise America	Date Sampled: 05/17/04
		Date Received: 05/18/04
	Client Contact: Peter McIntyre	Date Reported: 05/25/04
	Client P.O.:	Date Completed: 05/25/04

WorkOrder: 0405285

May 25, 2004

Dear Peter:

Enclosed are:

1). the results of **6** analyzed samples from your **#8262; Cruise America 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

All Environmental, Inc.	Client Project ID: #8262; Cruise America	Date Sampled: 05/17/04-05/18/04
2500 Camino Diablo, Ste. #200		Date Received: 05/18/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 05/18/04
	Client P.O.:	Date Analyzed: 05/19/04-05/21/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0405285

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	S-1 6'	S	ND	ND	ND	ND	ND	ND	1	92.6
002A	S-2 6'	S	31,a	2.7	0.035	0.32	0.082	0.27	1	82.8
003A	S-5 6'	S	1.2,a	2.1	ND	0.014	ND	0.020	1	82.7
004A	S-6 6'	S	360,a,g	ND<3.5	0.61	1.8	5.0	5.2	20	92.6
005A	S-12 11'	S	ND	1.1	ND	ND	ND	ND	1	87.4
006A	S-7 6'	S	3.8,g,m	2.0	ND	0.016	ND	ND	1	81.5

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 ~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.

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

Matrix: S WorkOrder: 0405285

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 11591 Spiked Sample ID: 0405303-006A

	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	99.4	2.14	101	103	2.01	70	130
MTBE	ND	0.10	107	103	3.33	108	101	6.16	70	130
Benzene	ND	0.10	110	109	0.765	113	107	5.45	70	130
Toluene	ND	0.10	93	92.5	0.532	95.3	91	4.70	70	130
Ethylbenzene	ND	0.10	113	107	5.91	114	111	2.36	70	130
Xylenes	ND	0.30	100	100	0	103	100	3.28	70	130
%SS:	84.9	0.10	104	98	5.94	87.1	82.8	5.06	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.

DHS Certification No. 1644

QA/QC Officer

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0405285 **ClientID: AEL**

Report to:
Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #8262; Cruise America
PO:

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

Requested TAT: 5 days
Date Received: 5/18/04
Date Printed: 5/18/04

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
0405285-001	S-1 6'	Soil	5/17/04 8:25:00 AM	☐	A														
0405285-002	S-2 6'	Soil	5/17/04	☐	A														
0405285-003	S-5 6'	Soil	5/17/04	☐	A														
0405285-004	S-6 6'	Soil	5/17/04	☐	A														
0405285-005	S-12 11'	Soil	5/18/04	☐	A														
0405285-006	S-7 6'	Soil	5/18/04	☐	A														

Test Legend:

1	G-MBTEX_S	2		3		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.

0405285

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) 944-2899 Fax: (925) 944-2895
Project #: 8262 Project Name: Cruise America
Project Location: 66th Ave, Oakland
Sampler Signature: [signature]

SAMPLE ID (Field Point Name)	LOCATION	Sampling Date	Sampling Time	# Containers	Type Containers	Matrix: Water	Matrix: Soil	Matrix: Air	Matrix: Sludge	Matrix: Other	Preserved: Ice	Preserved: HCl	Preserved: HNO_3	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
S-1 6'		5/17/04	8:23	1	Brass		X				X				X																
S-2 6'		↓	9:45	1	↓		X				X				X																
S-5 6'		↓	2:05	1	↓		X				X				X																
S-6 6'		↓	3:25	1	↓		X				X				X																
S-12 11'		5/18	1:45	1	↓		X				X				X																
S-7 6'		↓	2:00	1	↓		X				X				X																

Relinquished By:	Date:	Time:	Received By:
[signature]	5/18	5:30	[signature]
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

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

PRESERVATION ✓ (VOAS | O&G | METALS | OTHER)
APPROPRIATE CONTAINERS ✓
PERSERVED IN LAB ____

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

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8262; Cruise AM	Date Sampled: 07/07/04
		Date Received: 07/07/04
	Client Contact: Peter McIntyre	Date Reported: 07/13/04
	Client P.O.:	Date Completed: 07/13/04

WorkOrder: 0407113

July 13, 2004

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

All Environmental, Inc.	Client Project ID: #8262; Cruise AM	Date Sampled: 07/07/04
2500 Camino Diablo, Ste. #200		Date Received: 07/07/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 07/09/04-07/13/04
	Client P.O.:	Date Analyzed: 07/09/04-07/13/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0407113

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	190,m	4900	ND<1.7	2.0	ND<1.7	ND<1.7	3.3	110
002A	MW-2	W	ND	5.7	ND	ND	ND	ND	1	104
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	109
004A	MW-4	W	ND	1400	ND	ND	ND	ND	1	115
005A	MW-5	W	ND<500	15,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	10	102

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

All Environmental, Inc.	Client Project ID: #8262; Cruise AM	Date Sampled: 07/07/04
2500 Camino Diablo, Ste. #200		Date Received: 07/07/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 07/07/04
	Client P.O.:	Date Analyzed: 07/08/04

Methyl tert-Butyl Ether and t-Butyl alcohol *

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0407113

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	t-Butyl alcohol (TBA)	DF	% SS
0407113-001B	MW-1	W	5500	ND<1000	200	105
0407113-002B	MW-2	W	5.6	ND	1	105
0407113-003B	MW-3	W	4.0	ND	1	105
0407113-004B	MW-4	W	2100	ND<250	50	105
0407113-005B	MW-5	W	19,000	ND<2000	400	103

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

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

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

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

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.

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

Matrix: W WorkOrder: 0407113

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 12272 Spiked Sample ID: 0407107-015A

	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	97.2	93.6	3.76	97.2	98.6	1.44	70	130
MTBE	ND	10	113	108	5.14	117	111	5.24	70	130
Benzene	ND	10	118	112	5.34	110	109	0.255	70	130
Toluene	ND	10	113	107	6.06	104	104	0	70	130
Ethylbenzene	ND	10	114	108	5.59	111	108	2.60	70	130
Xylenes	ND	30	100	95.3	4.78	96.7	95.3	1.39	70	130
%SS:	96.3	10	106	105	0.956	97.6	103	4.92	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 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

U. P. 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

Matrix: W WorkOrder: 0407113

EPA Method: SW8260B Extraction: SW5030B BatchID: 12276 Spiked Sample ID: 0407113-003B

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Methyl-t-butyl ether (MTBE)	3.98	10	118	120	1.00	116	117	0.813	70	130
%SS1:	105	10	96.4	97.5	1.12	102	99.6	2.08	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.

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0407113 **ClientID: AEL**

Report to:
Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

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

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

Requested TAT: 5 days
Date Received: 7/7/04
Date Printed: 7/7/04

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
0407113-001	MW-1	Water	7/7/04	☐	A	B													
0407113-002	MW-2	Water	7/7/04	☐	A	B													
0407113-003	MW-3	Water	7/7/04	☐	A	B													
0407113-004	MW-4	Water	7/7/04	☐	A	B													
0407113-005	MW-5	Water	7/7/04	☐	A	B													

Test Legend:

1	G-MBTEX_W	2	MTBE_W	3		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.

0407113

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) 944-2899 Fax: (925) 944-2895
Project #: 8262 Project Name: Cruise Am
Project Location: 66 4th Ave 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: MTBE + TBA (8260)	Comments
MW-1		7/6/04	9am	4	Vom	X					X	X			X															X	
MW-2				4		X					X	X			X															X	
MW-3				4		X					X	X			X															X	
MW-4				4		X					X	X			X															X	
MW-5				4		X					X	X			X															X	

Relinquished By:	Date:	Time:	Received By:
Adrian Nieto	7/7/04	5:45	
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 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

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8262; Cruise AM #2	Date Sampled: 07/19/04
		Date Received: 07/19/04
	Client Contact: Peter McIntyre	Date Reported: 07/26/04
	Client P.O.:	Date Completed: 07/26/04

WorkOrder: 0407243

July 26, 2004

Dear Peter:

Enclosed are:

1). the results of 3 analyzed samples from your **#8262; Cruise AM #2 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

All Environmental, Inc.	Client Project ID: #8262; Cruise AM #2	Date Sampled: 07/19/04
2500 Camino Diablo, Ste. #200		Date Received: 07/19/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 07/21/04-07/22/04
	Client P.O.:	Date Analyzed: 07/21/04-07/22/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0407243

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	340,m	8000	ND<2.5	4.0	ND<2.5	ND<2.5	5	113
002A	MW-4	W	ND	1200	ND	ND	ND	ND	1	107
003A	MW-5	W	ND<500,j	16,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	10	111

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

All Environmental, Inc.	Client Project ID: #8262; Cruise AM #2	Date Sampled: 07/19/04
2500 Camino Diablo, Ste. #200		Date Received: 07/19/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 07/19/04
	Client P.O.:	Date Analyzed: 07/20/04-07/26/04

Methyl tert-Butyl Ether & t-Butyl alcohol*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0407243

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	t-Butyl alcohol (TBA)	DF	% SS
0407243-001B	MW-1	W	9200	ND<1700	330	101
0407243-002B	MW-4	W	1300	ND<500	100	105
0407243-003B	MW-5	W	14,000	ND<2500	500	113

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

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

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

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

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.

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

Matrix: W WorkOrder: 0407243

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 12383 Spiked Sample ID: 0407248-004A

	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	95.7	93.5	2.36	78.3	74	5.55	70	130
MTBE	ND	10	103	105	1.47	114	108	5.33	70	130
Benzene	ND	10	109	113	3.01	105	99.7	5.03	70	130
Toluene	ND	10	104	107	2.66	104	102	2.49	70	130
Ethylbenzene	ND	10	109	111	1.89	112	106	6.15	70	130
Xylenes	ND	30	95.7	96.3	0.694	100	91.7	8.70	70	130
%SS:	103	10	102	105	3.06	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.

£ 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

Matrix: W WorkOrder: 0407243

EPA Method: SW8260B	Extraction: SW5030B		BatchID: 12393			Spiked Sample ID: 0407248-005B				
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Methyl-t-butyl ether (MTBE)	ND	10	108	112	3.32	107	107	0	70	130
%SS1:	105	10	105	108	2.46	97.7	97.4	0.312	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.

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0407243 **ClientID: AEL**

Report to:
Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #8262; Cruise AM #2
PO:

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

Requested TAT: 5 days
Date Received: 7/19/04
Date Printed: 7/19/04

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
0407243-001	MW-1	Water	7/19/04	☐	A	B													
0407243-002	MW-4	Water	7/19/04	☐	A	B													
0407243-003	MW-5	Water	7/19/04	☐	A	B													

Test Legend:

1	G-MBTEX_W	2	MTBE_W	3		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.

aEV 0407243

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) 944-2899 **Fax:** (925) 944-2895
Project #: 8262 **Project Name:** Cruise Am #2
Project Location: 66th Ave, 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: MTBE + TBA (8260)	Other	Other	Comments
+ MW-1		7/19/04	noon	4	Voa	X					X	X			X															+			
+ MW-4		↓	↓	↓	↓	X					X	X			X															+			
+ MW-5		↓	↓	↓	↓	X					X	X			X															+			

Relinquished By:	Date:	Time:	Received By:
Adrian Nieto	7/19/04	4:15	[signature]
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

	VOAS	O&G	METALS	OTHER
PRESERVATION	✓			

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

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

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8262; Cruise AM #3	Date Sampled: 08/06/04
		Date Received: 08/06/04
	Client Contact: Peter McIntyre	Date Reported: 08/11/04
	Client P.O.:	Date Completed: 08/11/04

WorkOrder: 0408096

August 11, 2004

Dear Peter:

Enclosed are:

1). the results of **3** analyzed samples from your **#8262; Cruise AM #3 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

All Environmental, Inc.	Client Project ID: #8262; Cruise AM #3	Date Sampled: 08/06/04
2500 Camino Diablo, Ste. #200		Date Received: 08/06/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 08/07/04-08/10/04
	Client P.O.:	Date Analyzed: 08/07/04-08/10/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0408096

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	280,m	7200	ND	5.6	ND	ND	1	110
002A	MW-4	W	ND	1300	0.76	ND	ND	ND	1	102
003A	MW-5	W	110,f	12,000	ND	ND	ND	ND	1	114
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

All Environmental, Inc.	Client Project ID: #8262; Cruise AM #3	Date Sampled: 08/06/04
2500 Camino Diablo, Ste. #200		Date Received: 08/06/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 08/06/04
	Client P.O.:	Date Analyzed: 08/06/04-08/09/04

Methyl tert-Butyl Ether and t-Butyl alcohol*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0408096

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	t-Butyl alcohol (TBA)	DF	% SS
0408096-001B	MW-1	W	5900	ND<1000	200	109
0408096-002B	MW-4	W	1200	ND<500	100	110
0408096-003B	MW-5	W	11,000	ND<2500	500	111

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

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

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

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

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; k) client defined reporting limit.

RL = Reporting Limit; MDL = Method Detection Limit; DF = Dilution Factor; J = Estimated value; concentration detected between the MDL and RL.

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

Matrix: W WorkOrder: 0408096

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 12636 Spiked Sample ID: 0408093-023A

	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	84.1	84.4	0.429	97.6	98	0.503	70	130
MTBE	ND	10	85.9	86	0.0931	107	104	2.77	70	130
Benzene	ND	10	85.7	87.5	2.02	107	106	1.68	70	130
Toluene	ND	10	87.8	89	1.34	103	100	3.10	70	130
Ethylbenzene	ND	10	89.9	91.2	1.46	106	106	0	70	130
Xylenes	ND	30	90	90.7	0.738	95.3	95	0.350	70	130
%SS:	85.7	10	95.8	96.8	1.06	103	101	1.86	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 / 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

Matrix: W WorkOrder: 0408096

EPA Method: SW8260B Extraction: SW5030B BatchID: 12641 Spiked Sample ID: 0408109-001B

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Methyl-t-butyl ether (MTBE)	ND	10	92.8	100	7.78	98.5	103	4.73	70	130
%SS1:	110	10	102	100	1.64	96.4	97.1	0.650	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 / 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

AEL 0408096

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 #3
Project Location: 66th 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
(1) MW-1		8/6/04	am	4	VOA	X					X	X		
2 MW-4		"	"	4	"	X					X	X		
3 MW-5		"	"	4	"	X					X	X		

Analysis Request	Other	Comments
1 BTEX & TPH as Gas (602/8020 + 8015)/MTBE	MTBE + TBA (8260)	
2 TPH as Diesel (8015)		
3 Total Petroleum Oil & Grease (5520 E&F/B&F)		
4 Total Petroleum Hydrocarbons (418.1)		
5 EPA 601 / 8010		
6 BTEX ONLY (EPA 602 / 8020)		
7 EPA 608 / 8080		
8 EPA 608 / 8080 PCB's ONLY		
9 EPA 624 / 8260		
10 EPA 625 / 8270		
11 PAH's / PNA's by EPA 625 / 8270 / 8310		
12 CAM-17 Metals		
13 LUFT 5 Metals		
14 Lead (7240/7421/239.2/6010)		
15 RCI		
1 X	1 X	
2 X	2 X	
3 X	3 X	

Relinquished By:	Date:	Time:	Received By:
Adam Metz	8/6/04	2:35	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0408096 **ClientID: AEL**

Report to:
Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #8262; Cruise AM #3
PO:

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

Requested TAT: 5 days
Date Received: 8/6/04
Date Printed: 8/6/04

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
0408096-001	MW-1	Water	8/6/04	☐	A	B													
0408096-002	MW-4	Water	8/6/04	☐	A	B													
0408096-003	MW-5	Water	8/6/04	☐	A	B													

Test Legend:

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

Prepared by: Elisa Venegas

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 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

All Environmental, Inc.	Client Project ID: #8262; Cruise AM #4	Date Sampled: 08/20/04
2500 Camino Diablo, Ste. #200		Date Received: 08/20/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Reported: 08/30/04
	Client P.O.:	Date Completed: 08/30/04

WorkOrder: 0408290

August 30, 2004

Dear Peter:

Enclosed are:

1). the results of 3 analyzed samples from your **#8262; Cruise AM #4 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

All Environmental, Inc.	Client Project ID: #8262; Cruise AM #4	Date Sampled: 08/20/04
2500 Camino Diablo, Ste. #200		Date Received: 08/20/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 08/21/04-08/27/04
	Client P.O.:	Date Analyzed: 08/21/04-08/27/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0408290

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND<250,j	4600	ND<2.5	ND<2.5	ND<2.5	ND<2.5	5	98.4
002A	MW-4	W	ND	460	ND	ND	ND	ND	1	97.4
003A	MW-5	W	ND<500,j	7200	ND<5.0	ND<5.0	ND<5.0	ND<5.0	10	99.3
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 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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0408290

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 12803 Spiked Sample ID: 0408397-001A

	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	102	102	0	101	99.2	1.41	70	130
MTBE	ND	10	104	100	3.74	93.2	107	14.0	70	130
Benzene	ND	10	106	103	2.66	96.3	105	8.50	70	130
Toluene	ND	10	104	100	3.76	97.8	103	5.52	70	130
Ethylbenzene	ND	10	103	102	0.592	97.1	102	5.32	70	130
Xylenes	ND	30	90.3	90.3	0	86	90.3	4.91	70	130
%SS:	101	10	106	105	0.696	101	105	3.96	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 / 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

0408290

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 #4
Project Location: 66th Ave Oakland
Sampler Signature: Adrian Nieto

Analysis Request columns: 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 / 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

SAMPLE ID (Field Point Name)	LOCATION	Sampling Date	Sampling Time	# Containers	Type Containers	Water	Soil	Air	Sludge	Other	Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Other analyses	Comments
MW-1		8/20	Am	4	Voas	X					X	X			X		
MW-4		↓	↓	4	↓	X					X	X			X		
MW-5		↓	↓	4	↓	X					X	X			X		

Relinquished By:	Date:	Time:	Received By:
Adrian Nieto	8/20	1:45	[signature]
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

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

	VOAS	O&G	METALS	OTHER
PRESERVATION	✓			

APPROPRIATE CONTAINERS ✓
PERSERVED IN LAB ____

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0408290 **ClientID: AEL**

Report to:
Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #8262; Cruise AM #4
PO:

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

Requested TAT: 5 days

Date Received: 8/20/04
Date Printed: 8/20/04

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
0408290-001	MW-1	Water	8/20/04	☐	A														
0408290-002	MW-4	Water	8/20/04	☐	A														
0408290-003	MW-5	Water	8/20/04	☐	A														

Test Legend:

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

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.

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

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8262; Cruise America#5	Date Sampled: 09/03/04
		Date Received: 09/03/04
	Client Contact: Peter McIntyre	Date Reported: 09/09/04
	Client P.O.:	Date Completed: 09/09/04

WorkOrder: 0409052

September 09, 2004

Dear Peter:

Enclosed are:

1). the results of **3** analyzed samples from your **#8262; Cruise America#5 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
Website: www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #8262; Cruise America#5	Date Sampled: 09/03/04
2500 Camino Diablo, Ste. #200		Date Received: 09/03/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 09/04/04-09/07/04
	Client P.O.:	Date Analyzed: 09/04/04-09/07/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0409052

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND<250,j	5700	ND<2.5	ND<2.5	ND<2.5	ND<2.5	5	106
002A	MW-4	W	ND	440	ND	ND	ND	ND	1	103
003A	MW-5	W	ND<500,j	8500	ND<2.5	ND<2.5	ND<2.5	ND<2.5	5	110

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

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8262; Cruise America#5	Date Sampled: 09/03/04
		Date Received: 09/03/04
	Client Contact: Peter McIntyre	Date Extracted: 09/03/04
	Client P.O.:	Date Analyzed: 09/04/04-09/08/04

Methyl tert-Butyl Ether & t-Butyl alcohol*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0409052

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	t-Butyl alcohol (TBA)	DF	% SS
0409052-001B	MW-1	W	4700	ND<1000	200	98.0
0409052-002B	MW-4	W	370	ND<50	10	104
0409052-003B	MW-5	W	7200	ND<1700	330	102

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

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

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

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

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; k) client defined reporting limit.

RL = Reporting Limit; MDL = Method Detection Limit; DF = Dilution Factor; J = Estimated value; concentration detected between the MDL and RL.

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

Matrix: W WorkOrder: 0409052

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 12971 Spiked Sample ID: 0409053-010A

	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	103	102	0.377	101	115	12.9	70	130
MTBE	ND	10	98	104	5.80	92.7	103	10.5	70	130
Benzene	ND	10	107	110	2.74	109	118	7.95	70	130
Toluene	ND	10	101	104	3.72	103	115	10.7	70	130
Ethylbenzene	ND	10	105	108	2.16	107	111	4.25	70	130
Xylenes	ND	30	90.7	95	4.67	91.3	95.7	4.63	70	130
%SS:	102	10	107	109	2.26	109	120	9.81	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 / 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

Matrix: W WorkOrder: 0409052

EPA Method: SW8260B Extraction: SW5030B BatchID: 12985 Spiked Sample ID: 0409039-001A

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Methyl-t-butyl ether (MTBE)	ND	10	97.1	93.9	3.44	92.7	95.4	2.86	70	130
%SS1:	107	10	104	103	1.32	98.5	98.3	0.183	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 / 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

0409052 - APL

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 America #5

Project Location: 66+L Ave Oakland

Sampler Signature: Adam McIntyre

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 / 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		9/3/04		7	Vial	X					X	X			X														X	X	
MW-4		↓		2	1	X					X	X			X														X	X	
MW-5				2	1	X					X	X			X														X	X	

Relinquished By:	Date:	Time:	Received By:
Adam McIntyre	9/3/04	2:30pm	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0409052 **ClientID: AEL**

Report to:
Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #8262; Cruise America#5
PO:

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

Requested TAT: 5 days
Date Received: 9/3/04
Date Printed: 9/3/04

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
0409052-001	MW-1	Water	9/3/04	☐	A	B													
0409052-002	MW-4	Water	9/3/04	☐	A	B													
0409052-003	MW-5	Water	9/3/04	☐	A	B													

Test Legend:

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

Prepared by: Rosa Venegas

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 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

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8262; Cruise America	Date Sampled: 10/13/04
		Date Received: 10/13/04
	Client Contact: Peter McIntyre	Date Reported: 10/19/04
	Client P.O.:	Date Completed: 10/19/04

WorkOrder: 0410176

October 19, 2004

Dear Peter:

Enclosed are:

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

All Environmental, Inc.	Client Project ID: #8262; Cruise America	Date Sampled: 10/13/04
2500 Camino Diablo, Ste. #200		Date Received: 10/13/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 10/14/04-10/15/04
	Client P.O.:	Date Analyzed: 10/14/04-10/15/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0410176

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	170,m	3700	ND	4.8	ND	ND	1	116
002A	MW-2	W	ND	ND	ND	ND	ND	ND	1	109
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	106
004A	MW-4	W	ND	330	ND	ND	ND	ND	1	105
005A	MW-5	W	ND<250,j	6700	ND<2.5	ND<2.5	ND<2.5	ND<2.5	5	105

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.

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

All Environmental, Inc.	Client Project ID: #8262; Cruise America	Date Sampled: 10/13/04
2500 Camino Diablo, Ste. #200		Date Received: 10/13/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 10/14/04
	Client P.O.:	Date Analyzed: 10/14/04

Methyl tert-Butyl Ether*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0410176

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	DF	% SS
001B	MW-1	W	4400	200	106
002B	MW-2	W	2.6	1	105
003B	MW-3	W	ND	1	108
004B	MW-4	W	360	10	111
005B	MW-5	W	7700	330	105

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

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

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

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

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; k) client defined reporting limit.

RL = Reporting Limit; MDL = Method Detection Limit; DF = Dilution Factor; J = Estimated value; concentration detected between the MDL and RL.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0410176

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 13559 Spiked Sample ID: 0410177-008A

Analyte	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	95.2	94.3	0.939	97.6	96.6	1.08	70	130
MTBE	ND	10	98.1	104	6.11	97.4	95.7	1.79	70	130
Benzene	ND	10	103	105	2.01	99.7	98.3	1.40	70	130
Toluene	ND	10	97	98.4	1.47	91.6	92.7	1.25	70	130
Ethylbenzene	ND	10	100	102	1.01	99.6	97.4	2.23	70	130
Xylenes	ND	30	85.7	89.7	4.56	89.7	85.7	4.56	70	130
%SS:	100	10	108	109	1.56	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 / 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.

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QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0410176

EPA Method: SW8260B Extraction: SW5030B BatchID: 13560 Spiked Sample ID: 0410184-002A

Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Methyl-t-butyl ether (MTBE)	ND	10	104	112	6.96	96.4	94.2	2.27	70	130
%SS1:	110	10	102	106	3.41	100	99	1.31	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 / 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.

QA/QC Officer

DHS Certification No. 1644

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0410176 **ClientID: AEL**

Report to:
Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #8262; Cruise America
PO:

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

Requested TAT: **5 days**
Date Received: **10/13/04**
Date Printed: **10/13/04**

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
0410176-001	MW-1	Water	10/13/04	☐	A	B													
0410176-002	MW-2	Water	10/13/04	☐	A	B													
0410176-003	MW-3	Water	10/13/04	☐	A	B													
0410176-004	MW-4	Water	10/13/04	☐	A	B													
0410176-005	MW-5	Water	10/13/04	☐	A	B													

Test Legend:

1	G-MBTEX_W	2	MTBE_W	3		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.

aEC

0410176

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 #: Cruise America	Project Name: 8262
Project Location: 66th Ave, 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
4 MW-1		10/13/04		7	VOA	X					X	X		
4 MW-2				11		X					X	X		
4 MW-3				11		X					X	X		
4 MW-4				11		X					X	X		
4 MW-5		↓		11	↓	X					X	X		

Analysis Request	Other	Comments
BTEX & TPH as Gas (602/8020 + 8015)/MTBE	MTBE Only 8260	
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 / 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		
4 MW-1	X	
4 MW-2	X	
4 MW-3	X	
4 MW-4	X	
4 MW-5	X	

Relinquished By:	Date:	Time:	Received By:
Adrian Nieto	10/13	6:40p	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

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

McCampbell Analytical, Inc.

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All Environmental, Inc.	Client Project ID: #8262; Cruige America	Date Sampled: 01/11/05
2500 Camino Diablo, Ste. #200		Date Received: 01/11/05
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Reported: 01/19/05
	Client P.O.:	Date Completed: 01/19/05

WorkOrder: 0501122

January 19, 2005

Dear Peter:

Enclosed are:

1). the results of **5** analyzed samples from your **#8262; Cruige America 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
Website: www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #8262; Cruige America	Date Sampled: 01/11/05
2500 Camino Diablo, Ste. #200		Date Received: 01/11/05
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 01/12/05-01/13/05
	Client P.O.:	Date Analyzed: 01/12/05-01/13/05

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0501122

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	110,a	880	8.8	4.2	ND	ND	1	113
002A	MW-2	W	74,a	ND	2.6	11	2.1	10	1	107
003A	MW-3	W	68,a	ND	2.2	9.0	1.7	8.5	1	105
004A	MW-4	W	ND	450	1.0	2.1	ND	1.8	1	112
005A	MW-5	W	ND<100,j	3000	1.5	3.3	ND<1.0	2.3	2	112
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.

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

All Environmental, Inc.	Client Project ID: #8262; Cruige America	Date Sampled: 01/11/05
2500 Camino Diablo, Ste. #200		Date Received: 01/11/05
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 01/11/05
	Client P.O.:	Date Analyzed: 01/12/05-01/13/05

Methyl tert-Butyl Ether & t-Butyl alcohol*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0501122

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	t-Butyl alcohol (TBA)	DF	% SS
0501122-001B	MW-1	W	990	910	50	104
0501122-002B	MW-2	W	4.4	ND	1	113
0501122-003B	MW-3	W	ND	ND	1	106
0501122-004B	MW-4	W	430	ND<100	20	105
0501122-005B	MW-5	W	4800	1200	100	117

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

* water and vapor samples 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

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0501122

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 14625 Spiked Sample ID: 0501109-005A

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	99.2	93	6.50	96.3	97.5	1.23	70 - 130	70 - 130
MTBE	ND	10	106	106	0	102	101	0.858	70 - 130	70 - 130
Benzene	ND	10	107	103	3.60	110	110	0	70 - 130	70 - 130
Toluene	ND	10	103	94.7	8.44	104	105	0.760	70 - 130	70 - 130
Ethylbenzene	ND	10	105	106	1.09	106	107	1.15	70 - 130	70 - 130
Xylenes	ND	30	91	95	4.30	91	95.3	4.65	70 - 130	70 - 130
%SS:	110	10	109	112	2.71	112	111	1.40	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

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.

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0501122

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 14632 Spiked Sample ID: 0501128-009A

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	101	97.9	3.37	103	99.9	2.86	70 - 130	70 - 130
MTBE	ND	10	98.3	98.8	0.479	103	98.5	4.22	70 - 130	70 - 130
Benzene	ND	10	104	107	3.08	105	106	0.963	70 - 130	70 - 130
Toluene	ND	10	101	104	2.50	102	102	0	70 - 130	70 - 130
Ethylbenzene	ND	10	104	106	1.37	105	106	1.42	70 - 130	70 - 130
Xylenes	ND	30	91.7	95	3.57	95	95.7	0.699	70 - 130	70 - 130
%SS:	104	10	109	111	1.63	108	107	0.648	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

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.

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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: 0501122

EPA Method: SW8260B Extraction: SW5030B BatchID: 14626 Spiked Sample ID: 0501109-012C

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	114	115	0.970	98.3	94.6	3.85	70 - 130	70 - 130
%SS1:	114	10	99	103	3.71	103	101	1.39	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

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.

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: 0501122

EPA Method: SW8260B Extraction: SW5030B BatchID: 14633 Spiked Sample ID: 0501128-008B

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	114	111	2.93	99.4	97.5	1.92	70 - 130	70 - 130
%SS1:	113	10	98	100	1.33	103	101	1.80	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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0501122 **ClientID: AEL**

Report to:
Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #8262; Cruige America
PO:

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

Requested TAT: 5 days

Date Received: 01/11/2005
Date Printed: 01/11/2005

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
0501122-001	MW-1	Water	1/11/05	☐	A	B													
0501122-002	MW-2	Water	1/11/05	☐	A	B													
0501122-003	MW-3	Water	1/11/05	☐	A	B													
0501122-004	MW-4	Water	1/11/05	☐	A	B													
0501122-005	MW-5	Water	1/11/05	☐	A	B													

Test Legend:

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

Prepared by: Rosa Venegas

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.

AEI 0501122

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 #: 6262	**Project Name:** Cruise America
Project Location: 66th Ave Oakland	
Sampler Signature: Adrian McIntyre	

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 / 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		4/11/05		3	Voas	X					X	X			X															X				
(+) MW-2		"		3	"	X					X	X			X															X				
MW-3 ✓		"		3	"	X					X	X			X															X				
(+) MW-4		"		3	"	X					X	X			X															X				
(+) MW-5		"		3	"	X					X	X			X															X				

Relinquished By:	Date:	Time:	Received By:
Adrian McIntyre	4/11/05	2:30	Nadia
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

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

	VOAS	O&G	METALS	OTHER
PRESERVATION				
APPROPRIATE ✓				
CONTAINERS				