



10-373

Alameda County
OCT 31 2002
Environmental Health

May 31, 2002

REPORT
of
SOIL AND GROUNDWATER ASSESSMENT
ASE JOB NO. 3406
at
The Olympic Service Station
1436 Grant Avenue
San Lorenzo, California

Prepared for:
Mr. George Jaber
2801 Encinal Avenue
Alameda, CA 94501

Submitted by:
AQUA SCIENCE ENGINEERS, INC.
208 West El Pintado
Danville, CA 94526
(925) 820-9391

1.0 INTRODUCTION

This report presents the methods and findings of Aqua Science Engineers, Inc. (ASE)'s soil and groundwater assessment at the former Olympic Service Station located at 1436 Grant Avenue in San Lorenzo, California (Figure 1). The site assessment activities were initiated by the property owner, Mr. George Jaber, as required in various letters from the Alameda County Health Care Services Agency (ACHCSA). The scope of work for this assessment was discussed with Mr. Scott Seery of the ACHCSA at his office on January 16, 2001. The purpose of this assessment is to define the downgradient extent of soil and groundwater contamination at the site.

2.0 BACKGROUND INFORMATION

2.1 Underground Storage Tank Removal Project

In July 1998, Reese Construction removed one 10,000 gallon gasoline underground storage tank (UST), one 8,000 gallon gasoline UST, one 5,000 gallon diesel UST, one 250 gallon waste-oil UST and six dispensers from the subject site. At the time of the UST removal, groundwater was present in the fuel UST pit; no water was present in the waste-oil UST pit. Soil samples collected from the excavation sidewalls, excavation bottoms and stockpiled soil contained elevated concentrations of petroleum hydrocarbons, solvents and lead. The highest concentrations were as follows: total petroleum hydrocarbons as gasoline (TPH-G) at 5,700 parts per million (ppm), total petroleum hydrocarbons as diesel (TPH-D) at 1,300 ppm, oil and grease (O&G) at 4,300 ppm, benzene at 30 ppm, toluene at 180 ppm, ethyl benzene at 93 ppm, total xylenes at 430 ppm, methyl tertiary butyl ether (MTBE) at 27 ppm, and lead at 1,900 ppm. The waste-oil UST excavation also contained 26 parts per billion (ppb) 1,1-dichloroethane (1,1-DCA), 100 ppb cis-1,2-dichloroethene (cis-1,2-DCE), and 1,200 ppb tetrachloroethene (PCE). See the Reese Construction UST Removal letter dated September 14, 1998 for further information on the UST removal.

2.2 Stockpiled Soil Sampling

On November 11, 1998, ASE collected soil samples from the stockpiled soil that previously surrounded the gasoline and diesel-fuel USTs. The purpose was to determine whether the stockpiled soil was suitable for re-use as backfill material. Four composited soil samples were collected from the two fuel UST stockpiles and were analyzed for TPH-G, TPH-D,

benzene, toluene, ethyl benzene and total xylenes (collectively known as BTEX), MTBE, and total lead. The soil samples contained no detectable concentrations of TPH-G, up to 280 ppm TPH-D, no detectable concentrations of benzene, up to 0.055 ppm toluene, 0.026 ppm ethylbenzene, 0.066 ppm total xylenes, 0.012 ppm MTBE and 110 ppm total lead. These results were reported in an ASE letter report dated November 24, 1998 to Mr. Scott Seery of the ACHCSA. Mr. Seery then gave ASE verbal approval to re-use the stockpiled soil for backfill in the fuel UST excavation. The fuel UST excavation was subsequently backfilled and compacted by a company subcontracted directly by Mr. Jaber.

2.3 Waste-Oil UST Overexcavation

Due to the presence of elevated concentrations of petroleum hydrocarbons, oil and grease, volatile organic compounds (VOCs) and total lead at the bottom of the waste-oil UST excavation, ASE recommended overexcavation of the area followed by confirmation soil sampling. On December 18, 1998, ASE witnessed the overexcavation of the waste-oil UST pit. The excavation activities continued to a depth of 12-feet below ground surface (bgs) using a backhoe. Deeper excavation was not feasible due to the location of the excavation in relation to the adjacent building wall. The excavated spoils were stockpiled with the spoils generated during the UST removal.

A confirmation soil sample collected from the bottom of the excavation contained 940 ppm total petroleum hydrocarbons as motor oil (TPH-MO), 250 ppm TPH-D, 570 ppm O&G and 996 ppm total lead. TPH-G, BTEX, MTBE, cadmium, chromium, nickel, zinc, VOCs, and semi-volatile organic compounds (SVOCs) concentrations were below action levels. The TPH concentrations in the soil sample collected from 12-feet bgs were significantly lower than the concentrations in soil sample collected just below the UST after its removal. The total lead concentration was roughly half of the concentration of the soil sample collected just below the UST after its removal.

A four-point composite soil sample collected from the stockpiled soil was analyzed for TPH-G, TPH-D, TPH-MO, BTEX, MTBE, O&G, LUFT 5 metals, VOCs, SVOCs, and soluble lead using the waste extraction test (WET) and the toxicity characteristic leaching procedure (TCLP). The stockpiled soil sample contained 2,100 ppm TPH-MO, 550 ppm TPH-D, 1,300 ppm O&G and 54 ppm WET lead. The TCLP lead concentration was less than the detection limit of 1 ppm. The remaining compounds had concentrations below action levels.

The waste-oil UST excavation was subsequently backfilled completely with import material. The 15.3 tons of stockpiled soil was transported from the site by Lutrell Trucking to Chemical Waste Management in Kettleman City, California for disposal on September 24, 1999.

2.4 Dispenser Area

On December 18, 1998, ASE collected a confirmation soil sample following soil overexcavation in the area of one of the former dispensers that contained 5,700 ppm TPH-G in a soil sample at the time of the removal of one of the dispensers. The confirmation soil sample was analyzed for TPH-G, TPH-D, BTEX, MTBE and total lead. TPH-G, TPH-D, BTEX and MTBE were not detected above detection limits. The total lead concentration was 6.3 ppm.

2.5 Monitoring Well Installation

In September 1999, ASE constructed monitoring wells MW-1, MW-2 and MW-3 at the site. TPH-G, TPH-D and MTBE were detected in the groundwater sample collected from monitoring well MW-1 at 3,900 ppb, 87 ppb and 3,500 ppb, respectively. TPH-G and MTBE were detected in the groundwater sample collected from monitoring well MW-2 at 70 ppb and 11 ppb, respectively. No TPH-MO, O&G, VOCs or SVOCs were detected in the groundwater samples collected from monitoring well MW-2, next to the former waste oil UST. The groundwater sample collected from monitoring well MW-3 contained 3,900 ppb TPH-G, 300 ppb TPH-D, 900 ppb benzene, 89 ppb toluene, 160 ppb ethyl benzene, 560 ppb total xylenes, and 790 ppb MTBE. Groundwater appeared to flow to the northwest beneath the site at a gradient of approximately 0.0025-feet/foot.

2.6 Quarterly Groundwater Monitoring

Between October 1999 and October 2001, ASE collected groundwater samples from the three site wells on a quarterly basis. During this period, groundwater samples collected from monitoring well MW-1 contained up to 4,100 ppb TPH-G, 84 ppb TPH-D, 120 ppb benzene, and 6,100 ppb MTBE. Groundwater samples collected from monitoring well MW-2 contained up to 370 ppb TPH-G and 990 ppb MTBE. Groundwater samples collected from monitoring well MW-3 contained up to 3,900 ppb TPH-G, 640 ppb TPH-D, 900 ppb benzene, 89 ppb toluene, 180 ppb ethyl benzene, 560 ppb total xylenes, and 790 ppb MTBE. The predominant groundwater flow during this period was to the west.

3.0 SCOPE OF WORK (SOW)

Based on the requirements of the ACHCSA, ASE's SOW was as follows:

- 1) Prepare a workplan for submittal to the ACHCSA.
- 2) Obtain a drilling permit from the Alameda County Public Works Agency (ACPWA).
- 3) Drill three (3) soil borings downgradient of the site for the collection of soil and groundwater samples.
- 4) Analyze one soil and one groundwater sample from each boring at a CAL-EPA certified analytical laboratory for TPH-D by modified EPA Method 8015, and TPH-G, BTEX and the fuel oxygenates MTBE, DIPE, ETBE, TAME and TBA by EPA Method 8260.
- 5) Following collection of the soil and groundwater samples, backfill each boring with neat cement to the ground surface.
- 6) Prepare a report presenting results from this assessment.

Details of the assessment are presented below.

4.0 DRILL SOIL BORINGS AND COLLECT SAMPLES

4.1 Workplan and Permit Preparation

ASE prepared a workplan for this project dated May 9, 2001, which was subsequently approved by the ACHCSA on June 5, 2001 (Appendix A). Prior to drilling, ASE obtained a drilling permit from the ACPWA and contacted Underground Service Alert (USA) to mark underground utility lines in the site vicinity.

4.2 Drilling and Soil Sample Collection

On April 30, 2002, Gregg Drilling of Martinez, California drilled soil borings BH-A through BH-C at the site using a Geoprobe hydraulic sampling rig (Figure 2). ASE senior geologist Robert E. Kitay, R.G. directed the drilling.

Undisturbed soil samples were collected continuously as drilling progressed for lithologic and hydrogeologic description and for possible chemical analysis. The samples were collected by driving a sampler lined with acetate tubes using hydraulic direct push methods. Selective soil samples were immediately cut, sealed with Teflon tape and plastic end caps, labeled and chilled with ice for transport to Kiff Analytical of Davis, California (ELAP #2236) under chain of custody.

Soil from the remaining tubes was described by the site geologist using the Unified Soil Classification System and was screened for volatile compounds using an Organic Vapor Meter (OVM). The soil was screened by emptying soil from one of the sample tubes into a plastic bag. The bag was then sealed and placed in the sun for approximately 10 minutes. After the VOCs were allowed to volatilize, the OVM measured the vapor in the bag through a small hole punched in the bag. OVM readings are used as a screening tool only, since the procedures are not as rigorous as those used in the laboratory. The OVM readings are shown on the boring logs presented in Appendix B.

4.3 Groundwater Sample Collection

A temporary PVC well casing was driven into place in each boring for the collection of groundwater samples. Groundwater samples were removed from the boring with a pre-cleaned bailer. The groundwater samples were contained in 40-ml volatile organic analysis (VOA) vials, preserved with hydrochloric acid, and sealed without headspace. The samples were then labeled and chilled with ice for transport to Kiff Analytical under chain of custody.

4.4 Decontamination and Borehole Backfilling

Drilling equipment was cleaned with a TSP solution between sampling intervals and between borings to prevent potential cross-contamination. Following collection of the soil and groundwater samples, each boring was backfilled with neat cement to the ground surface.

4.5 Subsurface Lithology and Hydrogeology

Sediments encountered during drilling generally consisted of sandy silt/silty sand from beneath the asphalt surface to 6-feet bgs, clayey silt/silty clay from 6-feet bgs to 13-feet bgs, sandy silt from 13-feet bgs to 16-feet bgs, and silty sand from 16-feet bgs to the total depth explored of 20-feet bgs. Groundwater was encountered at approximately 16-feet bgs,

and rose to approximately 8-feet bgs indicating that the water-bearing zone is under artesian conditions. The boring logs are included as Appendix B.

5.0 ANALYTICAL RESULTS FOR SOIL

The soil sample collected from 11.5-foot bgs in each boring was analyzed by Kiff Analytical for TPH-D and TPH-MO by modified EPA Method 8015, and TPH-G, BTEX and the fuel oxygenates MTBE, DIPE, ETBE, TAME and TBA by EPA Method 8260. The soil sample from each boring that appeared to be the most contaminated based on odors, staining and/or OVM readings was selected for analysis. In all three borings, the sample collected from 11.5-foot bgs was selected for analysis. The analytical results are tabulated in Table One, and the certified analytical report and chain of custody forms are included in Appendix C.

The soil sample collected from 11.5-foot bgs in boring BH-A contained 150 ppm TPH-G, 270 ppm TPH-D, 180 ppm TPH-MO, 0.027 ppm toluene, 1.9 ppm ethylbenzene, and 0.28 ppm total xylenes. The soil sample collected from 11.5-foot bgs in boring BH-B contained 290 ppm TPH-G, 320 ppm TPH-D, 2.2 ppm benzene, 0.49 ppm toluene, 5.0 ppm ethylbenzene, and 12 ppm total xylenes. The soil sample collected from 11.5-foot bgs in boring BH-C contained 240 ppm TPH-G, 280 ppm TPH-D, 12 ppm TPH-MO, 1.7 ppm benzene, 0.016 ppm toluene, 4.3 ppm ethylbenzene, 5.1 ppm total xylenes, and 0.014 ppm MTBE.

The benzene and total xylene concentrations detected in the soil samples collected from borings BH-B and BH-C exceeded Risk-Based Screening Level (RBSLs) for surface soil where groundwater is not a potential source of drinking water and residential land use is permitted. These RBSLs are presented in the "Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region dated August 2000.

6.0 ANALYTICAL RESULTS FOR GROUNDWATER

The groundwater samples were analyzed by Kiff Analytical for TPH-D and TPH-MO by modified EPA Method 8015, and TPH-G, BTEX and the fuel oxygenates MTBE, DIPE, ETBE, TAME and TBA by EPA Method 8260. The analytical results are tabulated in Table Two, and the certified analytical report and chain of custody forms are included in Appendix C.

The groundwater sample collected from boring BH-A contained 180 ppb TPH-G, 8.8 ppb ethylbenzene, and 82 ppb MTBE. The groundwater sample collected from boring BH-B contained 2,300 ppb TPH-G, 120 ppb benzene, 11 ppb toluene, 60 ppb ethyl benzene, 150 ppb total xylenes, and 2,000 ppb MTBE. The groundwater sample collected from boring BH-C contained 1,200 ppb TPH-G, 57 ppb benzene, 0.72 ppb toluene, 43 ppb ethylbenzene, 87 ppb total xylenes, 240 ppb MTBE, and 1.0 ppb TAME. No other compounds were detected above laboratory reporting limits.

The TPH-G, benzene, total xylene and/or MTBE concentrations in borings BH-B and BH-C exceeded RBSLs for groundwater where groundwater is not a potential source of drinking water and residential land use is permitted.

7.0 CONCLUSIONS

Petroleum hydrocarbons were detected in soil samples collected from all three borings, with the highest concentrations of 290 ppm TPH-G, 320 ppm TPH-D, 2.2 ppm benzene, 0.49 ppm toluene, 5.0 ppm ethylbenzene, and 12 ppm total xylenes detected in the 11.5-foot bgs soil sample from boring BH-B.

Petroleum hydrocarbons were also detected in groundwater samples collected from all three borings, with the highest concentrations of 2,300 ppb TPH-G, 120 ppb benzene, 11 ppb toluene, 60 ppb ethyl benzene, 150 ppb total xylenes, and 2,000 ppb MTBE detected in the groundwater sample collected from boring BH-B.

Both soil and groundwater samples analyzed from borings BH-B and BH-C contained hydrocarbon concentrations exceeding RBSLs.

The extent of hydrocarbons still remains undefined downgradient of the site.

8.0 RECOMMENDATIONS

ASE recommends that groundwater monitoring continue at the site on a quarterly basis. Since the extent of contamination downgradient of the site remains undefined, ASE recommends that the extent of contamination be determined using a series of step-out borings utilizing a Geoprobe or similar drill rig. In addition, it appears that additional groundwater monitoring wells will be required to monitor the downgradient portion of the hydrocarbon plume.

9.0 REPORT LIMITATIONS

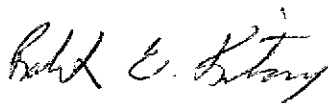
The results presented in this report represent conditions at the time of the soil and groundwater sampling, at the specific locations at which the samples were collected, and for the specific parameters analyzed by the laboratory.

This report does not fully characterize the site for contamination resulting from unknown sources or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of an independent CAL-EPA certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

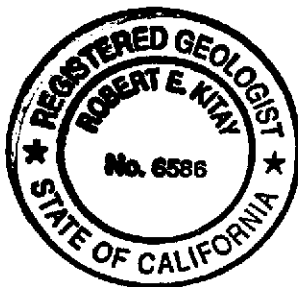
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project. Should you have any questions or comments, please feel free to call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



Robert E. Kitay, R.G., R.E.A.
Senior Geologist



Attachments: Figures 1 and 2
Tables One and Two
Appendices A through D

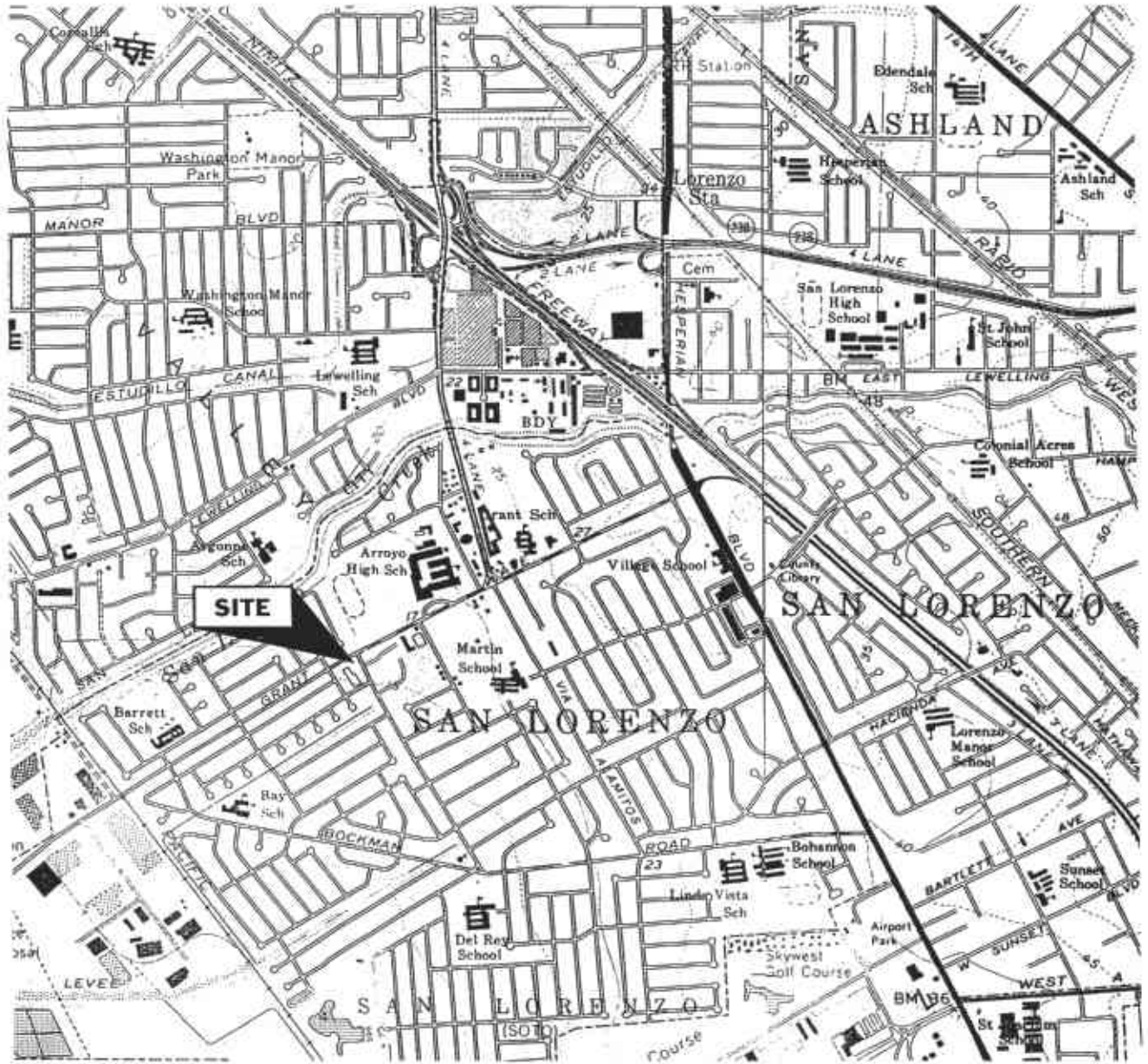
cc: Mr. George Jaber, 2801 Encinal Avenue, Alameda, CA 94501

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

Mr. Chuck Headlee, California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, CA 94612



NORTH



LOCATION MAP

Olympic Service Station
1436 Grant Avenue
San Lorenzo, California

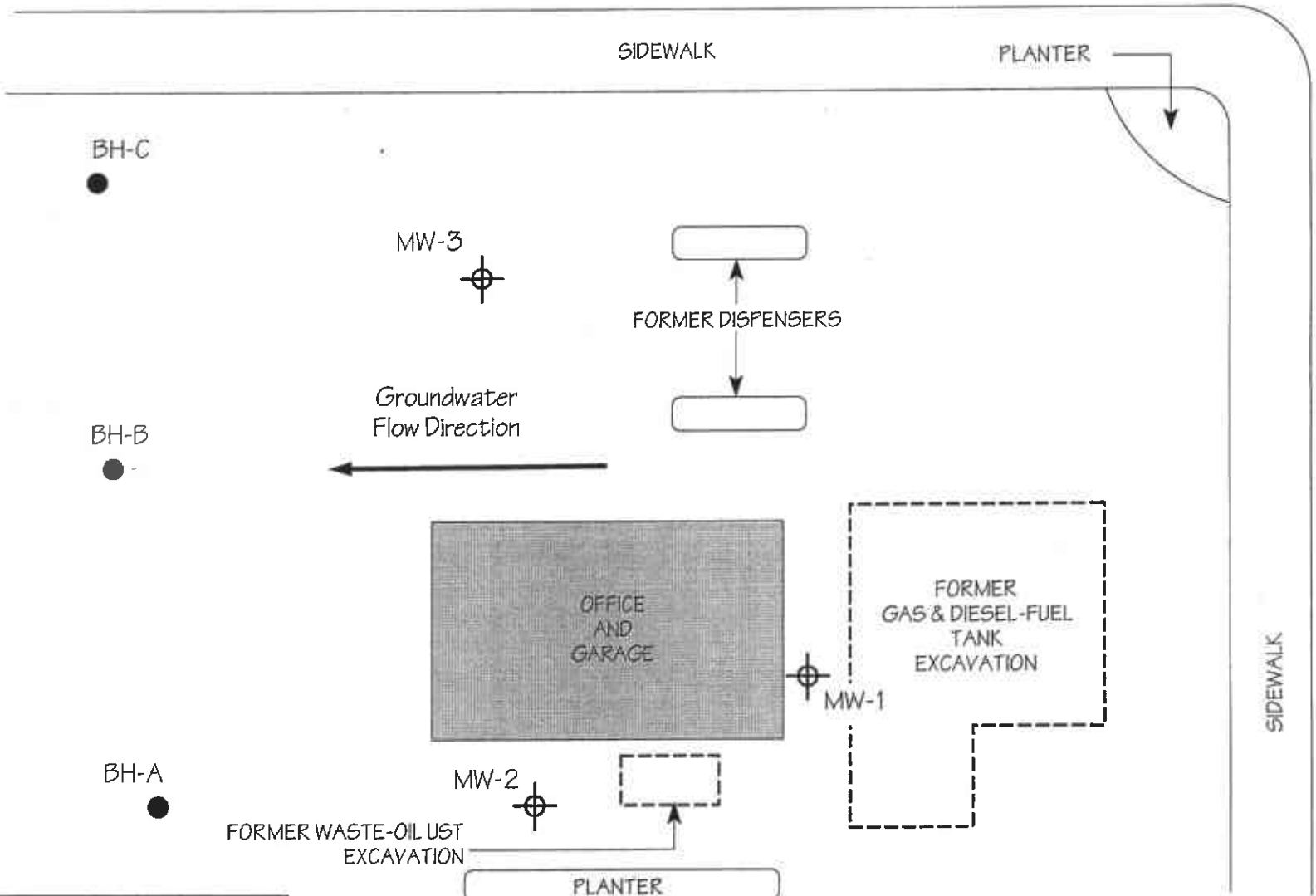
AQUA SCIENCE ENGINEERS, INC.

Figure 1

GRANT AVENUE



NORTH
SCALE
1" = 20'



LEGEND

- MW-1 Monitoring Well
- BH-A Boring Location

BORING LOCATION MAP

Olympic Service Station
1436 Grant Avenue
San Lorenzo, California

TABLE ONE

Analytical Results of SOIL Samples
 TPH-G, TPH-D, TPH-MO, BTEX, and Oxygenates
 All Results are in Parts Per Million
 Former Olympic Service Station
 1436 Grant Avenue, San Lorenzo, California

Boring	Depth Sampled	TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TAME	TBA	Remaining Compounds
BH-A	11.5'	150	270*	180	< 0.025	0.027	1.9	0.28	< 0.025	< 0.025	< 0.25	ND
BH-B	11.5'	290	320*	< 10	2.2	0.49	5.0	12	< 0.050	< 0.050	< 0.25	ND
BH-C	11.5'	240	280*	12	1.7	0.016	4.3	5.1	0.014	< 0.0050	< 0.050	ND
RBSL		400	500	500	0.18	8.4	24	1	1	NE	NE	VARIES

Notes:

Non-Detectable concentrations are noted by the less than symbol (<) followed by the laboratory detection limit.

RBSL = Risk Based Screening Levels for subsurface soil with residential land use permitted where groundwater is not a current or potential source of drinking water as presented in the "Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region, dated August 2000.

ND = Not detected at various laboratory reporting limits.

NE = RBSL is not established.

MTBE = methyl tertiary butyl ether.

TAME = tert. amyl methyl ether.

TBA = tertiary butyl alcohol.

* = Sample has a non-typical diesel pattern.

TABLE TWO

Analytical Results of GROUNDWATER Samples
TPH-G, TPH-D, TPH-MO, BTEX, and Oxygenates

All Results are in **Parts Per Billion**

Former Olympic Service Station

1436 Grant Avenue, San Lorenzo, California

Boring	TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TAME	TBA	Remaining Compounds
BH-A	180	< 100	< 100	< 0.50	< 0.50	8.8	< 0.50	82	< 0.50	< 5.0	ND
BH-B	2,300	< 200	< 100	120	11	60	150 *	2,000	< 5.0	< 5.0	ND
BH-C	1,200	< 150	< 100	57	0.72	43	87	240	1.0	< 5.0	ND
RBSL	400	500	500	46	130	290	13	1,800	NE	NE	VARIES

Notes:

Non-Detectable concentrations are noted by the less than symbol (<) followed by the laboratory detection limit.

RBSL = Risk Based Screening Levels for groundwater where groundwater is not a current or potential source of drinking water as presented in the "Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region, dated August 2000.

ND = Not detected at various laboratory reporting limits.

NE = RBSL is not established.

MTBE = methyl tertiary butyl ether.

TAME = tert. amyl methyl ether.

TBA = tertiary butyl alcohol.

* = Sample has a non-typical diesel pattern.

APPENDIX A

Workplan Approval Letter

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

June 5, 2001

STID 1791

Mr. George Jaber
2801 Encinal Avenue
Alameda, CA 94501

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

RE: Olympic Service Station, 1436 Grant Avenue, San Lorenzo - Soil and Water
Investigation Workplan

Dear Mr. Jaber:

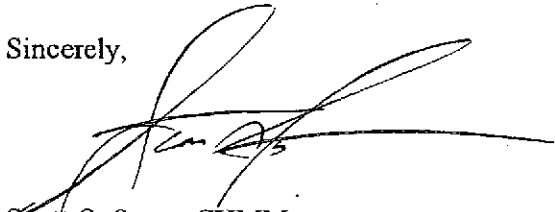
Thank you for our receipt of the May 9, 2001 Aqua Science Engineers, Inc. (ASE) work plan for the next phase of the investigation at the subject site. ASE proposes the installation of three (3) equally spaced "Geoprobe" soil borings in locations east of the former retail fuel station. The results of this work will assist in determining the extent of the release and the appropriate corrective action that may be deemed necessary, if any.

The cited ASE work plan has been accepted with the following clarification:

- Groundwater samples are to be collected from the completed boreholes using a device that will minimize the potential for the loss of volatile constituents in collected samples. A "mini" bailer is an example of such a device, while a peristaltic pump is not.

Please call me at (510) 567-6783 should you have any questions or comments about the content of this letter.

Sincerely,



Scott O. Seery, CHMM
Hazardous Materials Specialist

cc: Chuck Headlee, RWQCB
Dave Deaner, SWRCB UST Fund
Robert Kitay, Aqua Science Engineers, Inc.
208 W. El Pintado Rd., Danville, CA 94526

APPENDIX B

Boring Logs

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS

BORING: BH-A

Project Name: Olympic Station

Project Location: 1436 Grant Ave., San Lorenzo, CA

Page 1 of 1

Driller: Gregg Drilling

Type of Rig: Geoprobe

Size of Drill: 2.0" Diameter

Logged By: Robert E. Kitay, R.G.

Date Drilled: April 30, 2002

Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Depth of Water First Encountered: 17'

Total Depth of Well Completed: NA

Well Screen Type and Diameter: NA

Static Depth of Water in Well: 8'

Well Screen Slot Size: NA

Total Depth of Boring: 20.0'

Type and Size of Soil Sampler: 2.0" Macro-core

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA					Depth in Feet	DESCRIPTION OF LITHOLOGY
			Interval	Blow Counts	OVM (ppmv)	Water Level	Graphic Log		
0								Asphalt	
0								Sandy SILT (ML); yellow brown; soft; dry; 60% silt; 40% fine sand; non-plastic; low estimated K; no odor	
5		Portland Cement			56				
10								Clayey SILT (MH); brown; medium stiff; damp; 70% silt; 20% clay; 10% fine sand; high plasticity; very low estimated K; no odor	
15					755			Silty CLAY (CH); black; stiff; damp; 80% clay; 20% silt; high plasticity; very low estimated K; no odor	
20								Sandy SILT (ML); yellow brown; medium stiff; moist; 75% silt; 25% fine to medium sand; non-plastic; low estimated K; no odor	
20								End of boring at 20.0'	
25									
30									

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS

BORING: BH-B

Project Name: Olympic Station

Project Location: 1436 Grant Ave., San Lorenzo, CA

Page 1 of 1

Driller: Gregg Drilling

Type of Rig: Geoprobe

Size of Drill: 2.0" Diameter

Logged By: Robert E. Kitay, R.G.

Date Drilled: April 30, 2002

Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Total Depth of Well Completed: NA

Depth of Water First Encountered: 16'

Well Screen Type and Diameter: NA

Static Depth of Water in Well: 8'

Well Screen Slot Size: NA

Total Depth of Boring: 20.0'

Type and Size of Soil Sampler: 2.0" Macro-core

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA				Depth in Feet	DESCRIPTION OF LITHOLOGY
			Interval	Blow Counts	OVM (ppmv)	Water Level		
0							Asphalt	
0							Silty SAND (SM); yellow brown; loose; dry; 70% fine sand; 30% silt; non-plastic; low estimated K; no odor	
5				414			Sandy SILT (ML); yellow brown; soft; dry; 60% silt; 40% fine sand; non-plastic; low estimated K; moderate hc odor	
10				355			Clayey SILT (MH); brown; medium stiff; damp; 70% silt; 20% clay; 10% fine sand; high plasticity; very low estimated K; strong hc odor	
15				21			Sandy SILT (ML); yellow brown; medium stiff; damp; 60% silt; 25% fine sand, 15% clay; medium plasticity; low estimated K; strong hc odor	
20							Silty SAND (SM); yellow brown; medium dense; wet; 80% fine sand; 20% silt; non-plastic; medium estimated K; strong hc odor	
20							End of boring at 20.0'	
25								
30								

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS

BORING: BH-C

Project Name: Olympic Station

Project Location: 1436 Grant Ave., San Lorenzo, CA

Page 1 of 1

Driller: Gregg Drilling

Type of Rig: Geoprobe

Size of Drill: 2.0" Diameter

Logged By: Robert E. Kitay, R.G.

Date Drilled: April 30, 2002

Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Depth of Water First Encountered: 16'

Total Depth of Well Completed: NA

Well Screen Type and Diameter: NA

Static Depth of Water in Well: 8'

Well Screen Slot Size: NA

Total Depth of Boring: 20.0'

Type and Size of Soil Sampler: 2.0" Macro-core

Depth in Feet	BORING DETAIL	Description	SOIL/ROCK SAMPLE DATA				Depth in Feet	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
			Interval	Blow Counts	OVM (ppmv)	Water Level		
0	<p>Portland Cement</p>						0	Asphalt
5							5	Silty SAND (SM); yellow brown; loose; dry; 70% fine sand; 30% silt; non-plastic; low estimated K; no odor
10				395			10	Sandy SILT (ML); yellow brown; soft; dry; 60% silt; 30% fine sand; 10% clay; low plasticity; low estimated K; moderate hc odor
15				315			15	Clayey SILT (MH); brown; medium stiff; damp; 70% silt; 20% clay; 10% fine sand; high plasticity; very low estimated K; strong hc odor
20				21			20	Sandy SILT (ML); yellow brown; medium stiff; damp; 60% silt; 25% fine sand, 15% clay; medium plasticity; low estimated K; strong hc odor
25							25	Silty SAND (SM); yellow brown; medium dense; wet; 80% fine sand; 20% silt; non-plastic; medium estimated K; strong hc odor
30						30	End of boring at 20.0'	

APPENDIX C

Analytical Report and Chain of Custody Forms
For Soil and Groundwater Samples



Report Number : 26176

Date : 5/14/2002

Robert Kitay
Aqua Science Engineers, Inc.
208 West El Pintado Rd.
Danville, CA 94526

Subject : 3 Water Samples and 9 Soil Samples
Project Name : George Jaber
Project Number : 3406

Dear Mr. Kitay,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff



Report Number : 26176

Date : 5/14/2002

Subject : 3 Water Samples and 9 Soil Samples
Project Name : George Jaber
Project Number : 3406

Case Narrative

Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples BH-A 11.5', BH-B 11.5' and BH-C 11.5'. The Method Reporting Limit for TPH as Diesel is increased due to interference from Gasoline-Range Hydrocarbons for samples BH-A Water, BH-B Water and BH-C Water.

Approved By:  _____
Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 916-297-4800



Report Number : 26176

Date : 5/14/2002

Project Name : George Jaber

Project Number : 3406

Sample : BH-A 11.5'

Matrix : Soil

Lab Number : 26176-02

Sample Date :4/30/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.025	0.025	mg/Kg	EPA 8260B	5/4/2002
Toluene	0.027	0.025	mg/Kg	EPA 8260B	5/4/2002
Ethylbenzene	1.9	0.025	mg/Kg	EPA 8260B	5/4/2002
Total Xylenes	0.28	0.050	mg/Kg	EPA 8260B	5/4/2002
Methyl-t-butyl ether (MTBE)	< 0.025	0.025	mg/Kg	EPA 8260B	5/4/2002
Diisopropyl ether (DIPE)	< 0.025	0.025	mg/Kg	EPA 8260B	5/4/2002
Ethyl-t-butyl ether (ETBE)	< 0.025	0.025	mg/Kg	EPA 8260B	5/4/2002
Tert-amyl methyl ether (TAME)	< 0.025	0.025	mg/Kg	EPA 8260B	5/4/2002
Tert-Butanol	< 0.25	0.25	mg/Kg	EPA 8260B	5/4/2002
TPH as Gasoline	150	5.0	mg/Kg	EPA 8260B	5/4/2002
Toluene - d8 (Surr)	98.6		% Recovery	EPA 8260B	5/4/2002
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	5/4/2002
TPH as Diesel	270	1.0	mg/Kg	M EPA 8015	5/6/2002
TPH as Motor Oil	180	10	mg/Kg	M EPA 8015	5/6/2002
1-Chlorooctadecane (Diesel Surrogate)	107		% Recovery	M EPA 8015	5/6/2002

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Report Number : 26176

Date : 5/14/2002

Project Name : **George Jaber**

Project Number : **3406**

Sample : **BH-B 11.5'**

Matrix : Soil

Lab Number : 26176-05

Sample Date :4/30/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2.2	0.050	mg/Kg	EPA 8260B	5/9/2002
Toluene	0.49	0.050	mg/Kg	EPA 8260B	5/9/2002
Ethylbenzene	5.0	0.050	mg/Kg	EPA 8260B	5/9/2002
Total Xylenes	12	0.10	mg/Kg	EPA 8260B	5/9/2002
Methyl-t-butyl ether (MTBE)	< 0.050	0.050	mg/Kg	EPA 8260B	5/9/2002
Diisopropyl ether (DIPE)	< 0.050	0.050	mg/Kg	EPA 8260B	5/9/2002
Ethyl-t-butyl ether (ETBE)	< 0.050	0.050	mg/Kg	EPA 8260B	5/9/2002
Tert-amyl methyl ether (TAME)	< 0.050	0.050	mg/Kg	EPA 8260B	5/9/2002
Tert-Butanol	< 0.25	0.25	mg/Kg	EPA 8260B	5/9/2002
TPH as Gasoline	290	5.0	mg/Kg	EPA 8260B	5/9/2002
Toluene - d8 (Surr)	96.5		% Recovery	EPA 8260B	5/9/2002
4-Bromofluorobenzene (Surr)	113		% Recovery	EPA 8260B	5/9/2002
TPH as Diesel	320	1.0	mg/Kg	M EPA 8015	5/6/2002
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	5/6/2002
1-Chlorooctadecane (Diesel Surrogate)	93.8		% Recovery	M EPA 8015	5/6/2002

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Report Number : 26176

Date : 5/14/2002

Project Name : **George Jaber**

Project Number : **3406**

Sample : **BH-C 11.5'**

Matrix : Soil

Lab Number : 26176-08

Sample Date :4/30/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	1.7	0.0050	mg/Kg	EPA 8260B	5/4/2002
Toluene	0.016	0.0050	mg/Kg	EPA 8260B	5/4/2002
Ethylbenzene	4.3	0.025	mg/Kg	EPA 8260B	5/6/2002
Total Xylenes	5.1	0.025	mg/Kg	EPA 8260B	5/4/2002
Methyl-t-butyl ether (MTBE)	0.014	0.0050	mg/Kg	EPA 8260B	5/4/2002
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Tert-Butanol	< 0.050	0.050	mg/Kg	EPA 8260B	5/4/2002
TPH as Gasoline	240	5.0	mg/Kg	EPA 8260B	5/6/2002
Toluene - d8 (Surr)	90.8		% Recovery	EPA 8260B	5/4/2002
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	5/4/2002
TPH as Diesel	280	1.0	mg/Kg	M EPA 8015	5/6/2002
TPH as Motor Oil	12	10	mg/Kg	M EPA 8015	5/6/2002
1-Chlorooctadecane (Diesel Surrogate)	97.6		% Recovery	M EPA 8015	5/6/2002

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Report Number : 26176

Date : 5/14/2002

Project Name : **George Jaber**

Project Number : **3406**

Sample : **BH-A Water**

Matrix : Water

Lab Number : 26176-10

Sample Date :4/30/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/5/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/5/2002
Ethylbenzene	8.8	0.50	ug/L	EPA 8260B	5/5/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/8/2002
Methyl-t-butyl ether (MTBE)	82	0.50	ug/L	EPA 8260B	5/5/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/5/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/5/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/5/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/5/2002
TPH as Gasoline	180	50	ug/L	EPA 8260B	5/5/2002
Toluene - d8 (Surr)	95.9		% Recovery	EPA 8260B	5/5/2002
4-Bromofluorobenzene (Surr)	106		% Recovery	EPA 8260B	5/5/2002
TPH as Diesel	< 100	100	ug/L	M EPA 8015	5/12/2002
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	5/12/2002

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Report Number : 26176

Date : 5/14/2002

Project Name : George Jaber

Project Number : 3406

Sample : BH-B Water

Matrix : Water

Lab Number : 26176-11

Sample Date :4/30/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	120	5.0	ug/L	EPA 8260B	5/6/2002
Toluene	11	5.0	ug/L	EPA 8260B	5/6/2002
Ethylbenzene	60	5.0	ug/L	EPA 8260B	5/6/2002
Total Xylenes	150	5.0	ug/L	EPA 8260B	5/6/2002
Methyl-t-butyl ether (MTBE)	2000	5.0	ug/L	EPA 8260B	5/6/2002
Diisopropyl ether (DIPE)	< 5.0	5.0	ug/L	EPA 8260B	5/6/2002
Ethyl-t-butyl ether (ETBE)	< 5.0	5.0	ug/L	EPA 8260B	5/6/2002
Tert-amyl methyl ether (TAME)	< 5.0	5.0	ug/L	EPA 8260B	5/6/2002
Tert-Butanol	< 50	50	ug/L	EPA 8260B	5/6/2002
TPH as Gasoline	2300	500	ug/L	EPA 8260B	5/6/2002
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	5/6/2002
4-Bromofluorobenzene (Surr)	97.4		% Recovery	EPA 8260B	5/6/2002
TPH as Diesel	< 200	200	ug/L	M EPA 8015	5/12/2002
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	5/12/2002

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Report Number : 26176

Date : 5/14/2002

Project Name : **George Jaber**

Project Number : **3406**

Sample : **BH-C Water**

Matrix : Water

Lab Number : 26176-12

Sample Date :4/30/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	57	0.50	ug/L	EPA 8260B	5/5/2002
Toluene	0.72	0.50	ug/L	EPA 8260B	5/5/2002
Ethylbenzene	43	0.50	ug/L	EPA 8260B	5/5/2002
Total Xylenes	87	0.50	ug/L	EPA 8260B	5/5/2002
Methyl-t-butyl ether (MTBE)	240	0.50	ug/L	EPA 8260B	5/5/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/5/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/5/2002
Tert-amyl methyl ether (TAME)	1.0	0.50	ug/L	EPA 8260B	5/5/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/5/2002
TPH as Gasoline	1200	50	ug/L	EPA 8260B	5/5/2002
Toluene - d8 (Surr)	98.1		% Recovery	EPA 8260B	5/5/2002
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	5/5/2002
TPH as Diesel	< 150	150	ug/L	M EPA 8015	5/11/2002
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	5/11/2002

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 26176

Date : 5/14/2002

QC Report : Method Blank Data

Project Name : **George Jaber**

Project Number : **3406**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	5/6/2002
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	5/6/2002
1-Chlorooctadecane (Diesel Surrogate)	96.6		%	M EPA 8015	5/6/2002
TPH as Diesel	< 50	50	ug/L	M EPA 8015	5/9/2002
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	5/9/2002
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	5/4/2002
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	5/4/2002
Toluene - d8 (Surr)	95.7		%	EPA 8260B	5/4/2002
4-Bromofluorobenzene (Surr)	106		%	EPA 8260B	5/4/2002
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/7/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/7/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/7/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/7/2002
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/7/2002
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/7/2002
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/7/2002
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/7/2002
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/7/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/7/2002
Toluene - d8 (Surr)	98.5		%	EPA 8260B	5/7/2002
4-Bromofluorobenzene (Surr)	98.0		%	EPA 8260B	5/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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Approved By: Joel Kiff



KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 26176

Date : 5/14/2002

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **George Jaber**

Project Number : **3406**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	26037-12	4.9	20.0	20.0	28.7	26.4	mg/Kg	M EPA 8015	5/6/02	115	106	8.46	60-140	25
TPH as Diesel	Blank	<50	1000	1000	1100	950	ug/L	M EPA 8015	5/8/02	110	95.0	14.4	70-130	25
Benzene	26185-04	<0.0050	0.0391	0.0393	0.0335	0.0336	mg/Kg	EPA 8260B	5/4/02	85.8	85.4	0.496	70-130	25
Toluene	26185-04	<0.0050	0.0391	0.0393	0.0363	0.0363	mg/Kg	EPA 8260B	5/4/02	92.9	92.4	0.566	70-130	25
Tert-Butanol	26185-04	<0.0050	0.195	0.196	0.186	0.187	mg/Kg	EPA 8260B	5/4/02	95.5	95.4	0.0733	70-130	25
Methyl-t-Butyl Ether	26185-04	<0.0050	0.0391	0.0393	0.0300	0.0315	mg/Kg	EPA 8260B	5/4/02	76.8	80.3	4.36	70-130	25
Benzene	26191-09	<0.50	20.0	19.5	18.3	17.6	ug/L	EPA 8260B	5/7/02	91.2	90.2	1.08	70-130	25
Toluene	26191-09	<0.50	20.0	19.5	17.6	17.0	ug/L	EPA 8260B	5/7/02	88.1	87.5	0.655	70-130	25
Tert-Butanol	26191-09	<5.0	100	97.4	93.8	89.1	ug/L	EPA 8260B	5/7/02	93.6	91.5	2.29	70-130	25
Methyl-t-Butyl Ether	26191-09	14	20.0	19.5	30.0	29.7	ug/L	EPA 8260B	5/7/02	82.5	83.2	0.804	70-130	25

Approved By:  Joel Kiff

QC Report : Laboratory Control Sample (LCS)

Report Number : 26176

Date : 5/14/2002

Project Name : **George Jaber**

Project Number : **3406**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	5/5/02	120	70-130
Benzene	0.0375	mg/Kg	EPA 8260B	5/4/02	85.9	70-130
Toluene	0.0375	mg/Kg	EPA 8260B	5/4/02	94.5	70-130
Tert-Butanol	0.188	mg/Kg	EPA 8260B	5/4/02	100	70-130
Methyl-t-Butyl Ether	0.0375	mg/Kg	EPA 8260B	5/4/02	77.8	70-130
Benzene	40.0	ug/L	EPA 8260B	5/7/02	94.3	70-130
Toluene	40.0	ug/L	EPA 8260B	5/7/02	90.8	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/7/02	92.8	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/7/02	83.8	70-130

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Approved By:  Joel Kiff

Aqua Science Engineers, Inc.
 208 W. El Pintado Road
 Danville, CA 94526
 (925) 820-9391
 FAX (925) 837-4853

Chain of Custody 26176

PAGE 1 OF 2

SAMPLER (SIGNATURE) Robert C. Kiley (PHONE NO.) (925) 820-9391 PROJECT NAME George Jabur JOB NO. 3406
 ADDRESS 1436 Grant Ave, San Lorenzo, CA

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5050/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPA 624/8240/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LUFT METALS (5) (EPA 6010+7000)	CAM 17 METALS (EPA 6010+7000)	PCBs & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140 EPA 608/8080)	FUEL OXYGENATES (EPA 8260)	Pb (TOTAL or DISSOLVED) (EPA 6010)	TPH-G/BTEX/5 OXY'S (EPA 8260)	TPH-G/BTEX/7 OXY'S / HYDROCS (EPA 8260)	COMPOSITE	
					BH-A 5.5'	4/30	9:26	Soil	1												
BH-A 11.5'		9:31					X											X			-02
BH-A 15.5'		9:38																		X	-03
BH-B 7.5'		10:20																		X	-04
BH-B 11.5'		10:25					X											X			-05
BH-B 15.5'		10:29																		X	-06
BH-C 7.5'		10:52																		X	-07
BH-C 11.5'		11:00					X											X			-08
BH-C 15.5'	✓	11:05	✓	✓																X	-09

RELINQUISHED BY: <u>Robert C. Kiley</u> 11:15 (signature) (time)	RECEIVED BY: _____ (signature) (time)	RELINQUISHED BY: _____ (signature) (time)	RECEIVED BY LABORATORY: <u>John Cutler</u> / 1115 (signature) (time)	COMMENTS:
<u>Robert E Kiley</u> 5-2-02 (printed name) (date)	_____ (printed name) (date)	_____ (printed name) (date)	<u>John Cutler</u> / 050202 (printed name) (date)	
Company- <u>ASE</u>	Company- _____	Company- _____	Company- <u>KUFF ANALYTICAL</u>	TURN AROUND TIME STANDARD 24hr 48hr 72hr OTHER:

Aqua Science Engineers, Inc.
 208 W. El Pintado Road
 Danville, CA 94526
 (925) 820-9391
 FAX (925) 837-4853

Chain of Custody 26176

PAGE 2 OF 2

SAMPLER (SIGNATURE) Robert E. Kitay (PHONE NO.) (925) 820-9391 PROJECT NAME George Jabr JOB NO. _____
 ADDRESS 1436 Grant Ave, San Lorenzo, CA

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPA 624/8240/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LIFT METALS (6) (EPA 6010+7000)	CAM 17 METALS (EPA 6010+7000)	PCBs & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140 EPA 608/8080)	FUEL OXYGENATES (EPA 8260)	Pb (TOTAL or DISSOLVED) (EPA 6010)	TPH-G/BTEX/5 OXY'S (EPA 8260)	TPH-G/BTEX/7 OXY'S / HYCS (EPA 8260)	COMPOSITE	
BH-A Water	4/30	9:48	Water	5			X											X			
BH-B Water	↓	10:42	↓	↓			X											X			
BH-C Water	↓	11:15	↓	↓			X											X			

RELINQUISHED BY: <u>Robert E. Kitay</u> 11:15 (signature) (time)	RECEIVED BY: <u>John Cutler</u> (signature) (time)	RELINQUISHED BY: <u>Robert E. Kitay</u> 5-2-02 (signature) (time)	RECEIVED BY LABORATORY: <u>John Cutler</u> / 11:15 (signature) (time)	COMMENTS:
<u>Robert E. Kitay</u> 5-2-02 (printed name) (date)		<u>Robert E. Kitay</u> 5-2-02 (printed name) (date)	<u>JOHN CUTLER</u> / 050202 (printed name) (date)	TURN AROUND TIME STANDARD 24H 48H 72H
Company- <u>ASE</u>	Company-	Company-	Company- <u>KIFF ANALYTICAL</u>	OTHER:

11
13
14