



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

July 24, 2006

REPORT
of
ADDITIONAL SOIL AND GROUNDWATER ASSESSMENT
AND QUARTERLY GROUNDWATER SAMPLING
ASE JOB NO. 3648
at
Alameda Gas
1310 Central Avenue
Alameda, California

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



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

TABLE OF CONTENTS

SECTION	PAGE
1.0 INTRODUCTION	1
2.0 BRIEF SITE HISTORY AND BACKGROUND INFORMATION	1
2.1 May 1996 Underground Storage Tank Removal	1
2.2 November 1998 Soil Boring Assessment	1
2.3 December 1999 Monitoring Well Installation	2
2.4 May 2000 Monitoring Well Sampling	2
2.5 July 2000 Soil Boring Assessment	2
2.6 Quarterly Groundwater Monitoring	3
2.7 December 2002 Subsurface Conduit Study	3
2.8 January 2004 Soil Boring Assessment and Sewer Sampling	3
2.9 December 2005 Area Well Survey and Workplan	4
3.0 SCOPE OF WORK (SOW)	4
4.0 DRILL SOIL BORINGS FOR THE COLLECTION OF SOIL AND GROUNDWATER SAMPLES	5
4.1 Permits	5
4.2 Drill Soil Borings and Collect Soil Samples	5
4.3 Collect Groundwater Samples from the Borings	6
4.4 Equipment Decontamination and Boring Backfilling	6
5.0 INSTALL GROUNDWATER MONITORING WELLS	6
5.1 Permits	6
5.2 Drill Two Soil Borings for the Installation of Groundwater Monitoring Wells	6
5.3 Monitoring Well Construction	7
5.4 Monitoring Well Development	7
5.5 Monitoring Well Sampling	7
6.0 LITHOLOGY AND HYDROGEOLOGY	8
7.0 SURVEY AND GROUNDWATER ELEVATIONS	8



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

TABLE OF CONTENTS

SECTION	PAGE
8.0 ANALYTICAL RESULTS FOR SOIL AND GROUNDWATER	8
8.1 Soil Sample Analysis	8
8.2 Groundwater Sample Analysis	8
9.0 CONCLUSIONS	9
10.0 RECOMMENDATIONS	10
11.0 REPORT LIMITATIONS	11

LIST OF FIGURES

FIGURE 1	SITE LOCATION MAP
FIGURE 2	BORING AND MONITORING WELL LOCATION MAP AND GROUNDWATER ELEVATION CONTOUR MAP
FIGURE 3	TPH-G ISOCONCENTRATION MAP
FIGURE 4	BENZENE ISOCONCENTRATION MAP
FIGURE 5	MTBE ISOCONCENTRATION MAP

LIST OF TABLES

TABLE ONE	ANALYTICAL RESULTS OF SOIL SAMPLES
TABLE TWO	ANALYTICAL RESULTS OF GROUNDWATER SAMPLES FROM SOIL BORINGS
TABLE THREE	GROUNDWATER ELEVATION DATA
TABLE FOUR	ANALYTICAL RESULTS OF GROUNDWATER SAMPLES FROM MONITORING WELLS



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

TABLE OF CONTENTS (Continued)

LIST OF APPENDICES

APPENDIX A	PERMITS
APPENDIX B	BORING LOGS AND WELL CONSTRUCTION DETAILS
APPENDIX C	WELL SAMPLING FIELD LOGS
APPENDIX D	SURVEY REPORT
APPENDIX E	ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

1.0 INTRODUCTION

This submittal presents Aqua Science Engineers, Inc. (ASE's) report for a soil and groundwater assessment at Alameda Gas Service Station located at 1310 Central Avenue in Alameda, California (Figure 1). The site assessment activities were initiated by Mr. Nissan Saidian, property owner, as required by the Alameda County Health Care Services Agency (ACHCSA) in their letter dated May 6, 2005.

2.0 BRIEF SITE HISTORY AND BACKGROUND INFORMATION

The subject site is currently a small operating gasoline service station.

2.1 May 1996 Underground Storage Tank Removal

In May 1996, Petrotek removed one 10,000-gallon gasoline underground storage tank (UST), one 7,500-gallon gasoline UST, and one 5,000-gallon gasoline UST from the western corner of the site. All associated piping and dispensers were also removed. In addition, one 500-gallon waste-oil UST was removed from a location adjacent to the building. Soil samples collected during the UST removal contained elevated hydrocarbon concentrations, and free-product was observed on groundwater within the UST excavation. Apparently, 600 tons of contaminated soil were removed from the site and disposed of off-site, and approximately 15,000 gallons of water and product were pumped from the excavation, treated and discharged into the storm sewer. Two new USTs were installed in the former UST excavations. New dispensers and piping were also installed. It is ASE's understanding that Petrotek did not issue a report regarding these activities.

2.2 November 1998 Soil Boring Assessment

In November 1998, All Environmental, Inc. (AEI) drilled 14 soil borings at the site and collected soil and groundwater samples for analysis. Up to 5,900 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-G) were detected in soil samples collected from the borings. Up to 120,000 parts per billion (ppb) TPH-G and 7,200 ppb benzene were detected in groundwater samples collected from the borings.



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

2.3 December 1999 Monitoring Well Installation

In December 1999, HerSchy Environmental of Bass Lake, California installed three groundwater monitoring wells at the site (Figure 2). Up to 43,000 ppb TPH-G, 8,700 ppb total petroleum hydrocarbons as diesel (TPH-D), 1,300 ppb benzene and 120,000 ppb methyl tertiary butyl ether (MTBE) were detected in groundwater samples collected from the monitoring wells. The groundwater flow direction was to the southwest at a gradient of 0.0085-feet/foot.

2.4 May 2000 Monitoring Well Sampling

On May 16, 2000, ASE collected groundwater samples from the three site monitoring wells. Groundwater samples collected from monitoring well MW-1 contained 2,000 ppb TPH-G, 38 ppb benzene, 6.3 ppb toluene, 740 ppb ethyl benzene, and 1,600 ppb total xylenes. No MTBE or other oxygenates were detected in this groundwater sample. The groundwater samples collected from monitoring well MW-3 contained 17,000 ppb TPH-G, 2,800 ppb benzene, 60 ppb toluene, 380 ppb ethyl benzene, 190 ppb total xylenes, 990 ppb MTBE, 9.1 ppb tert-amyl methyl ether (TAME) and 350 ppb tert-butanol (TBA). No hydrocarbons were detected in groundwater samples collected from monitoring well MW-2. These results are significantly different to the previous results, especially in respect to hydrocarbon concentrations in monitoring well MW-2, and the MTBE concentrations throughout the site. The radically different MTBE concentrations this sampling period are probably related to the use of EPA Method 8260 this period which is a much more reliable method for MTBE identification than EPA Method 8020, which was used during the December 1999 sampling. It appears that the very high MTBE concentrations detected in December 1999 were a false positive. The groundwater flow direction on May 16, 2000 was to the west-southwest.

2.5 July 2000 Soil Boring Assessment

On July 28, 2000, ASE drilled soil borings BH-A through BH-L at the site using a Geoprobe hydraulic sampling rig (Figure 2). The soil samples collected from 3.0-feet below ground surface (bgs) in boring BH-K contained 0.0061 ppm of MTBE. There were no hydrocarbons or oxygenates detected in soil samples from the remaining borings. The groundwater samples collected from boring BH-A contained 0.7 ppb toluene and 0.9 ppb total xylenes. The groundwater samples collected from boring BH-B contained 1,800 ppb TPH-G, 270 ppb benzene, 8.8 ppb toluene, 18 ppb ethyl benzene, 13 ppb total xylenes, 4,100 ppb MTBE, 5.6 ppb TAME, and 440 ppb TBA. The groundwater samples collected from boring BH-C contained 230 ppb TPH-G, 11 ppb benzene, 1.2 ppb toluene, 0.96 ppb total xylenes, 760 ppb MTBE, 6.6 ppb TAME, and 130 ppb TBA. The groundwater samples collected from boring BH-D contained 72 ppb TPH-D and 1.7 ppb MTBE. The groundwater samples collected from boring BH-I contained 0.55 ppb MTBE. The groundwater samples collected from boring BH-J contained 200 ppb TPH-D. The groundwater samples collected from boring BH-K contained 520 ppb TPH-D and 0.77 ppb MTBE. The groundwater samples collected from boring BH-L contained 2.5 ppb MTBE. The analytical results for the soil and groundwater samples collected during this assessment are tabulated in Tables One and Two.



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

2.6 Quarterly Groundwater Monitoring

Groundwater at the site continues to be sampled on a quarterly basis. Depth to water data and hydrocarbon concentrations in groundwater are tabulated in Tables Three and Four. There has been variation in the calculated groundwater flow direction during the period of the groundwater monitoring program. The predominant groundwater flow direction has been to the southwest. However, based on the hydrocarbon distribution off-site, the groundwater flow direction appears to be to the northwest.

2.7 December 2002 Subsurface Conduit Study

In December 2002, ASE performed a conduit study to determine whether subsurface utility lines could provide a conduit for the movement of groundwater. ASE contacted Underground Service Alert (USA) to mark underground utility lines in the site vicinity, reviewed sewer line maps at the Alameda City Department of Public Works office, and placed phone calls to agencies whose marks were not visible in the street areas to confirm that no lines were present in these areas. The locations of all lines are shown on Figure 2. The backfill material used throughout the City of Alameda is the same native sand that was removed to create the trenches. Since groundwater beneath the site ranges in depth from 1.9 to 5.6-feet bgs, and the typical depth to groundwater in the site vicinity ranges from 2.75 to 5.5-feet bgs, groundwater almost certainly exists in the backfill of the utility trenches near the site. Although it appears that groundwater is likely present in utility line trenches, it does not appear that the utility lines act as a conduit for the movement of groundwater since (a) the backfill of the utility trenches is the exact same sandy material as the native material, and (b) the Geoprobe borings containing the highest hydrocarbon concentrations are located beyond the conduits and their associated trenches. Even though it does not appear that the utility lines are conduits for the movement of groundwater, the ACHCSA requested that water samples be collected from the sewer to determine whether contaminated groundwater may have entered the sewer line through seams or cracks.

2.8 January 2004 Soil Boring Assessment and Sewer Sampling

In January 2004, ASE drilled soil borings BH-M through BH-P at the site using a Geoprobe hydraulic sampling rig (Figure 2). The soil samples analyzed from all four borings contained very low concentrations of TPH-D at a maximum concentration of 68 ppm TPH-D. No TPH-G, BTEX or oxygenates were detected in any of the soil samples analyzed. The groundwater samples collected from all four borings contained TPH-D at concentrations up to 170 ppb TPH-D. The groundwater samples collected from boring BH-O contained 19 ppb MTBE. None of the other samples contained detectable concentrations of TPH-G, BTEX or oxygenates.

In addition to the soil and groundwater sampling, liquid samples were also collected from the sewer line beneath Central Avenue both upgradient and downgradient of the site. Only very low concentrations of TPH-G were detected in liquid samples collected from the sewer in both directions. No BTEX or oxygenates were detected in either of these samples.



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

2.9 December 2005 Area Well Survey and Workplan

In December 2005, ASE searched records from the Alameda County Public Works Agency and the California Department of Water Resources (DWR) to identify water wells within 1/2-mile radius of the site. A total of 25 wells were located in this area. Of these wells, three are domestic wells, ten are irrigation wells, one is industrial, two are cathodic protection wells, four are monitoring wells and five are vapor extraction wells. The closest well is located over 1,000-feet east of the site. The closest potentially downgradient well is located approximately 1,260-feet northwest of the site. ASE also prepared a workplan for additional soil and groundwater assessment for the site. This report presents the results from the scope of work outlined in the December 2005 workplan.

3.0 SCOPE OF WORK (SOW)

The purpose of this assessment is to further define the extent of soil and groundwater contamination at the site. The scope of work for this project is to:

- 1) Obtain a drilling permit from the Alameda County Public Works Agency and an encroachment permit from the City of Alameda to drill in city right of way areas.
- 2) Contract with a subsurface utility locating service to clear drilling locations of underground utility lines.
- 3) Using a Geoprobe, drill two additional borings further to the northwest on Sherman Street to completely define the extent of groundwater contamination in this direction. Based on the results from these borings, additional borings will be drilled as necessary to complete the assessment.
- 4) Following collection of the soil and groundwater samples, backfill the boring described in task 3 with neat cement.
- 5) Using a hollow-stem auger drill rig, drill one additional soil boring near boring BH-O and construct a groundwater monitoring well in the boring.
- 6) Develop the new monitoring well using surge block agitation and pump and/or bailer evacuation.
- 7) Collect groundwater samples from all site monitoring wells.
- 8) Analyze soil and groundwater samples collected from each boring described in tasks 3, 5 and 7 at a CAL-DHS certified analytical laboratory for TPH-D by EPA Method 8015 and TPH-G, BTEX, and fuel oxygenates by EPA Method 8260B.



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

- 9) Survey the top of casing elevation of each new well relative to the mean sea level (msl), and determine the groundwater flow direction and gradient beneath the site.
- 10) Prepare a report presenting results from this assessment. This report will present tabulated analytical results, boring logs, potentiometric surface maps, conclusions, and recommendations for appropriate feasibility tests, as necessary.

4.0 DRILL SOIL BORINGS FOR THE COLLECTION OF SOIL AND GROUNDWATER SAMPLES

4.1 Permits

Prior to drilling, ASE obtained drilling permits from the Alameda County Public Works Agency (ACPWA). ASE also obtained an encroachment permit to allow for the drilling of soil borings in the City of Alameda's right of way. Copies of these permits are presented in Appendix A. ASE also notified Underground Service Alert (USA) to have underground public utilities in the vicinity of the site marked prior to drilling. ASE also contracted with Subtronics of Concord, California to mark subsurface utility lines in the site vicinity. Local residents were also notified of the project one week prior to drilling as required by the City of Alameda.

4.2 Drill Soil Borings and Collect Soil Samples

On April 3, 2006, Woodward Drilling of Rio Vista, California drilled soil borings BH-Q and BH-R using a Geoprobe direct-push hydraulic sampling rig. Boring locations are presented in Figure 2. The drilling was directed by ASE associate geologist David Rains.

Undisturbed soil samples were collected continuously as drilling progressed for lithologic and hydrogeologic description and for possible chemical analysis. The soil samples were collected by driving a Macro-Core sampler lined with acetate tubes into the ground using hydraulic direct push methods. Selected soil samples were cut, trimmed, sealed with Teflon squares and plastic end caps, labeled, and chilled in an ice chest with wet ice for transport to Kiff Analytical, LLC of Davis, California (CA DHS ELAP #2236) under appropriate chain of custody documentation. Soil from the remaining tubes was described by the site geologist using the Unified Soil Classification System (USCS) and was screened for VOCs using a photoionization detector (PID). 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 PID measured the vapor in the bag through a small hole punched in the bag. PID readings are used as a screening tool only, since the procedures are not as rigorous as those used in the laboratory. The PID readings are listed on the boring logs presented in Appendix B.



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

4.3 Collect Groundwater Samples from the Borings

Groundwater samples were collected from the borings using factory-cleaned, unused polyethylene bailers. The groundwater samples were decanted into 40-ml volatile organic analysis (VOA) vials, preserved with hydrochloric acid, and sealed without headspace. The samples were then labeled and stored in an ice chest with wet ice for transport to Kiff Analytical under chain of custody.

4.4 Equipment Decontamination and Boring Backfilling

Drilling equipment was cleaned with an Alconox 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.

5.0 INSTALL GROUNDWATER MONITORING WELLS

5.1 Permits

Prior to drilling, ASE obtained drilling permits from the ACPWA. ASE also obtained an encroachment permit to allow for the drilling of soil borings in the City of Alameda's right of way. Copies of these permits are presented in Appendix A. ASE also notified USA to have underground public utilities in the vicinity of the site marked prior to drilling and also contracted with Subtronics to mark subsurface utility lines in the site vicinity. Local residents were also notified of the project one week prior to drilling as required by the City of Alameda.

5.2 Drill Two Soil Borings for the Installation of Groundwater Monitoring Wells

On April 3 and 4, 2006, Woodward Drilling of Rio Vista, California drilled soil borings MW-4 and MW-5 at the site using a drill rig equipped with 8-inch diameter hollow-stem augers (Figure 2). The drilling was directed by ASE associate geologist David Rains.

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 Macro-Core sampler lined with acetate tubes using hydraulic direct-push. Selective soil samples were immediately cut, trimmed, sealed with Teflon squares and plastic end caps, labeled, and stored in an ice chest with wet ice for transport to Kiff Analytical, LLC under chain of custody. Soil from the remaining tubes was described by the site geologist using the USCS and was screened for VOCs using a PID. 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 volatile compounds were allowed to volatilize, the PID measured the vapor in the bag through a small hole punched in the bag. PID readings are used as a screening tool only, since the procedures are not as rigorous as those used in the laboratory. The PID readings are listed on the boring logs presented in Appendix B.



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

Drilling equipment was cleaned with an Alconox solution between sampling intervals to prevent potential cross-contamination.

5.3 Monitoring Well Construction

Both monitoring wells were constructed in the borings with 2-inch diameter, 0.020-inch slotted, flush-threaded, Schedule 40 PVC well screen and blank casing. Both monitoring wells are constructed to monitor the first water bearing zone encountered. Monitoring well MW-4 is screened between 2-foot bgs and 16-foot bgs. Monitoring well MW-5 is screened between 2-foot bgs and 17-foot bgs. Number 3 washed Monterey sand occupies the annular space between the borehole and the casing from the bottom of the boring to approximately 0.5-foot above the well screen. A 0.5-foot thick hydrated bentonite layer separates the sand from the overlying cement surface seal. The cement surface seal consists of neat Portland cement. The wellheads are secured with locking wellplugs beneath at-grade, traffic-rated well boxes. Well construction details are shown on the boring logs in Appendix B.

5.4 Monitoring Well Development

On April 16, 2006, ASE associate geologist David Rains developed monitoring wells MW-4 and MW-5 using two episodes of surge-block agitation and bailer evacuation. Over ten well casing volumes of water were removed from the wells during development. Evacuation continued until the water removed from the wells was relatively clear. Well development purge water was contained in sealed and labeled 55-gallon steel drums and left on-site for temporary storage until off-site disposal could be arranged. No free-floating hydrocarbons or sheen were present on the surface of groundwater during well development.

5.5 Monitoring Well Sampling

On May 25, 2006, ASE associate geologist Michael Rauser collected groundwater samples from all five monitoring wells for analysis. No free-floating hydrocarbons or sheen were present on the surface of groundwater in any of the monitoring wells.

Prior to sampling, each well was purged of four well casing volumes of groundwater. The pH, temperature, and conductivity of the purge water were monitored during evacuation, and samples were not collected until these parameters stabilized. Groundwater samples were removed from the monitoring wells with factory-cleaned, unused polyethylene bailers. The groundwater samples were contained in 40-ml VOA vials, preserved with hydrochloric acid, and sealed without headspace. The samples were then labeled and stored in an ice chest with wet ice for transport to Kiff Analytical under chain of custody. Well sampling purge water was contained in sealed and labeled 55-gallon steel drums and left on-site for temporary storage until off-site disposal could be arranged. The well sampling field logs are presented in Appendix C. Please note that labels and field forms for monitoring wells MW-4 and MW-5 were reversed. Tabulated data reflects the corrected labels.



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

6.0 LITHOLOGY AND HYDROGEOLOGY

Sediments encountered beneath the site generally consisted of layers of clayey sand, silty sand, and sand from the ground surface to the total depth explored of 17-feet bgs. Groundwater was encountered at approximately 3-feet bgs. Boring logs are presented in Appendix B.

7.0 SURVEY AND GROUNDWATER ELEVATIONS

On April 27, 2006, CSS Environmental Services of Novato, California surveyed the top of casing elevation of each monitoring well and the ground surface elevation of each boring and monitoring well relative to mean sea level (msl). Longitude and latitude coordinates were also surveyed to Geotracker standards. A copy of the survey is included as Appendix D.

On May 25, 2006, ASE measured the depth to groundwater in each monitoring well prior to purging and sampling. Depth to groundwater measurements are presented in Table One. A groundwater elevation (potentiometric surface) contour map is presented as Figure 3. The groundwater appeared to flow to the northwest beneath the site at a gradient of 0.012-feet/foot.

8.0 ANALYTICAL RESULTS FOR SOIL AND GROUNDWATER

8.1 Soil Sample Analysis

The soil samples collected from 2-feet bgs in borings BH-Q, BH-R, MW-4 and MW-5 were analyzed by Kiff Analytical for TPH-G, BTEX, and oxygenates by EPA Method 8260B, and TPH-D by modified EPA Method 8015 with silica gel cleanup. The analytical results are tabulated in Table One, and certified analytical report and chain of custody are presented in Appendix E.

The only hydrocarbon that was detected in any of the soil samples was TPH-D at low concentrations of 11 ppm in the soil sample collected from 2.0-feet bgs in boring BH-Q and 1.7 ppm in the soil sample collected from 2.0-feet bgs in boring MW-5. In both cases, the laboratory noted that the hydrocarbons reported as TPH-D did not exhibit a typical diesel chromatogram pattern. None of these concentrations exceeded California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) environmental screening levels (ESLs) for shallow soil. The ESLs are presented in the "Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater" document dated February 2005. None of the soil samples contained detectable concentrations of TPH-G, BTEX, or oxygenates.

8.2 Groundwater Sample Analysis

The groundwater samples collected from borings BH-Q and BH-R were analyzed by Kiff Analytical for TPH-G, BTEX, and oxygenates by EPA Method 8260B, and TPH-D by modified



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

EPA Method 8015 with silica gel cleanup. The analytical results from these borings are tabulated in Table Two, and certified analytical report and chain of custody are presented in Appendix E. The groundwater samples collected from the monitoring wells were analyzed by Kiff Analytical for TPH-G, BTEX, and oxygenates by EPA Method 8260B, and TPH-D by modified EPA Method 8015 with silica gel cleanup. The analytical results for groundwater samples collected from the monitoring wells are tabulated in Table Four, and certified analytical report and chain of custody are presented in Appendix E.

Elevated hydrocarbon concentrations, well above RWQCB ESLs, were detected in groundwater samples collected from monitoring wells MW-1 and MW-3. In addition, elevated MTBE concentrations were detected in groundwater samples collected from monitoring well MW-5. The only hydrocarbons detected in groundwater samples collected from monitoring wells MW-2 and MW-4 were TPH-D at 160 ppb and 86 ppb, respectively. As in the soil samples, the laboratory noted that the hydrocarbons reported as TPH-D did not exhibit a typical diesel chromatogram pattern. The groundwater sample from monitoring well MW-4 also contained 1.2 ppb MTBE, which is well below the RWQCB ESL.

9.0 CONCLUSIONS

No significant hydrocarbon concentrations were detected in the soil samples analyzed during this portion of the investigation.

Elevated hydrocarbon concentrations, well above RWQCB ESLs, were detected in groundwater samples collected from monitoring wells MW-1 and MW-3. In addition, elevated MTBE concentrations were detected in groundwater samples collected from monitoring well MW-5. The only hydrocarbons detected in groundwater samples collected from monitoring wells MW-2 and MW-4 were TPH-D at 160 ppb and 86 ppb, respectively. As in the soil samples, the laboratory noted that the hydrocarbons reported as TPH-D did not exhibit a typical diesel chromatogram pattern. The groundwater sample from monitoring well MW-4 also contained 1.2 ppb MTBE, which is well below the RWQCB ESL.

Based on these results, it now appears that the extent of hydrocarbons in soil and groundwater is adequately defined, and ASE does not recommend any further definition of the extent of hydrocarbons.

10.0 RECOMENDATIONS

It appears that remediation will be required to reduced the mass of hydrocarbons and MTBE both on and off-site in order to obtain case closure. ASE recommends that a corrective action plan (CAP) be prepared to determine the best means of remediation for this site. Appropriate feasibility tests should also be performed as necessary to assist in determining the appropriate remediation alternatives for the site. ASE also recommends continued quarterly groundwater monitoring at the site.



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

11.0 REPORT LIMITATIONS

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

It 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-DHS certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Should you have any questions or comments, please call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC

A handwritten signature in dark ink, appearing to read 'Robert E. Kitay', is written over the printed name.

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





Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

FIGURES



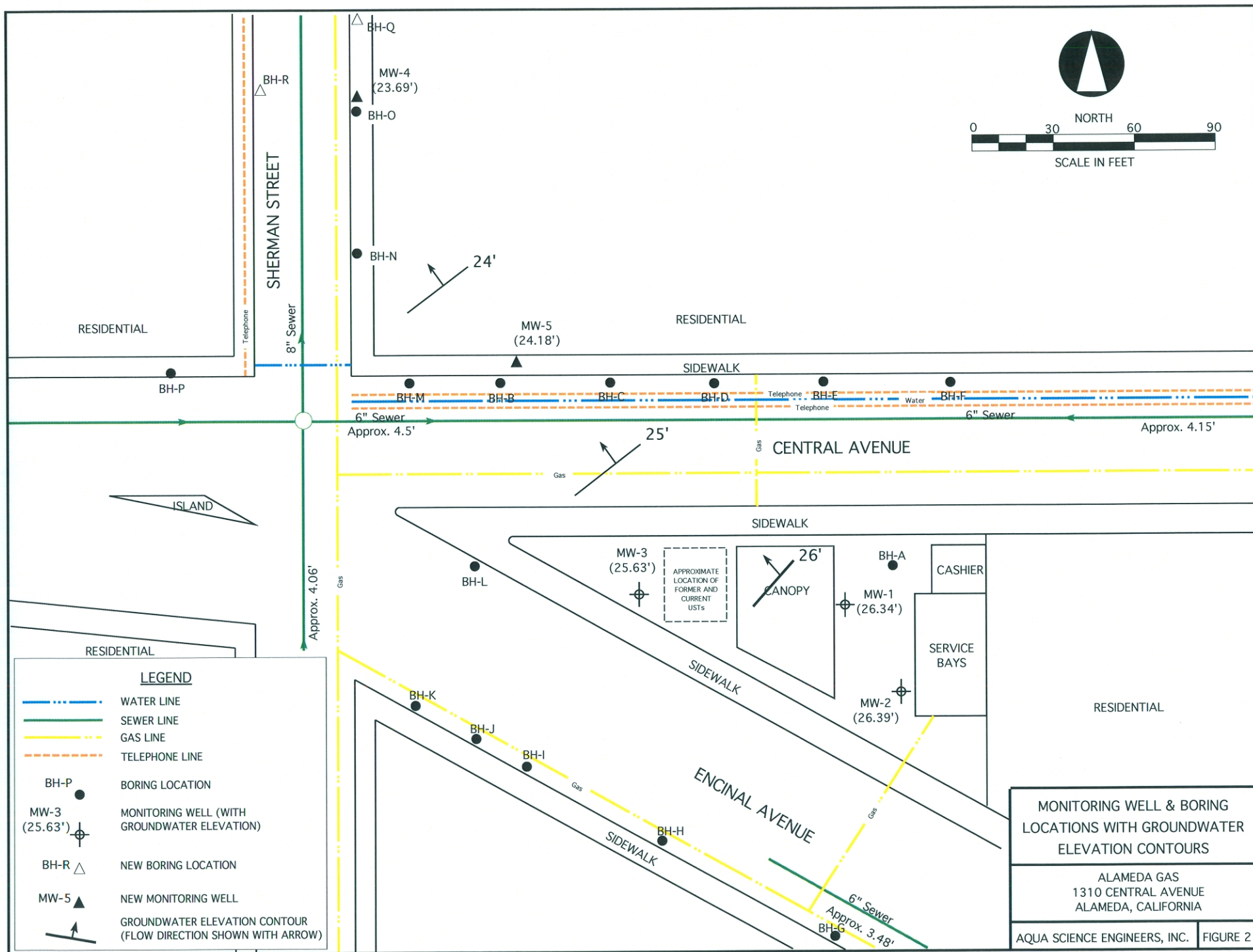
NORTH

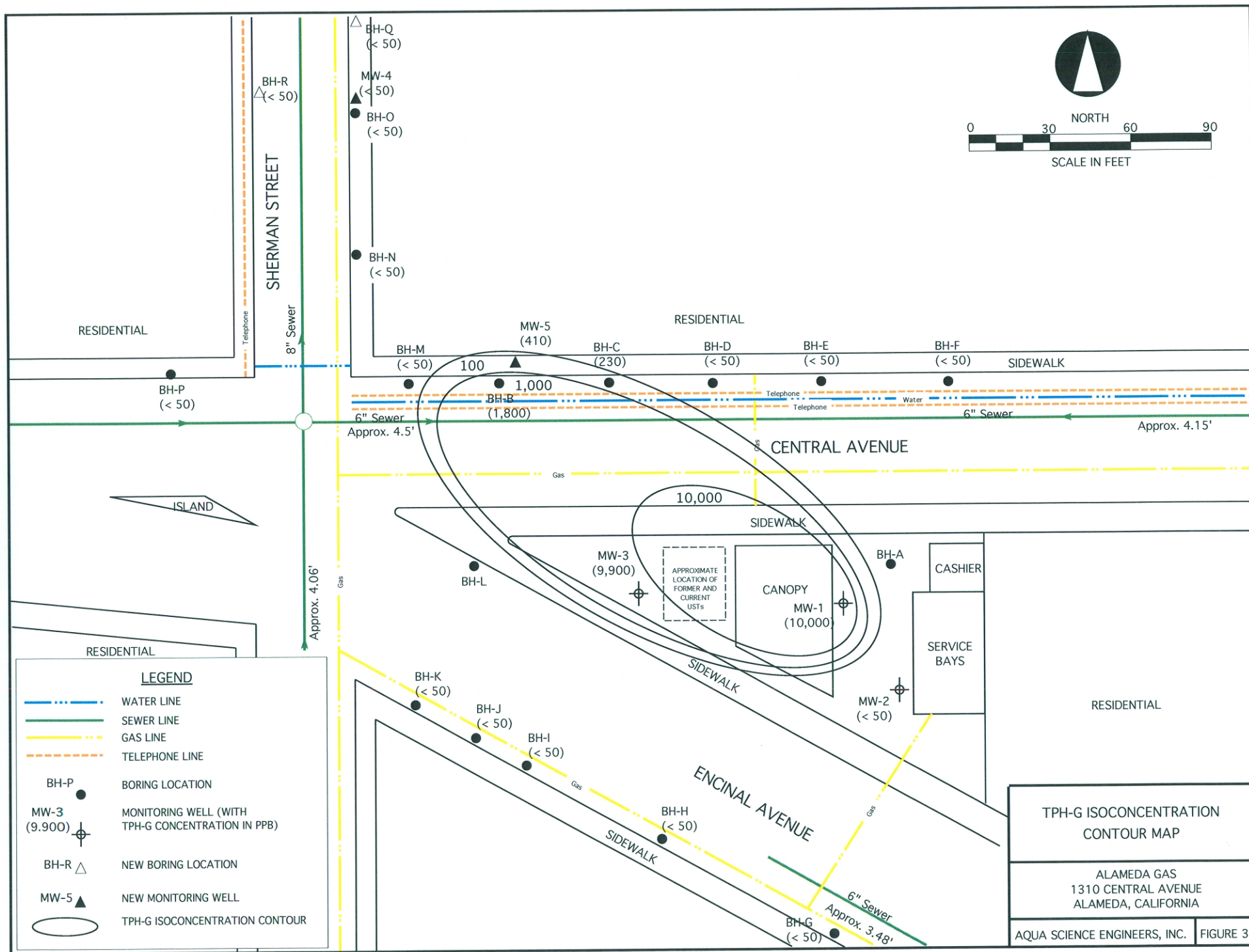
LOCATION MAP

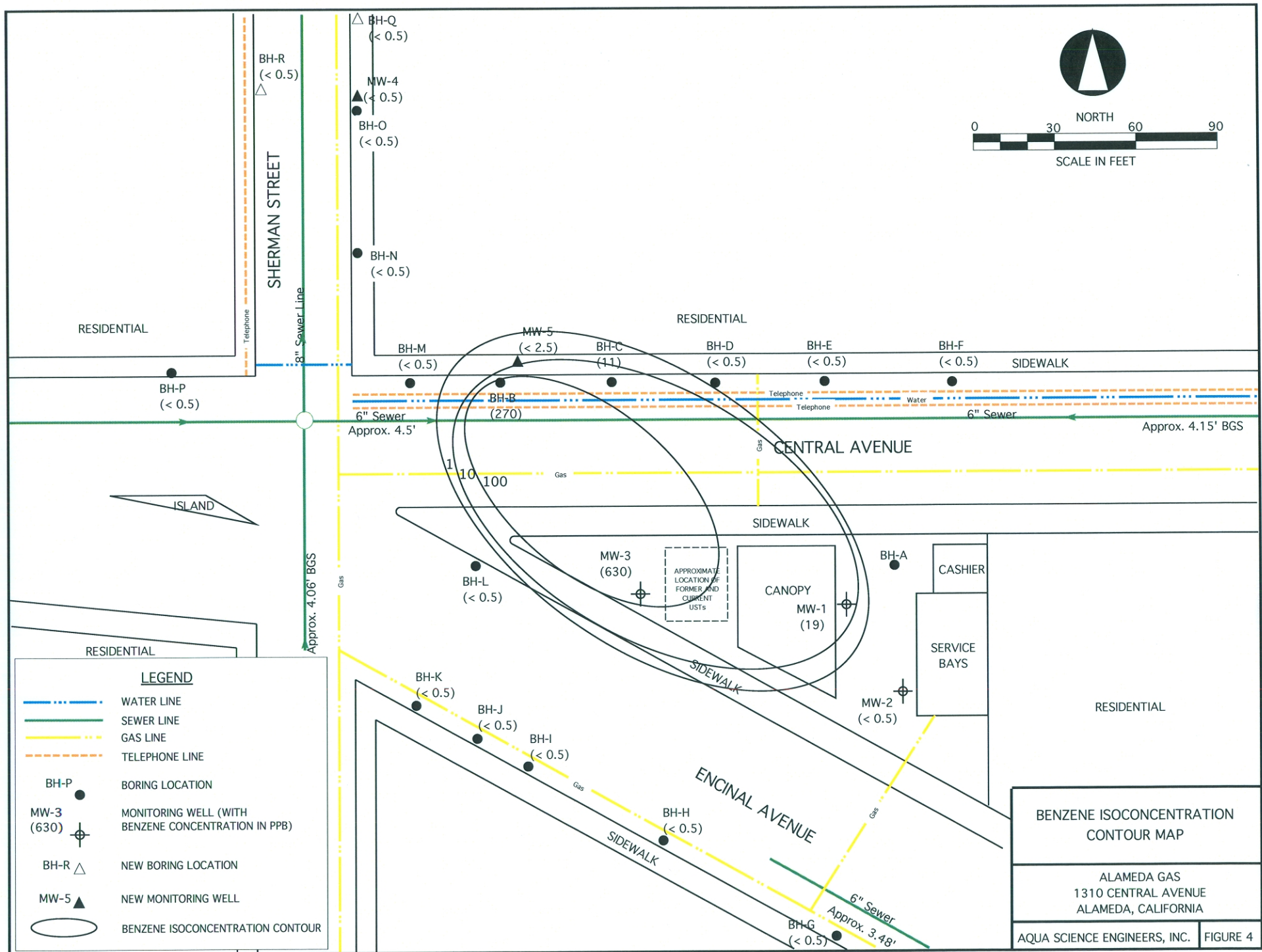
SAIDIAN PROPERTY
1310 CENTRAL AVENUE
ALAMEDA, CALIFORNIA

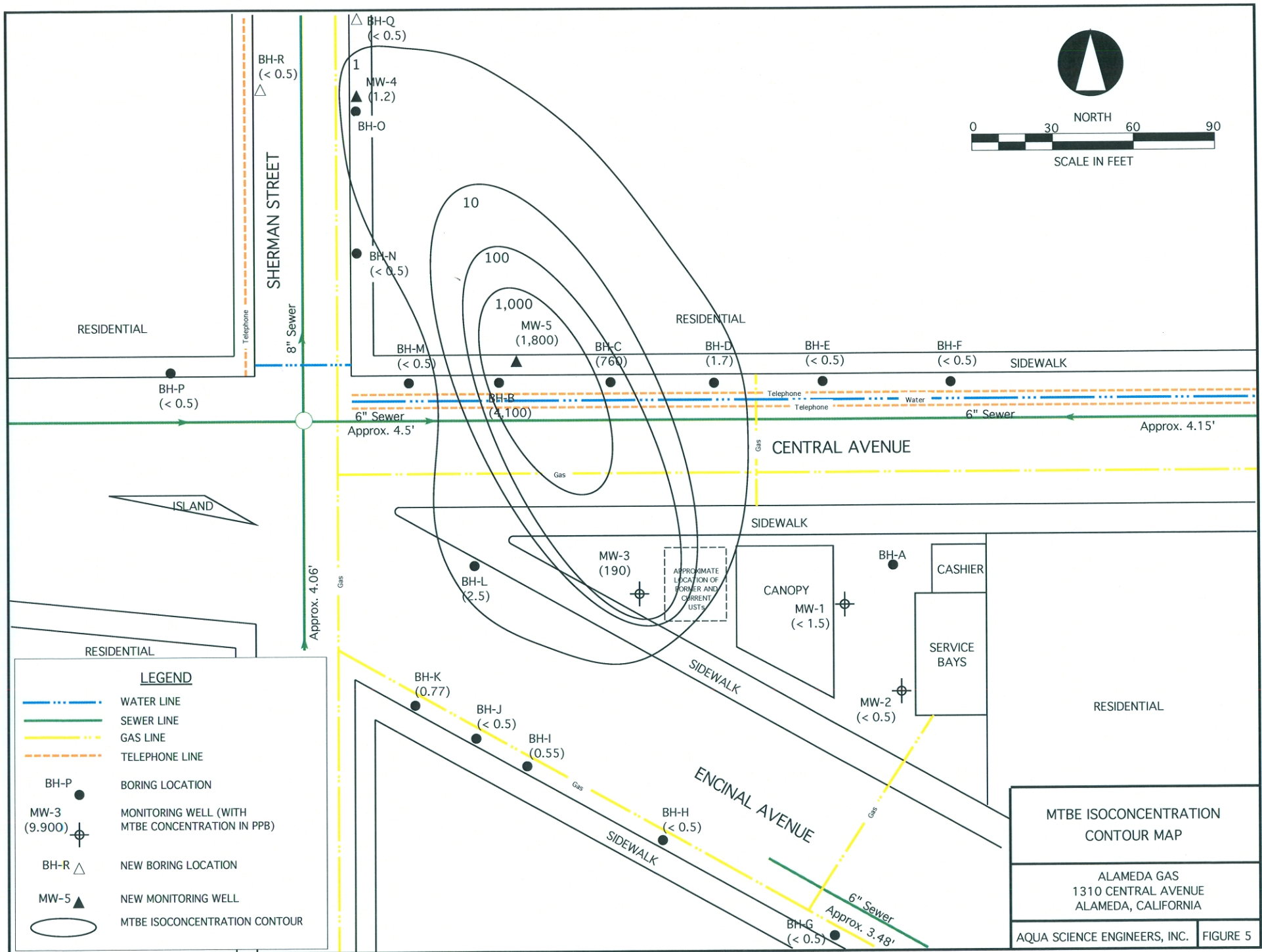
AQUA SCIENCE ENGINEERS, INC.

Figure 1











Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

TABLES

TABLE ONE
Summary of Chemical Analysis of SOIL Samples
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in parts per million

[illegible]

TABLE ONE
Summary of Chemical Analysis of SOIL Samples
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in parts per million

Boring & Depth (ft)	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
BH-N-2.5'	< 1.0	7.2*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
BH-O-2.0'	< 1.0	2.2*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
BH-P-2.0'	< 1.0	4.9*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
BH-Q-2.0'	< 1.0	11*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
BH-R-2.0'	< 1.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-4-2.0'	< 1.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
MW-5-2.0'	< 1.0	1.7*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
ESL	100	100	0.044	2.9	3.3	1.5	0.023	NE	NE	NE

Notes:

MTBE = Methyl-t-butyl ether

TAME = Tert-amyl methyl ether

TBA = Tert-Butanol

ESL = Environmental Screening Level established by the RWQCB for shallow residential soil where groundwater is a current or potential source of drinking water.

NE = ESL has not been established.

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

Detectable concentrations are in bold.

* = Laboratory noted that the hydrocarbons reported as TPH-D exhibited a non-typical diesel pattern.

TABLE TWO
Summary of Chemical Analysis of GROUNDWATER Samples from Soil Borings
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in parts per billion

Boring	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
BH-A	< 50	< 50	< 0.5	0.7	< 0.5	0.9	< 0.5	< 0.5	< 5.0	< 0.5
BH-B	1,800	< 2,000	270	8.8	18	13	4,100	5.6	440	< 3.0
BH-C	230	< 100	11	1.2	< 0.5	0.96	760	6.6	130	< 0.5
BH-D	< 50	72	< 0.5	< 0.5	< 0.5	< 0.5	1.7	< 0.5	< 5.0	< 0.5
BH-E	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
BH-F	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
BH-G	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
BH-H	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
BH-I	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	0.55	< 0.5	< 5.0	< 0.5
BH-J	< 50	200	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
BH-K	< 50	520	< 0.5	< 0.5	< 0.5	< 0.5	0.77	< 0.5	< 5.0	< 0.5
BH-L	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	2.5	< 0.5	< 5.0	< 0.5

TABLE TWO
Summary of Chemical Analysis of GROUNDWATER Samples from Soil Borings
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in parts per billion

Boring	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
BH-M	< 50	170*	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
BH-N	< 50	68	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
BH-O	< 50	100	< 0.5	< 0.5	< 0.5	< 0.5	19	< 0.5	< 5.0	< 0.5
BH-P	< 50	72	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
BH-Q	< 50	220*	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
BH-R	< 50	770*	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
ESL	100	100	1	2.9	3.3	1.5	5	NE	NE	VARIES

Notes:

MTBE = Methyl-t-butyl ether

TAME = Tert-amyl methyl ether

TBA = Tert-Butanol

ESL is the Environmental Screening Level established by the RWQCB for sites where groundwater is a current or potential source of drinking

NE = ESL is not established.

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

Detectable concentrations are in bold.

TABLE THREE
Groundwater Elevation Data
Saidian Property-Alameda
1310 Central Avenue, Alameda, CA

Well	Date Measurement	of Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation (msl)
MW-1	9/6/99	26.85	5.16	21.69
	5/16/00		3.24	23.61
	8/3/00		4.15	22.70
	12/5/00		4.90	21.95
	3/5/01		3.04	23.81
	6/4/01		4.01	22.84
	6/5/02		3.73	23.12
	9/9/02		5.06	21.79
	12/19/02		4.09	22.76
	3/10/03		3.50	23.35
	6/3/03		3.66	23.19
	9/18/03		4.91	21.94
	12/22/03		4.30	22.55
	3/12/04		2.93	23.92
	6/11/04		4.23	22.62
	9/13/04		5.02	21.83
	12/16/04		3.76	23.09
	3/21/05		2.81	24.04
	6/23/05		3.66	23.19
	9/30/05		4.55	22.30
	12/8/05		4.21	22.64
	3/1/06		2.90	23.95
	5/25/06	29.18	2.84	26.34

TABLE THREE
Groundwater Elevation Data
Saidian Property-Alameda
1310 Central Avenue, Alameda, CA

Well	Date Measurement	of Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation (msl)
MW-2	9/6/99	27.18	5.56	21.62
	5/16/00		3.52	23.66
	8/3/00		4.44	22.74
	12/5/00		5.24	21.94
	3/5/01		3.28	23.90
	6/4/01		4.33	22.85
	6/5/02		3.98	23.20
	9/9/02		5.34	21.84
	12/19/02		4.33	22.85
	3/10/03		3.58	23.60
	6/3/03		3.87	23.31
	9/18/03		5.24	21.94
	12/22/03		4.47	22.71
	3/12/04		3.10	24.08
	6/11/04		4.51	22.67
	9/13/04		5.35	21.83
	12/16/04		4.09	23.09
	3/21/05		3.01	24.17
	6/23/05		3.91	23.27
	9/30/05		4.86	22.32
	12/8/05		4.49	22.69
	3/1/06		3.09	24.09
	5/25/06	29.55	3.16	26.39

TABLE THREE
Groundwater Elevation Data
Saidian Property-Alameda
1310 Central Avenue, Alameda, CA

Well	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation (msl)
MW-3	9/6/00	25.30	4.02	21.28
	5/16/00		2.06	23.24
	8/3/00		3.20	22.10
	12/5/00		3.71	21.59
	3/5/01		1.90	23.40
	6/4/01		2.72	22.58
	6/5/02		2.75	22.55
	9/9/02		3.88	21.42
	12/19/02		2.79	22.51
	3/10/03		2.36	22.94
	6/3/03		2.65	22.65
	9/19/03		3.15	22.15
	12/22/03		2.83	22.47
	3/12/04		2.00	23.30
	6/11/04		3.11	22.19
	9/13/04		3.90	21.40
	12/16/04		2.89	22.41
	3/21/05		1.93	23.37
	6/23/05		2.69	22.61
	9/30/05		4.54	20.76
MW-4	12/8/05	26.23	3.05	22.25
	3/1/06		1.95	23.35
	5/25/06		2.11	25.63
MW-4	5/25/06	26.23	2.54	23.69
MW-5	5/25/06	26.78	2.60	24.18

Notes:

Wells were resurveyed on April 27, 2006

TABLE FOUR
Summary of Chemical Analysis of GROUNDWATER Samples
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in **parts per billion (ppb)**

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
MW-1										
9/6/99	5,700	8,700	170	59	22	85	20,000	NA	NA	NA
5/16/00	20,000	< 7,500	38	6.3	740	1,600	< 5.0	< 5.0	< 50	< 5.0
8/3/00	20,000	< 6,000	56	9.7	920	1,600	< 0.5	< 0.5	< 50	< 0.5
12/5/00	31,000	< 4,000	64	27	820	2,200	< 10	< 5.0	< 50	< 5.0
3/5/01	20,000	< 4,000	19	< 5.0	480	870	< 5.0	< 5.0	< 50	< 5.0
6/4/01	23,000	< 7,000	58	50	710	2,100	5.1	< 5.0	< 50	< 5.0
6/5/02	7,400	< 1,500	9.3	6.7	180	230	< 1.0	< 1.0	< 10	< 1.0
9/9/02	8,300	< 3,500	32	20	390	670	< 2.0	< 2.0	< 20	< 2.0
12/19/02	5,100	--	7.9	2.5	56	93	< 1.0	< 1.0	< 10	< 1.0
3/10/03	2,000	< 2,000	3.4	2.9	80	98	< 0.5	< 0.5	< 5.0	< 0.5
6/3/03	7,300	< 4,000	6.8	9.9	300	1,000	2.3	< 0.5	< 5.0	< 0.5
9/18/03	9,000	< 3,000	26	22	420	1,200	4.5	< 1.5	< 20	< 1.5
12/22/03	4,300	< 2,000	12	6.7	200	290	9.1	< 1.0	< 10	< 1.0
3/12/04	7,000	< 3,000	8.3	8.2	250	760	3.9	< 2.0	< 20	< 2.0
6/11/04	13,000	< 4,000	26	27	530	1,700	< 2.5	< 2.5	< 15	< 2.5
9/13/04	17,000	< 4,000	37	42	840	2,000	< 5.0	< 5.0	< 50	< 5.0
12/16/04	1,800	< 1,000	5.9	1.9	100	35	16	< 0.5	< 5.0	< 0.5
3/21/05	7,500	< 3,000	3.4	4.2	290	760	< 1.5	< 1.5	< 20	< 1.5
6/23/05	11,000	< 8,000	15	11	370	910	2.4	< 1.5	< 7	< 1.5
9/30/05	9,800	< 4000	32	25	540	680	1.6	< 1.5	< 7.0	< 1.5
12/8/05	9,200	< 4,000	27	21	500	490	2.2	< 1.5	< 7.0	< 1.5
3/1/06	6,500	< 4,000	8.1	9.4	370	660	1.8	< 1.5	< 6.0	< 1.5
5/25/06	10,000	< 3,000	19	14	900	620	< 1.5	< 1.5	< 7.0	< 1.5

TABLE FOUR

Alameda Gas, 1310 Central Avenue, Alameda, California

All results are in **parts per billion (ppb)**

[illegible]

TABLE FOUR
Summary of Chemical Analysis of GROUNDWATER Samples
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in **parts per billion (ppb)**

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
MW-3										
9/6/99	43,000	870	860	70	< 0.5	65	120,000	NA	NA	NA
5/16/00	17,000	< 5,000	2,800	60	380	190	990	9.1	350	< 5.0
8/3/00	16,000	< 2,000	1,600	29	210	53	1,200	21	260	< 2.0
12/5/00	17,000	5,800	1,700	45	460	240	1,100	21	230	< 5.0
3/5/01	29,000	<1300	2,100	68	280	100	180	<8.0	<80	<8.0
6/4/01	17,000	<6,000	2,000	56	340	230	300	<10	130	<10
6/5/02	11,000	<2,000	1,600	46	210	47	790	<10	220	<10
9/9/02	12,000	< 800	1,400	44	130	27	760	< 10	160	< 10
12/19/02	10,000	--	740	32	180	38	86	< 5.0	< 50	< 5.0
3/10/03	13,000	< 6,000	1,200	42	240	35	470	5.3	140	< 5.0
6/3/03	6,500	< 3,000	750	21	46	15	1,300	< 50	280	< 2.5
9/18/03	9,800	< 3,000	1,500	38	170	32	420	< 10	150	< 10
12/22/03	8,800	< 2,000	1,100	32	82	20	330	5.8	52	< 5.0
3/12/04	7,600	< 3,000	590	23	69	17	470	9.2	63	< 2.5
6/11/04	7,800	< 2,000	840	19	58	15	710	12	140	< 1.5
9/13/04	7,500	< 1,500	840	17	23	7.8	730	15	93	< 2.5
12/16/04	9,300	< 2,000	1,100	26	76	13	600	12	130	< 2.5
3/21/05	11,000	< 3,000	1,200	37	190	24	460	9.3	100	< 2.5
6/23/05	9,600	< 4,000	1,100	28	93	23	370	8.2	67	< 2.5
9/30/05	9,000	< 3,000	690	18	32	14	380	8.4	72	< 1.5
12/8/05	8,700	< 3,000	560	23	38	12	350	6.9	82	< 1.5
3/1/06	8,400	< 2,000	410	24	42	13	360	8.0	58	< 1.5
5/25/06	9,900	< 2,000	630	25	13	13	190	5.3	59	< 1.5

TABLE FOUR
Summary of Chemical Analysis of GROUNDWATER Samples
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in **parts per billion (ppb)**

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
MW-4 5/25/06	< 50	86	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	< 5.0	< 0.5
MW-5 5/25/06	410	< 80	< 2.5	< 2.5	< 2.5	< 2.5	1,800	28	44	< 2.5
ESL	100	100	1	2.9	3.3	1.5	5	NE	NE	VARIES

Notes:

MTBE = Methyl-t-butyl ether

TAME = Tert-amyl methyl ether

TBA = Tert-Butanol

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (February 2005)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

NA = Samples Not Analyzed for this compound.

NE = ESLs are not established.

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

Most recent data in bold.

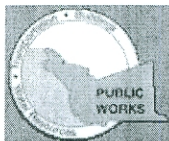


Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX A

Permits

Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 03/22/2006 By jamesy
Permits Issued: W2006-0213 to W2006-0215

Receipt Number: WR2006-0131
Permits Valid from 04/03/2006 to 04/30/2006

Application Id: 1142624743646
Site Location: 1310 Central Avenue
Project Start Date: 04/03/2006

City of Project Site: Alameda
Completion Date: 04/30/2006

Applicant: Aqua Science Engineers - Robert Kitay
208 West El Pintado, Suite C, Danville, CA 94526
Property Owner: Nissan Saidian
5733 Medallion Court, Castro Valley, CA 94552
Client: ** same as Property Owner **

Phone: 925-820-9391
Phone: --

Total Due: \$800.00
Total Amount Paid: \$800.00
Payer Name : Aqua Science Engineers **Paid By:** VISA **PAID IN FULL**

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 2 Wells
Driller: Woodward Drilling - Lic #: 710079 - Method: hstem

Work Total: \$600.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2006-0213	03/22/2006	07/02/2006	MW-4	8.00 in.	2.00 in.	2.00 ft	20.00 ft
W2006-0214	03/22/2006	07/02/2006	MW-5	8.00 in.	2.00 in.	2.00 ft	20.00 ft

Specific Work Permit Conditions

1. 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.
2. 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 statutes 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 work is being completed.
3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained.
4. Compliance with the 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.

Alameda County Public Works Agency - Water Resources Well Permit

5. Applicant shall contact George Cashen for an inspection time at 510-670-6610 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
6. 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.
7. Minimum surface seal thickness is two inches of cement grout placed by tremie
8. Minimum seal depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
9. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

Borehole(s) for Investigation-Contamination Study - 2 Boreholes

Driller: Woodward Drilling - Lic #: 710079 - Method: DP

Work Total: \$200.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2006- 0215	03/22/2006	07/02/2006	2	2.00 in.	12.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.
 2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
 3. 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.
 4. Applicant shall contact George Cashen for an inspection time at 510-670-6610 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
 5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
 6. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.
-

CITY OF ALAMEDA

2263 SANTA CLARA AVENUE, ROOM 190
ALAMEDA, CA 94501

(510) 747-6800
FAX (510) 747-6804

Encroachment Permit: EN06-0017**Applicant Information**

AQUA SCIENCE ENGINEERS,
INC.
208 W. EL PINTADO
DANVILLE, CA 94526
925-820-9391

Contractor Information

AQUA SCIENCE ENGINEERS, INC.
208 W. EL PINTADO
DANVILLE, CA 94526
925-820-9391

Owner Information

SAIDIAN & ZECTSER LLC
AND SAIDIAN G & Z INC
5977 SKYFARM DR
CASTRO VALLEY, CA 94552-
1636
N/A

Project Information

Status: **ISSUED**

Applied: **03/31/2006**

Issued: **03/31/2006**

Type: **Encroachment Permit**

Finalized:

Category: **NA**

Sub-Type: **NA**

Parcel Number: **072-0341-001-00**

Valuation: **\$36.00**

Job Address: **1310 CENTRAL AVE**

Work Description: **"NO PARKING" - 8 N/M SPACES ADJACENT TO GAS STATION AT 1310 CENTRAL AVE
(DRILLING), MONDAY, APRIL 3, 2006, 7:00 AM TO 5:00 PM**

INSPECTIONS

Building: (510) 747-6830 (7:30-9:30 AM)

Electrical: (510) 747-6830 (7:30-9:30 AM)

Plumbing & Mechanical: (510) 747-6830 (7:30-9:30 AM)

Fire: (510) 337-2120

Design Review: (510) 747-6850

<u>ITEM #</u>	<u>FEE DESCRIPTION</u>	<u>ACCOUNT CODE</u>	<u>UNITS</u>	<u>FEE AMOUNT</u>	<u>PAID</u>
835	835-Engineering - Other Revenue (free form)	4225-39900 (1590)	36	\$36.00	\$36.00
Total Fees:					\$36.00

<u>RECEIPT #</u>	<u>PAYMENT METHOD</u>	<u>CHECK #</u>	<u>COMMENTS/PAYEE</u>	<u>RECEIPT DATE</u>	<u>RECEIPT AMT</u>
429820	Check	30019	AQUA SCIENCE ENGINEERS, INC.	03/31/2006	\$36.00
Total Payments:					\$36.00
Balance Due:					\$0.00

2263 SANTA CLARA AVENUE, ROOM 190
ALAMEDA, CA 94501

CITY OF ALAMEDA

(510) 747-6800
FAX (510) 747-6804

RIGHT OF WAY PERMIT: EX06-0034

Applicant Information

AQUA SCIENCE ENGINEERS, INC.
208 W. EL PINTADO
DANVILLE, CA 94526
925-820-9391

Contractor Information

AQUA SCIENCE ENGINEERS, INC.
208 W. EL PINTADO
DANVILLE, CA 94526
925-820-9391

Owner Information

SAIDIAN & ZEKTSER LLC AND SAIDIAN G
& Z INC
5977 SKYFARM DR
CASTRO VALLEY, CA 94552-1636
N/A

Project Information

Status: **ISSUED**

Type: **Right-of-Way Permit**

Category: **NA**

Sub-Type: **NA**

Parcel Number: **072-0341-001-00**

Job Address: **1310 CENTRAL AVE, ALAMEDA, CA 94501**

Work Description: **ENVIRONMENTAL TESTING**

Applied: **03/15/2006**

Finalized:

Issued: **03/31/2006**

Expires: **03/30/2007**

Valuation: **\$150.00**

INSPECTIONS

Building: (510) 748-4564 (7:30-9:30 AM)
Plumbing & Mechanical: (510) 748-4563 (7:30-9:30 AM)

Electrical: (510) 748-4634 (7:30-9:30 AM)
Fire: (510) 749-5885
Design Review: (510) 748-4554

ITEM #	FEE DESCRIPTION	ACCOUNT CODE	UNITS	FEE AMOUNT	PAID
250	250-Filing Fee (per activity)	4140-37450 (1050)	1	\$40.00	\$40.00
620	620-Records Management Fee	469409-37900 (6210)	1	\$3.50	\$3.50
783	783-Engineering Inspection (free form)	4215-37160 (9500)	100	\$100.00	\$100.00
833	833-Right of Way Permit Fee	4225-37190 (6321)	1	\$54.00	\$54.00
965	965-Community Planning Fee (Enter 1)	4140-33064 (8765)	1	\$0.45	\$0.45
1160	1160-Business License Fee (free form)	2430-33100 (8000)	68	\$68.00	\$68.00
2999	Technology Fee (enter 1 required)	4140-33063 (1051)	1	\$2.00	\$2.00

Total Fees: \$267.95

RECEIPT #	PAYMENT METHOD	COMMENTS/PAYEE	RECEIPT DATE	RECEIPT AMT
429394	Check	AQUA SCIENCE ENGINEERS INC	03/15/2006	\$199.95
429819	Check	AQUA SCIENCE ENGINEERS, INC.	03/31/2006	\$68.00
Total Payments:				\$267.95
Balance Due:				\$0.00

**** See application for additional requirements ****

INSPECTIONS

(510) 749-5840

Note: All construction within the public right of way must have barricades with flashers for night time protection.

This is to certify that the above work has been completed to my satisfaction and approval.

Date

Inspector

6017
Version 6.1.3

RIGHT OF WAY PERMIT: EX06-0034

Applicant Information

AQUA SCIENCE ENGINEERS, INC.
208 W. EL PINTADO
DANVILLE, CA 94526
925-820-9391

Contractor Information

AQUA SCIENCE ENGINEERS, INC.
208 W. EL PINTADO
DANVILLE, CA 94526
925-820-9391

Owner Information

SAIDIAN & ZEKTSER LLC AND SAIDIAN G
& Z INC
5977 SKYFARM DR
CASTRO VALLEY, CA 94552-1636
N/A

Project Information

Status: **APPLIED**
Type: **Right-of-Way Permit**

Applied: **03/15/2006**
Finaled:

Issued:
Expires: **03/14/2007**

Category: NA
Sub-Type: NA

Parcel Number: **072-0341-001-00**

Valuation: **\$150.00**

Job Address: **1310 CENTRAL AVE, ALAMEDA, CA 94501**

Work Description: **ENVIRONMENTAL TESTING**

INSPECTIONS

Building: (510) 748-4564 (7:30-9:30 AM)
Plumbing & Mechanical: (510) 748-4563 (7:30-9:30 AM)

Electrical: (510) 748-4634 (7:30-9:30 AM)
Fire: (510) 749-5885
Design Review: (510) 748-4554

ITEM #	FEE DESCRIPTION	ACCOUNT CODE	UNITS	FEE AMOUNT	PAID
250	250-Filing Fee (per activity)	4140-37450 (1050)	1	\$40.00	\$40.00
620	620-Records Management Fee	469409-37900 (6210)	1	\$3.50	\$3.50
783	783-Engineering Inspection (free form)	4215-37160 (9500)	100	\$100.00	\$100.00
833	833-Right of Way Permit Fee	4225-37190 (6321)	1	\$54.00	\$54.00
965	965-Community Planning Fee (Enter 1)	4140-33064 (8765)	1	\$0.45	\$0.45
2999	Technology Fee (enter 1 required)	4140-33063 (1051)	1	\$2.00	\$2.00

Total Fees: \$199.95

RECEIPT #	PAYMENT METHOD	COMMENTS/PAYEE	RECEIPT DATE	RECEIPT AMT
429394	Check	AQUA SCIENCE ENGINEERS INC	03/15/2006	\$199.95
Total Payments:				\$199.95
Balance Due:				\$0.00

**** See application for additional requirements ****

INSPECTIONS

(510) 749-5840

Note: All construction within the public right of way must have barricades with flashers for night time protection.

This is to certify that the above work has been completed to my satisfaction and approval.

Date




Inspector





Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX B

Boring Logs
And
Well Construction Details

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS										Well BH-Q	
Project Name: Alameda Gas					Project Location: 1310 Central Avenue, Alameda, CA					Page 1 of 1	
Driller: Woodward Drilling				Type of Rig: Hollow-Stem Auger			Size of Drill: 8.0" Diameter				
Logged By: David Rains				Date Drilled: April 3, 2006				Checked By: Robert E. Kitay, P.G.			
WATER AND WELL DATA							Total Depth of Well Completed: NA				
Depth of Water First Encountered: 3'							Well Screen Type and Diameter: NA				
Static Depth of Water in Boring: NA							Well Screen Perforation Size: NA				
Total Depth of Boring: 5'							Type and Size of Soil Sampler: 2.0" I.D. 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		standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.		
0		Portland Cement							0	Clayey SAND (SP); dark brown; medium stiff; moist; 90% sand; 10% clay; moderate plasticity; medium estimated K; no odor	
5								5			
10									10	End of boring at 5'	
15									15		
20									20		
25									25		
30									30		

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS										Well BH-R	
Project Name: Alameda Gas					Project Location: 1310 Central Avenue, Alameda, CA					Page 1 of 1	
Driller: Woodward Drilling				Type of Rig: Hollow-Stem Auger			Size of Drill: 8.0" Diameter				
Logged By: David Rains				Date Drilled: April 3, 2006				Checked By: Robert E. Kitay, P.G.			
WATER AND WELL DATA							Total Depth of Well Completed: NA				
Depth of Water First Encountered: 3'							Well Screen Type and Diameter: NA				
Static Depth of Water in Boring: NA							Well Screen Perforation Size: NA				
Total Depth of Boring: 5'							Type and Size of Soil Sampler: 2.0" I.D. 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		standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.		
0							0	Clayey SAND (SP); dark brown; medium stiff; moist; 90% sand; 10% clay; moderate plasticity; medium estimated K; no odor			
5							End of boring at 5'				
10							10				
15							15				
20							20				
25							25				
30							30				

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS							Well MW-4		
Project Name: Alameda Gas			Project Location: 1310 Central Avenue, Alameda, CA				Page 1 of 1		
Driller: Woodward Drilling			Type of Rig: Hollow-Stem Auger		Size of Drill: 8.0" Diameter				
Logged By: David Rains			Date Drilled: April 3, 2006			Checked By: Robert E. Kitay, P.G.			
WATER AND WELL DATA							Total Depth of Well Completed: 16'		
Depth of Water First Encountered: 4'							Well Screen Type and Diameter: 2" Schedule 40 PVC		
Static Depth of Water in Boring: 4'							Well Screen Perforation Size: 0.020" factory slotted		
Total Depth of Boring: 16'							Type and Size of Soil Sampler: 2.0" I.D. 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		standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
<div style="position: relative; height: 300px;"> <div style="position: absolute; left: 0; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 10px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 20px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 30px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 40px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 50px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 60px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 70px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 80px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 90px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 100px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 110px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 120px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 130px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 140px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 150px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 160px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 170px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 180px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 190px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 200px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 210px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 220px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 230px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 240px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 250px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 260px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 270px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 280px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 290px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 300px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 310px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 320px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 330px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 340px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 350px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 360px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 370px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 380px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 390px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 400px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 410px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 420px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 430px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 440px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 450px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 460px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 470px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 480px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 490px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 500px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 510px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 520px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 530px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 540px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 550px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 560px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 570px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 580px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 590px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 600px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 610px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 620px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 630px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 640px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 650px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 660px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 670px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 680px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 690px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 700px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 710px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 720px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 730px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 740px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 750px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 760px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 770px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 780px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 790px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 800px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 810px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 820px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 830px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 840px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 850px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 860px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 870px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 880px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 890px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 900px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 910px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 920px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 930px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 940px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 950px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 960px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 970px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 980px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> <div style="position: absolute; left: 990px; top: 0; bottom: 0; width: 10px; border-left: 1px solid black;"></div> </div>									

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS										Well MW-5					
Project Name: Alameda Gas					Project Location: 1310 Central Avenue, Alameda, CA					Page 1 of 1					
Driller: Woodward Drilling				Type of Rig: Hollow-Stem Auger			Size of Drill: 8.0" Diameter								
Logged By: David Rains				Date Drilled: April 4, 2006				Checked By: Robert E. Kitay, P.G.							
WATER AND WELL DATA								Total Depth of Well Completed: 17'							
Depth of Water First Encountered: 4'								Well Screen Type and Diameter: 2" Schedule 40 PVC							
Static Depth of Water in Boring: 4'								Well Screen Perforation Size: 0.020" factory slotted							
Total Depth of Boring: 17'								Type and Size of Soil Sampler: 2.0" I.D. 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			standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.		
0						0					0	Concrete			
5						5	Clayey SAND (SP); dark brown; medium stiff; moist; 90% sand; 10% clay; moderate plasticity; medium estimated K; no odor								
10						10	SAND (SP); brown; loose; wet; 100% sand; non-plastic; high estimated K; no odor								
15						15	Clayey SAND (SP); brown; medium stiff; wet; 90% sand; 10% clay; moderate plasticity; medium estimated K; no odor								
20						20	SAND (SP); grey green; loose; wet; 100% sand; non-plastic; high estimated K; gasoline-like odor								
25											25	light brown; no odor below 13'			
30										30	End of boring at 17'				



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX C

Well Sampling Field Log

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME

Alameda

JOB NUMBER

3648

DATE OF SAMPLING

5-25-06

WELL ID.

MW-1

SAMPLER

MLR

TOTAL DEPTH OF WELL

10.75

WELL DIAMETER

2

DEPTH TO WATER PRIOR TO PURGING

2.84

PRODUCT THICKNESS

0

DEPTH OF WELL CASING IN WATER

7.91

NUMBER OF GALLONS PER WELL CASING VOLUME

1.32

NUMBER OF WELL CASING VOLUMES TO BE REMOVED

3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING

3.9

EQUIPMENT USED TO PURGE WELL

Ø Bailer

TIME EVACUATION STARTED

1330

TIME EVACUATION COMPLETED

1350

TIME SAMPLES WERE COLLECTED

1400

DID WELL GO DRY

NO

AFTER HOW MANY GALLONS

—

VOLUME OF GROUNDWATER PURGED

4.0

SAMPLING DEVICE

Bailer

SAMPLE COLOR

clear

ODOR/SEDIMENT

slight odor

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	68.7	6.95	395
2	68.6	6.56	416
3	69.2	6.49	561

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-1/5-25/06	3	VVAFs		HQ
	2	1-L		—

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME

Alameda

JOB NUMBER

3648

DATE OF SAMPLING

5-25-06

WELL ID.

MW-2

SAMPLER

MLR

TOTAL DEPTH OF WELL

12.10

WELL DIAMETER

2

DEPTH TO WATER PRIOR TO PURGING

3.16

PRODUCT THICKNESS

0

DEPTH OF WELL CASING IN WATER

8.94

NUMBER OF GALLONS PER WELL CASING VOLUME

1.49

NUMBER OF WELL CASING VOLUMES TO BE REMOVED

3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING

4.5

EQUIPMENT USED TO PURGE WELL

Bailer

TIME EVACUATION STARTED

1435

TIME EVACUATION COMPLETED

1455

TIME SAMPLES WERE COLLECTED

1500

DID WELL GO DRY

NO

AFTER HOW MANY GALLONS

—

VOLUME OF GROUNDWATER PURGED

6

SAMPLING DEVICE

Bailer

SAMPLE COLOR

Clear

ODOR/SEDIMENT

no odor / no sed

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
2	69.1	6.54	193
4	68.7	6.28	189
6	68.3	6.21	176

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-2/5-25-06	3	VVA		HLR
	2	1-L		—

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

RECEIVED

By dehloptoxic at 2:47 pm, Jul 25, 2006

PROJECT NAME Alameda

JOB NUMBER 3648 DATE OF SAMPLING 5-25-06

WELL ID. MW-3 SAMPLER MLR

TOTAL DEPTH OF WELL 1585 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 2.11

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 13.74

NUMBER OF GALLONS PER WELL CASING VOLUME 2.29

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6.8

EQUIPMENT USED TO PURGE WELL Bailer

TIME EVACUATION STARTED 1410 TIME EVACUATION COMPLETED ~~1420~~ 1425

TIME SAMPLES WERE COLLECTED 1430

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 9

SAMPLING DEVICE Bailer

SAMPLE COLOR clear ODOR/SEDIMENT strang odor

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
<u>3</u>	<u>68.6</u>	<u>6.37</u>	<u>556</u>
<u>6</u>	<u>67.4</u>	<u>6.35</u>	<u>564</u>
<u>9</u>	<u>69.1</u>	<u>6.39</u>	<u>552</u>

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-3/5-25-06</u>	<u>3</u>	<u>VOA's</u>		<u>HU</u>
	<u>2</u>	<u>1-L</u>		<u>—</u>

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME Alameda
 JOB NUMBER 3648 DATE OF SAMPLING 5-25-06
 WELL ID. MW-4 SAMPLER MLR
 TOTAL DEPTH OF WELL 14.50 WELL DIAMETER 2
 DEPTH TO WATER PRIOR TO PURGING 2.60
 PRODUCT THICKNESS 0
 DEPTH OF WELL CASING IN WATER 11.9
 NUMBER OF GALLONS PER WELL CASING VOLUME 1.9
 NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3
 REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 5.9
 EQUIPMENT USED TO PURGE WELL Bailer
 TIME EVACUATION STARTED 1220 TIME EVACUATION COMPLETED 1240
 TIME SAMPLES WERE COLLECTED 1245
 DID WELL GO DRY NO AFTER HOW MANY GALLONS —
 VOLUME OF GROUNDWATER PURGED 6
 SAMPLING DEVICE Bailer
 SAMPLE COLOR cloudy brn ODOR/SEDIMENT slight odor
brn silty

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
<u>2</u>	<u>63.8</u>	<u>7.36</u>	<u>748</u>
<u>4</u>	<u>63.3</u>	<u>6.76</u>	<u>656</u>
<u>6</u>	<u>63.5</u>	<u>6.73</u>	<u>615</u>

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-4/5-25-06</u>	<u>3</u>	<u>VQA</u>		<u>HLR</u>
	<u>2</u>	<u>1-L</u>		<u>—</u>

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME Alameda

JOB NUMBER 3648 DATE OF SAMPLING 5-25-06

WELL ID. MLW-5 SAMPLER MLR

TOTAL DEPTH OF WELL 13.30 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 2.54

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 10.76

NUMBER OF GALLONS PER WELL CASING VOLUME 1.79

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 5.3

EQUIPMENT USED TO PURGE WELL Bailer

TIME EVACUATION STARTED 1250-1325 TIME EVACUATION COMPLETED 1505-15-25

TIME SAMPLES WERE COLLECTED 1530

DID WELL GO DRY Yes AFTER HOW MANY GALLONS 4

VOLUME OF GROUNDWATER PURGED 10

SAMPLING DEVICE Bailer

SAMPLE COLOR Silty brn ODOR/SEDIMENT NO O / Some Sol

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
2	66.5	6.97	731
4	65.1	6.90	427
6	64.9	7.27	586

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MLW-5/5-25-06	3	VOA		HQ
	1	1-L		



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX D

Survey Report



CSS ENVIRONMENTAL SERVICES, INC.
 Managing Cost, Scope and Schedule
 100 Galli Drive, Suite 1
 Novato, CA 94949
 Telephone: (415) 883-6203
 Facsimile: (415) 883-6204



Site Positions

6364D Aqua Science Alameda
 1310 Central Ave., Alameda

Horizontal Coordinate System: North American 1983-CONUS Survey Date: 04/27/06
 Height System: North American Vertical Datum 1988 Ortho. Ht. (GEOID99)
 Project file: 6364D Aqua Science Alameda.spr
 Desired Horizontal Accuracy: 0.100Ft + 1ppm
 Desired Vertical Accuracy: 0.100Ft + 2ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: Int. Feet

Site ID	Site Descriptor	Position	95% Error	Fix Status	Position Status
1 MW-3	This is TBM-1	Lat. 37° 46' 15.28672" N	0.017		Adjusted
	N RIM WELL LOCATION	Lon. 122° 15' 47.24157" W	0.017		
	N TOC	Elv. 28.17	0.035		
		Elv. 27.74			
2 MW-5	NR WELL LOC	Lat. 37° 46' 16.21022" N	0.025		Adjusted
	N RIM WELL LOCATION	Lon. 122° 15' 47.48996" W	0.021		
	N TOC	Elv. 27.39			
		Elv. 26.78			
3 MW-1	TBM2/NR WELL LOC	Lat. 37° 46' 15.20394" N	0.020		Adjusted
	N RIM WELL LOCATION	Lon. 122° 15' 46.13606" W	0.021		
	N TOC	Elv. 29.54			
		Elv. 29.18			
4 6882	MONUMENT DG6882	Lat. 37° 44' 10.70846" N	0.000	Fixed	Adjusted
		Lon. 122° 15' 23.58003" W	0.000	Fixed	
		Elv. 13.911	0.000	Fixed	
5 MW-4	NR WELL LOC	Lat. 37° 46' 17.12115" N	0.019		Adjusted
	N RIM WELL LOCATION	Lon. 122° 15' 48.05243" W	0.020		
	N TOC	Elv. 26.63			
		Elv. 26.23			
6 MW-2	NR WELL LOC	Lat. 37° 46' 14.93558" N	0.072		Adjusted
	N RIM WELL LOCATION	Lon. 122° 15' 45.97882" W	0.067		
	N TOC	Elv. 29.90			
		Elv. 29.55			
7 0882	MONUMENT HT0882	Lat. 37° 46' 48.04137" N	0.000	Fixed	Adjusted
		Lon. 122° 17' 53.51060" W	0.000	Fixed	
		Elv. 9.131	0.000	Fixed	



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX E

Analytical Results
And Chain of Custody
Documentation



Report Number : 49377

Date : 04/12/2006

David Rains
Aqua Science Engineers, Inc.
208 West El Pintado Rd.
Danville, CA 94526

Subject : 4 Soil Samples and 2 Water Samples
Project Name : Alameda
Project Number : 3648

Dear Mr. Rains,

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,

A handwritten signature in black ink, appearing to read 'Joel Kiff', is written over a printed name.

Joel Kiff

Subject : 4 Soil Samples and 2 Water Samples
Project Name : Alameda
Project Number : 3648

Case Narrative

Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples BH-Q, BH-R and MW-5. These hydrocarbons are higher boiling than typical diesel fuel.

Matrix Spike/Matrix Spike Duplicate Results associated with sample BH-R for the analytes Tert-Butanol, Methyl-t-butyl ether were outside of control limits. This may indicate a bias for the sample that was spiked. Since the LCS recoveries were within control limits, no data are flagged.

Approved By: _____

Joel Kiff

Project Name : **Alameda**

Project Number : **3648**

Sample : **BH-Q**

Matrix : Water

Lab Number : 49377-01

Sample Date : 04/03/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	04/08/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	04/08/2006
Toluene - d8 (Surr)	105		% Recovery	EPA 8260B	04/08/2006
4-Bromofluorobenzene (Surr)	99.9		% Recovery	EPA 8260B	04/08/2006
TPH as Diesel (Silica Gel)	220	50	ug/L	M EPA 8015	04/08/2006
Octacosane (Diesel Surrogate)	85.6		% Recovery	M EPA 8015	04/08/2006

Approved By:

Joel Kiff



Project Name : **Alameda**

Project Number : **3648**

Sample : **BH-Q**

Matrix : Soil

Lab Number : 49377-02

Sample Date : 04/03/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	04/08/2006
Toluene - d8 (Surr)	95.6		% Recovery	EPA 8260B	04/08/2006
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	04/08/2006
TPH as Diesel (Silica Gel)	11	1.0	mg/Kg	M EPA 8015	04/11/2006
1-Chlorooctadecane (Silica Gel Surr)	104		% Recovery	M EPA 8015	04/11/2006

Approved By:

Joel Kiff

Project Name : **Alameda**

Project Number : **3648**

Sample : **BH-R**

Matrix : Water

Lab Number : 49377-03

Sample Date : 04/03/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	04/08/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	04/08/2006
Toluene - d8 (Surr)	107		% Recovery	EPA 8260B	04/08/2006
4-Bromofluorobenzene (Surr)	98.6		% Recovery	EPA 8260B	04/08/2006
TPH as Diesel (Silica Gel)	770	50	ug/L	M EPA 8015	04/08/2006
Octacosane (Diesel Surrogate)	87.8		% Recovery	M EPA 8015	04/08/2006

Approved By:

Joel Kiff



Project Name : **Alameda**

Project Number : **3648**

Sample : **BH-R**

Matrix : Soil

Lab Number : 49377-04

Sample Date : 04/03/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	04/10/2006
Toluene - d8 (Surr)	95.2		% Recovery	EPA 8260B	04/10/2006
4-Bromofluorobenzene (Surr)	112		% Recovery	EPA 8260B	04/10/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	04/12/2006
1-Chlorooctadecane (Silica Gel Surr)	90.0		% Recovery	M EPA 8015	04/12/2006

Approved By:

Joel Kiff

Project Name : **Alameda**

Project Number : **3648**

Sample : **MW-4**

Matrix : Soil

Lab Number : 49377-05

Sample Date :04/03/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	04/07/2006
Toluene - d8 (Surr)	96.8		% Recovery	EPA 8260B	04/07/2006
4-Bromofluorobenzene (Surr)	114		% Recovery	EPA 8260B	04/07/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	04/10/2006
1-Chlorooctadecane (Silica Gel Surr)	99.1		% Recovery	M EPA 8015	04/10/2006

Approved By:

Joel Kiff

Project Name : **Alameda**

Project Number : **3648**

Sample : **MW-5**

Matrix : Soil

Lab Number : 49377-06

Sample Date : 04/04/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/08/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	04/08/2006
Toluene - d8 (Surr)	95.2		% Recovery	EPA 8260B	04/08/2006
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	04/08/2006
TPH as Diesel (Silica Gel)	1.7	1.0	mg/Kg	M EPA 8015	04/11/2006
1-Chlorooctadecane (Silica Gel Surr)	103		% Recovery	M EPA 8015	04/11/2006

Approved By:

Joel Kiff



Report Number : 49377

Date : 04/12/2006

QC Report : Method Blank DataProject Name : **Alameda**Project Number : **3648**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	04/08/2006
Octacosane (Diesel Surrogate)	97.2		%	M EPA 8015	04/08/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	04/10/2006
1-Chlorooctadecane (Silica Gel Surr)	94.7		%	M EPA 8015	04/10/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	04/12/2006
1-Chlorooctadecane (Silica Gel Surr)	83.1		%	M EPA 8015	04/12/2006
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/07/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	04/07/2006
Toluene - d8 (Surr)	96.3		%	EPA 8260B	04/07/2006
4-Bromofluorobenzene (Surr)	115		%	EPA 8260B	04/07/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	04/10/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	04/10/2006
Toluene - d8 (Surr)	109		%	EPA 8260B	04/10/2006
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	04/10/2006
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	04/08/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	04/08/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	04/08/2006
Toluene - d8 (Surr)	105		%	EPA 8260B	04/08/2006
4-Bromofluorobenzene (Surr)	96.9		%	EPA 8260B	04/08/2006

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 49377

Date : 04/12/2006

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Alameda**Project Number : **3648**

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	Blank	<50	1000	1000	827	785	ug/L	M EPA 8015	4/10/06	82.7	78.5	5.27	70-130	25
TPH as Diesel	49377-05	<1.0	20.0	20.0	23.7	21.1	mg/Kg	M EPA 8015	4/10/06	118	105	11.8	60-140	25
TPH as Diesel	49377-04	<1.0	20.0	20.0	20.1	20.1	mg/Kg	M EPA 8015	4/12/06	101	100	0.150	60-140	25
Benzene	48992-15	<0.0050	0.0398	0.0399	0.0386	0.0382	mg/Kg	EPA 8260B	4/7/06	97.0	95.6	1.46	70-130	25
Toluene	48992-15	<0.0050	0.0398	0.0399	0.0376	0.0370	mg/Kg	EPA 8260B	4/7/06	94.5	92.8	1.81	70-130	25
Tert-Butanol	48992-15	<0.0050	0.199	0.200	0.182	0.187	mg/Kg	EPA 8260B	4/7/06	91.5	93.9	2.54	70-130	25
Methyl-t-Butyl Ether	48992-15	<0.0050	0.0398	0.0399	0.0396	0.0392	mg/Kg	EPA 8260B	4/7/06	99.5	98.3	1.22	70-130	25
Benzene	49379-01	<0.0050	0.0398	0.0398	0.0284	0.0288	mg/Kg	EPA 8260B	4/10/06	71.3	72.3	1.32	70-130	25
Toluene	49379-01	<0.0050	0.0398	0.0398	0.0293	0.0295	mg/Kg	EPA 8260B	4/10/06	73.5	74.0	0.710	70-130	25
Tert-Butanol	49379-01	<0.0050	0.199	0.199	0.119	0.123	mg/Kg	EPA 8260B	4/10/06	59.9	61.9	3.33	70-130	25
Methyl-t-Butyl Ether	49379-01	0.0078	0.0398	0.0398	0.0356	0.0368	mg/Kg	EPA 8260B	4/10/06	69.7	73.0	4.53	70-130	25
Benzene	49409-06	<0.50	40.0	40.0	41.1	39.6	ug/L	EPA 8260B	4/8/06	103	99.1	3.67	70-130	25
Toluene	49409-06	<0.50	40.0	40.0	44.0	41.9	ug/L	EPA 8260B	4/8/06	110	105	4.87	70-130	25
Tert-Butanol	49409-06	<5.0	200	200	212	210	ug/L	EPA 8260B	4/8/06	106	105	1.14	70-130	25
Methyl-t-Butyl Ether	49409-06	5.5	40.0	40.0	46.3	46.3	ug/L	EPA 8260B	4/8/06	102	102	0.140	70-130	25

Approved By:  Joe Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

QC Report : Laboratory Control Sample (LCS)Project Name : **Alameda**Project Number : **3648**

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	4/10/06	96.2	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	4/12/06	93.3	70-130
Benzene	0.0400	mg/Kg	EPA 8260B	4/7/06	97.6	70-130
Toluene	0.0400	mg/Kg	EPA 8260B	4/7/06	95.0	70-130
Tert-Butanol	0.200	mg/Kg	EPA 8260B	4/7/06	91.9	70-130
Methyl-t-Butyl Ether	0.0400	mg/Kg	EPA 8260B	4/7/06	99.9	70-130
Benzene	0.0398	mg/Kg	EPA 8260B	4/10/06	94.7	70-130
Toluene	0.0398	mg/Kg	EPA 8260B	4/10/06	98.6	70-130
Tert-Butanol	0.199	mg/Kg	EPA 8260B	4/10/06	87.2	70-130
Methyl-t-Butyl Ether	0.0398	mg/Kg	EPA 8260B	4/10/06	92.0	70-130
Benzene	40.0	ug/L	EPA 8260B	4/8/06	99.4	70-130
Toluene	40.0	ug/L	EPA 8260B	4/8/06	109	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/8/06	104	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/8/06	102	70-130

KIFF ANALYTICAL, LLC

Approved By:

Joel Kiff

Aqua Science Engineers, Inc.
208 W. El Pintado Road
Danville, CA 94526
(925) 820-9397
FAX (925) 837-4853

Chain of Custody

49377

PAGE 1 OF 1

SAMPLER (SIGNATURE)

PROJECT NAME

~~Alameda~~ Alameda

JOB NO.

ADDRESS

1310 Central Ave

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX	TPH-DIESEL W/ Silica Gel Cleanup	TPH-MINERAL SPIRITS W/ Silica Gel Cleanup	PURGEABLE HALOCARBONS	VOLATILE ORGANICS (EPA 8260)	SEMI-VOLATILE ORGANICS	OIL & GREASE	LUFT METALS (5)	CAM 17 METALS	PCBs & PESTICIDES	ORGANOPHOSPHORUS PESTICIDES	FUEL OXYGENATES	Pb (TOTAL or DISSOLVED)	TPH-G/BTEX/5 OXY'S (EPA 8260)	HOLD	
BH-Q	4-3	940	W	5	X	X										X				01
BH-Q		940	S	1																02
BH-R		1610	W	5																03
BH-R		1610	S	1																04
MW-4		910	S	1																05
MW-5	4-4	920	S	1																06
					Sample Request Soil															
					Temp °C 4.8 Therm. ID# 1R-1															
					Initial RLW Date 040606 Time 1605															
					Coolant present: Yes / No															
					Sample Request water															
					Temp °C 2.0 Therm. ID# 1R-1															
					Initial RLW Date 040606 Time 1605															
					Coolant present: Yes / No															

RELINQUISHED BY:

(signature) 1200 (time)

RANs 4-5-06 (printed name) (date)

Company-

Aqua Science Engineers

RECEIVED BY:

(signature) (time)

(printed name) (date)

Company-

RELINQUISHED BY:

(signature) (time)

(printed name) (date)

Company-

RECEIVED BY LABORATORY:

Ron McGee 1358 (signature) (time)

Ron McGee 040606 (printed name) (date)

Company-

Kiff Analytical

COMMENTS:

TURN AROUND TIME

STANDARD 24Hr 48Hr 72Hr

OTHER:



Report Number : 50263

Date : 6/2/2006

David Allen
Aqua Science Engineers, Inc.
208 West El Pintado Rd.
Danville, CA 94526

Subject : 5 Water Samples
Project Name : Alameda
Project Number : 3648

Dear Mr. Allen,

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,

A handwritten signature in black ink, appearing to read 'Joel Kiff', is written over a printed name.

Joel Kiff



Report Number : 50263

Date : 6/2/2006

Subject : 5 Water Samples
Project Name : Alameda
Project Number : 3648

Case Narrative

The Method Reporting Limit for TPH as Diesel is increased due to interference from Gasoline-Range Hydrocarbons for samples MW-1, MW-3 and MW-4.

Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples MW-2 and MW-5. These hydrocarbons are higher boiling than typical diesel fuel.

Matrix Spike/Matrix Spike Duplicate Results associated with samples MW-2, MW-3, MW-1 and MW-4 for the analytes Benzene and Toluene were affected by the analyte concentrations already present in the un-spiked sample.

Approved By: _____

Joe Kiff



Report Number : 50263

Date : 6/2/2006

Project Name : **Alameda**

Project Number : **3648**

Sample : **MW-1**

Matrix : Water

Lab Number : 50263-01

Sample Date :5/25/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	19	1.5	ug/L	EPA 8260B	5/31/2006
Toluene	14	1.5	ug/L	EPA 8260B	5/31/2006
Ethylbenzene	900	1.5	ug/L	EPA 8260B	5/31/2006
Total Xylenes	620	1.5	ug/L	EPA 8260B	5/31/2006
Methyl-t-butyl ether (MTBE)	< 1.5	1.5	ug/L	EPA 8260B	5/31/2006
Diisopropyl ether (DIPE)	< 1.5	1.5	ug/L	EPA 8260B	5/31/2006
Ethyl-t-butyl ether (ETBE)	< 1.5	1.5	ug/L	EPA 8260B	5/31/2006
Tert-amyl methyl ether (TAME)	< 1.5	1.5	ug/L	EPA 8260B	5/31/2006
Tert-Butanol	< 7.0	7.0	ug/L	EPA 8260B	5/31/2006
TPH as Gasoline	10000	150	ug/L	EPA 8260B	5/31/2006
Toluene - d8 (Surr)	97.2		% Recovery	EPA 8260B	5/31/2006
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	5/31/2006
TPH as Diesel (Silica Gel)	< 3000	3000	ug/L	M EPA 8015	6/1/2006
Octacosane (Diesel Surrogate)	94.4		% Recovery	M EPA 8015	6/1/2006

Approved By:

Joel Kiff

Project Name : **Alameda**

Project Number : **3648**

Sample : **MW-2**

Matrix : Water

Lab Number : 50263-02

Sample Date : 5/25/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/31/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/31/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/31/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/31/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/31/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/31/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/31/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/31/2006
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	5/31/2006
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	5/31/2006
TPH as Diesel (Silica Gel)	160	50	ug/L	M EPA 8015	6/1/2006
Octacosane (Diesel Surrogate)	93.8		% Recovery	M EPA 8015	6/1/2006

Approved By:

Joel Kiff





Report Number : 50263

Date : 6/2/2006

Project Name : **Alameda**

Project Number : **3648**

Sample : **MW-3**

Matrix : Water

Lab Number : 50263-03

Sample Date :5/25/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	630	1.5	ug/L	EPA 8260B	5/31/2006
Toluene	25	1.5	ug/L	EPA 8260B	5/31/2006
Ethylbenzene	13	1.5	ug/L	EPA 8260B	5/31/2006
Total Xylenes	13	1.5	ug/L	EPA 8260B	5/31/2006
Methyl-t-butyl ether (MTBE)	190	1.5	ug/L	EPA 8260B	5/31/2006
Diisopropyl ether (DIPE)	< 1.5	1.5	ug/L	EPA 8260B	5/31/2006
Ethyl-t-butyl ether (ETBE)	< 1.5	1.5	ug/L	EPA 8260B	5/31/2006
Tert-amyl methyl ether (TAME)	5.3	1.5	ug/L	EPA 8260B	5/31/2006
Tert-Butanol	59	7.0	ug/L	EPA 8260B	5/31/2006
TPH as Gasoline	9900	150	ug/L	EPA 8260B	5/31/2006
Toluene - d8 (Surr)	94.4		% Recovery	EPA 8260B	5/31/2006
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	5/31/2006
TPH as Diesel (Silica Gel)	< 2000	2000	ug/L	M EPA 8015	6/1/2006
Octacosane (Diesel Surrogate)	87.0		% Recovery	M EPA 8015	6/1/2006

Approved By:

Joel Kiff

A handwritten signature in black ink, appearing to read 'Joel Kiff', is written over a horizontal line.

Project Name : **Alameda**

Project Number : **3648**

Sample : **MW-4**

Matrix : Water

Lab Number : 50263-04

Sample Date :5/25/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 2.5	2.5	ug/L	EPA 8260B	5/31/2006
Toluene	< 2.5	2.5	ug/L	EPA 8260B	5/31/2006
Ethylbenzene	< 2.5	2.5	ug/L	EPA 8260B	5/31/2006
Total Xylenes	< 2.5	2.5	ug/L	EPA 8260B	5/31/2006
Methyl-t-butyl ether (MTBE)	1800	2.5	ug/L	EPA 8260B	5/31/2006
Diisopropyl ether (DIPE)	< 2.5	2.5	ug/L	EPA 8260B	5/31/2006
Ethyl-t-butyl ether (ETBE)	< 2.5	2.5	ug/L	EPA 8260B	5/31/2006
Tert-amyl methyl ether (TAME)	28	2.5	ug/L	EPA 8260B	5/31/2006
Tert-Butanol	44	15	ug/L	EPA 8260B	5/31/2006
TPH as Gasoline	410	250	ug/L	EPA 8260B	5/31/2006
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	5/31/2006
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	5/31/2006
TPH as Diesel (Silica Gel)	< 80	80	ug/L	M EPA 8015	6/1/2006
Octacosane (Diesel Surrogate)	92.6		% Recovery	M EPA 8015	6/1/2006

Approved By:

Joel Kiff





Report Number : 50263

Date : 6/2/2006

Project Name : **Alameda**

Project Number : **3648**

Sample : **MW-5**

Matrix : Water

Lab Number : 50263-05

Sample Date :5/25/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Methyl-t-butyl ether (MTBE)	1.2	0.50	ug/L	EPA 8260B	6/1/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	6/1/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/1/2006
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	6/1/2006
4-Bromofluorobenzene (Surr)	97.4		% Recovery	EPA 8260B	6/1/2006
TPH as Diesel (Silica Gel)	86	50	ug/L	M EPA 8015	6/1/2006
Octacosane (Diesel Surrogate)	88.6		% Recovery	M EPA 8015	6/1/2006

Approved By:

Joel Kiff

A handwritten signature in black ink, appearing to read 'Joel Kiff', is written over a horizontal line.

Report Number : 50263

Date : 6/2/2006

QC Report : Method Blank Data

Project Name : **Alameda**

Project Number : **3648**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	5/31/2006
Octacosane (Diesel Surrogate)	105		%	M EPA 8015	5/31/2006
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/30/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/30/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/30/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/30/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/30/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/30/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/30/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/30/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/30/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/30/2006
Toluene - d8 (Surr)	100		%	EPA 8260B	5/30/2006
4-Bromofluorobenzene (Surr)	98.2		%	EPA 8260B	5/30/2006
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/1/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	6/1/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/1/2006
Toluene - d8 (Surr)	102		%	EPA 8260B	6/1/2006
4-Bromofluorobenzene (Surr)	97.1		%	EPA 8260B	6/1/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
-----------	----------------	------------------------	-------	-----------------	---------------

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800