RO-084

AllWest Environmental, Inc.

Specialists in Physical Due Diligence and Remedial Services

530 Howard Street, Suite 300
San Francisco, CA 94105
Tel 415.391.2510
Fax 415.391.2008

QUARTERLY GROUNDWATER MONITORING REPORT
First Quarter, 2002

900 Central Avenue
Alameda, California

PREPARED FOR:

Mr. David Thompson
c/o Kathleen Friend, Esq.
Ryan, Andrada & Lifter
300 Lakeside Drive, Suite 1045
Oakland, CA 94612

AllWest Project No. 22002.28
June 26, 2002

PREPARED BY:

Michael L. Siembieda RG 4007
Senior Project Manager

REVIEWED BY:

Marc Cunningham REA
President

AllWest

TABLE OF CONTENTS

AllWest

QUARTERLY GROUNDWATER MONITORING

First Quarter, 2002

900 Central Avenue
Alameda, California

I. EXECUTIVE SUMMARY

AllWest reinitiated quarterly groundwater monitoring at 900 Central Avenue, Alameda, California (site) on March 29, 2002. The quarterly monitoring activities included the sampling of three onsite monitoring wells, chemical analyses of the collected groundwater samples, and the preparation of this summary report. The purpose of the work was to comply with the request of Alameda County Environmental Health Services (ACEHS) for reinitiating monitoring of the shallow groundwater quality in the vicinity of underground storage tanks (USTs) formerly located at the site.

Three onsite groundwater monitoring wells (MW-1, MW-2 and MW-3) were sampled on March 29, 2002, according to AllWest's *Groundwater Monitoring and Risk Assessment Work Plan, 900 Central Avenue, Alameda, California*, dated March 8, 2002. One groundwater sample was collected from each well and forwarded to a state certified laboratory for chemical analyses of total petroleum hydrocarbons in the gasoline, diesel, and motor oil range (TPH-G, TPH-D, TPH-mo), four fuel related volatile compounds: benzene, toluene, ethylbenzene, and xylene (BTEX), and the fuel oxygenates methyl-ter-butyl-ether (MTBE), tert-Butyl alcohol (TBA), Di-isopropyl Ether (DIPE), Ethyl tert-butyl ether (ETBE), and tert-Amyl methyl ether (TAME) .

The results of groundwater monitoring for the first quarter of 2002 indicate none of the target analytes were detected in any of the groundwater samples collected during this sampling event. Concentrations of TPH-G, TPH-D and BTEX decreased from the previous historic highs (14,000 ppb TPH-G, 2,100 ppb TPH-D, 300 ppb benzene, 1,900 ppb toluene, 890 ppb ethylbenzene, and 5,600 ppb xylene) detected in the September 1999 sampling of MW-1 to non-detectable levels. TPH-G, TPH-D and BTEX were not detected in the samples collected form MW-2 and MW-3 which is in agreement with previous sampling data. TPH-mo and MTBE have not been detected in any of the wells during the five rounds of groundwater sampling of the wells performed at the site. Additionally, water samples collected from the three wells during this round of sampling were also analyzed, for the first time, for the fuel oxygenates TBA, DIPE, ETBE and TAME. None of these constituents were detected.

Groundwater gradient and flow direction for this monitoring event was calculated at 0.004 ft/ft and to the southwest. Groundwater surface elevation measurements were generally 3 feet higher during

this quarter than last measured in September 1999 but essentially similar to elevations during the June 1999 sampling.

A review of the monitoring data indicate that wells MW-1 and MW-3 are located downgradient of the probable locations of the former USTs, conveyance lines and pump island and therefore are well suited to monitor groundwater conditions. Currently, no evidence of groundwater impacts, due to historic use of petroleum hydrocarbons are being detected at the site.

This monitoring event reinitiates a one-year quarterly groundwater monitoring program at the subject site. A previous one-year sampling program ended in October 1999. AllWest recommends that the groundwater monitoring continue in accordance with AllWest's March 8, 2002 Work Plan with the following modifications: 1) since MTBE has not been detected during any of the previous five rounds of groundwater sampling, and in accordance with an February 20, 2002 e-mail from Eva Chu of the ACEHS, discontinue the analysis for MTBE and other oxygenates from the sampling program, 2) delay and or rescind the requirement of a Risk Based Corrective Analysis (RBCA) assessment if additional sampling indicates that no groundwater impacts are currently occurring and 3) evaluate if groundwater analysis of samples collected from MW-2 and MW-3 can be discontinued during the third and fourth quarter sampling events because of historic non-detection of chemicals of concern in these wells.

AllWest also recommends that a copy of this report should be submitted to the Alameda County Environmental Health Services (ACEHS) to fulfill the agency reporting requirements. In accordance with the March 2002 Work Plan and verbal concurrence with the ACEHS, AllWest will complete a Conceptual Site Model (CSM) after the results of the second quarter 2002 sampling event are known.

II. INTRODUCTION

This report presents the results of the re-instituted quarterly groundwater monitoring program conducted in the vicinity of gasoline USTs formerly located at 900 Central Avenue, Alameda, California. The monitoring event was for the first quarter of 2002. Included in this report is an abbreviated site investigation history, a description of field activities, a summary of analytical results, our interpretation of the data, and a recommended course of action. Supporting information such as site figures, sampling logs, and laboratory reports are also included.

A. Site Background

The subject property is located in the central-southern portion of the city of Alameda amidst a predominantly residential area. Specifically, the property is at the southeast corner of Central Avenue and Ninth Street. Site improvements consist of a two-story wood-frame duplex apartment with surrounding landscaped areas. A site location map and a generalized site plan are presented on Figures 1 and 2 in the FIGURES section of this report.

According to a 1994 Lowney Associates report, the subject property was used as a gas station between 1931 and 1975 that included the use of underground fuel storage tanks. Lowney Associates also conducted a soil and groundwater sampling program at the site in 1994 to evaluate the potential of subsurface impact due to historical site use. The sampling program included the advancement of three borings, collection of soil and grab groundwater samples, and chemical analyses of selected samples. Lowney Associates reported that soil and groundwater samples from boring EB-1, located near the northwest corner of the subject property, contained elevated levels of gasoline (TPH-G) and fuel volatile compounds (BTEX).

In 1997, AllWest was retained to review and verify Lowney's 1994 findings. AllWest's 1997 investigation included the review of historical documents related to past site usage, the advancement of eight soil borings via the Geoprobe method to collect soil and groundwater samples, the chemical analyses of selected samples for TPH-G and BTEX, and a preliminary risk assessment using the American Society for Testing and Materials (ASTM) Risk Based Corrective Action (RBCA) process. The 1997 investigation results indicated that no current source areas are located at the subject site, the majority of impacted groundwater beneath the site is limited to the northwest corner and the former tank site is likely located in the public right-of-way, along the sidewalk of Central Avenue. The preliminary risk assessment indicated that petroleum hydrocarbons detected in groundwater beneath the subject property is unlikely to cause increased cancer risk to site occupants.

The results of the 1997 AllWest investigation were submitted to Alameda County Environmental Health Services (ACEHS), the lead regulatory agency for leaking underground storage tank sites in the City of Alameda. In March 1998, the County issued a letter requesting quarterly groundwater monitoring for a minimum of one year at the subject site. In June 1998, AllWest prepared a workplan for the well installation and groundwater monitoring program. Groundwater samples were proposed to be analyzed for the presence of TPH-G, BTEX, and MTBE The workplan was submitted to and approved by ACEHS in August 1998 In addition to TPH-G, BTEX, and MTBE, ACEHS required the groundwater samples to be also analyzed for total petroleum hydrocarbons in the diesel and motor oil ranges (TPH-D and TPH-mo).

In November 1998, AllWest installed, developed, and sampled three groundwater monitoring wells at the subject site. TPH-G and BTEX were detected in well MW-1, located at the northwest corner of the subject property and near the suspected former UST site. In March 1999, AllWest sampled the three wells in accordance with the established quarterly monitoring program. Analytical results indicated no detectable levels of target contaminants in any of the groundwater samples collected during the March quarterly sampling event. In June 1999, AllWest collected groundwater samples from all the wells for the second quarter of 1999. The analysis of the samples collected indicated petroleum hydrocarbons in the groundwater sample collected from MW-1. No concentrations of petroleum hydrocarbons were recorded in the samples taken from wells MW-2 or MW-3. In the September 1999 event, the last of the initial quarterly sampling events, historic highs of TPH-G, TPH-D and BTEX were detected in the sample collected from MW-1. No chemicals were detected in the samples collected from MW-2 and MW-3 except for trace concentrations of xylene detected in MW-2. The wells have were last sampled in September of 1999

B. Purpose and Scope of Work

The purpose of this quarterly groundwater monitoring was to comply with the requirements of ACEHS for the reinstatement of groundwater monitoring in the vicinity of the USTs formerly located at site.

The scope of work for groundwater monitoring, was described in the March 8, 2002 Work Plan prepared by AllWest, which was subsequently approved by the ACEHS, and included the following tasks:

1. Measure the depth of groundwater table in each onsite groundwater monitoring well. Calculate the groundwater surface elevation, and determine the groundwater flow direction and gradient;

2. Collect a representative groundwater sample from each onsite monitoring well after proper purging process. Contain the purge water in appropriate storage devices onsite;

3. Submit the collected groundwater samples to a state certified laboratory for chemical analyses to detect the presence of total petroleum hydrocarbons in the gasoline, diesel, and motor oil range (TPH-G, TPH-D, TPH-mo), fuel related volatile organic compounds benzene, toluene, ethylbenzene, and xylene (BTEX) by modified EPA method 8015M and fuel oxygenates methyl tert-butyl ether (MTBE), tert-Butyl alcohol (TBA), Di-isopropyl Ether (DIPE), Ethyl tert-butyl ether (ETBE), and tert-Amyl methyl ether (TAME) by EPA method 8260B .

4. Prepare a written report to describe the field activities, summarize the analytical results and field measurements, and provide recommendations as appropriate.

III. FIELD ACTIVITIES

Representative groundwater samples were collected by AllWest from each groundwater monitoring well on March 29, 2002. Prior to well purging, an electric water level sounder was lowered into each well casing to measure the depth to the water to the nearest 0.01 feet. A new clear poly disposable bailer was then lowered into each well casing and partially submerged. Upon retrieval of the clear bailer, the surface of the water column retained in the bailer was examined for any floating product or product sheen. No floating product or odors were observed on the surface of water retained in the bailers from any of the three wells sampled.

After initial measurements were completed and recorded, each of the wells were purged by a disposal bailer. Approximately 3 well volumes of groundwater were purged from each well. During the purging process, the groundwater physical property indicators (temperature, pH, and conductivity) were monitored periodically Purging was considered complete when indicators were

stabilized (consecutive readings within 10% of each other) and the purged water was relatively free of visible sediments.

Groundwater sampling was conducted after the water level recovered to at least 80% of the initial measurement, recorded prior to purging. The groundwater sample was collected by using a disposable bailer that was discarded after each well sampling event to avoid cross-contamination. Upon retrieval of the disposable bailer, the retained water was carefully transferred to appropriate pre-cleaned glassware furnished by the analytical laboratory. A special adapter fitted to the bottom end of the bailer was used to minimize the loss of volatile organics during transfer. All sample containers were fitted with a Teflon lined septum/cap and filled such that no headspace was present. After the water samples were properly transferred to the appropriate container, the containers were labeled and immediately placed on ice to preserve its chemical characteristics. A well sampling log was maintained during the sampling event and copies of the logs are included in Appendix B.

Samples were field stored and transported in an insulated cooler filled with crushed ice and transported to the analytical laboratory. All samples were transported to the laboratory under proper chain of custody documentation from the time of collection to the time of arrival at the laboratory.

To avoid cross-contamination, all groundwater sampling equipment that came in contact with the groundwater was thoroughly cleansed by washing it in Alconox (a non-phosphor detergent) solution and rinsed with distilled water prior to each well sampling event. All purged water was temporarily stored on-site in a labeled DOT-approved 55-gallon steel drum awaiting test results to determine the proper disposal method.

IV. MONITORING RESULTS

A. Groundwater Conditions

Groundwater gradient and flow direction for this monitoring event was calculated at 0 004 ft/ft to the southwest. Groundwater flow direction and gradient have remained consistent during the monitoring program. Groundwater surface elevation measurements were generally 3 feet higher during this quarter than last measured in September 1999 but essentially similar to elevations during the June 1999 sampling. A cumulative summary of groundwater surface elevation measurements is presented on Table 1 in the TABLES section of this report.

B. Laboratory Analyses

The collected groundwater samples were forwarded to Chromalab of Pleasanton, California, a state certified analytical laboratory, for chemical analyses. Analyses performed on the groundwater samples included total petroleum hydrocarbons in the gasoline, diesel, and motor oil ranges (TPH-G, TPH-D, TPH-mo), fuel related volatile organic compounds: benzene, toluene, ethylbenzene, and xylenes (BTEX) by gas chromatography (EPA method 8015M), and the fuel oxygenate methyl tert-

butyl ether (MTBE) tert-Butyl alcohol (TBA), Di-isopropyl Ether (DIPE), Ethyl tert-butyl ether (ETBE), and tert-Amyl methyl ether (TAME) .by EPA method 8260B.

The results of groundwater monitoring for the first quarter of 2002 indicate none of the target analytes were detected in any of the groundwater samples collected during this sampling event. Concentrations of TPH-G, TPH-D and BTEX decreased from the previous historic highs (14,000 ppb TPH-G, 2,100 ppb TPH-D, 300 ppb benzene, 1,900 ppb toluene, 890 ppb ethylbenzene, and 5,600 ppb xylene) detected in the September 1999 sampling of MW-1 to non-detectable levels. TPH-G, TPH-D and BTEX were not detected in the samples collected form MW-2 and MW-3 which is in agreement with previous sampling data. TPH-mo and MTBE have not been detected in any of the wells during the five rounds of groundwater sampling of the wells performed at the site. Additionally, water samples collected from the three wells during this round of sampling were also analyzed, for the first time, for the fuel oxygenates TBA, DIPE, ETBE and TAME. None of these constituents were detected.

A review of laboratory internal quality assurance/quality control (QA/QC) report indicates the method blank and sample spike data are within the laboratory recovery limits. The laboratory QA/QC report indicated that the groundwater samples were analyzed within the acceptable EPA holding time. Based on the laboratory QA/QC report, the analysis data from Chromalab are considered to be of good quality. A copy of the laboratory analytical reports and chain-of-custody records are presented in the LABORATORY RESULTS section of this report. A cumulative summary of the analytical results is presented on Table 2.

V. CONCLUSIONS AND RECOMMENDATIONS

A review of the monitoring data indicate that wells MW-1 and MW-3 are located downgradient of the probable locations of the former USTs, conveyance lines and pump island and therefore are well suited to monitor groundwater conditions. Currently, no evidence of groundwater impacts, due to historic use of petroleum hydrocarbons are being detected at the site.

This monitoring event reinitiates a one-year quarterly groundwater monitoring program at the subject site. A previous one-year sampling program ended in October 1999. AllWest recommends that the groundwater monitoring continue in accordance with AllWest's March 8, 2002 Work Plan with the following modifications: 1) since MTBE has not been detected during any of the previous five rounds of groundwater sampling, and in accordance with an February 20, 2002 e-mail from Eva Chu of the ACEHS, discontinue the analysis for MTBE and other oxygenates from the sampling program, 2) delay and or rescind the requirement of a Risk Based Corrective Analysis (RBCA) assessment if additional sampling indicates that no groundwater impacts are currently occurring and 3) evaluate if groundwater analysis of samples collected from MW-2 and MW-3 can be discontinued during the third and fourth quarter sampling events because of historic non-detection of chemicals of concern in these wells.

VI. REPORT LIMITATIONS

The work described in this report is performed in accordance with the Environmental Consulting Agreement between Mr. David Thompson and AllWest Environmental, dated January 11, 2002. AllWest has prepared this report for the exclusive use of Mr. David Thompson for this particular project and in accordance with generally accepted practices at the time of the work. No other warranties, certifications or representation, either expressed or implied are made as to the professional advice offered. The services provided for Mr. David Thompson were limited to their specific requirements; the limited scope allows for AllWest to form no more than an opinion of the actual site conditions. No matter how much research and sampling may be performed the only way to know about the actual composition and condition of the subsurface of a site is through excavation.

The conclusions and recommendations contained in this report are made based on observed conditions existing at the site, laboratory test results of the submitted samples, and interpretation of a limited data set. It must be recognized that changes can occur in subsurface conditions due to site use or other reasons. Furthermore, the distribution of chemical concentrations in the subsurface can vary spatially and over time. The results of chemical analysis are valid as of the date and at the sampling location only. AllWest cannot be held accountable for the accuracy of the test data from an independent laboratories nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratories.

TABLES

Table 1

SUMMARY OF GROUNDWATER ELEVATION MEASUREMENTS

900 Central Avenue, Alameda, California

Well Number	Well Casing Elevation[2]	Date of Measurement	Depth to Groundwater[3]	Groundwater Surface Elevation[2]
MW-1	+ 25.17'	11/27/1998 03/12/1999 06/01/1999 09/03/1999	11.77' 6.59' 8.71' 11.79'	+ 13.40' + 18.58' + 16.46' + 13.38'
MW-2	+ 25.12'	11/27/1998 03/12/1999 06/01/1999 09/03/1999	11.76' 6.53' 8.56' 11.60'	+ 13.45' + 18.59' + 16.56' + 13.52'
MW-3	+ 24.58'	11/27/1998 03/12/1999 06/01/1999 09/03/1999	11.41' 6.01' 8.16' 11.27'	+ 13.17' + 18.57' + 16.42' + 13.31'

Notes:

1. Wells MW-1, MW-2 and MW-3 were installed on November 16, 1998
2. Feet above mean sea level (MSL)
3. Below the top of well casing

Table 2

SUMMARY OF ANALYTICAL RESULTS

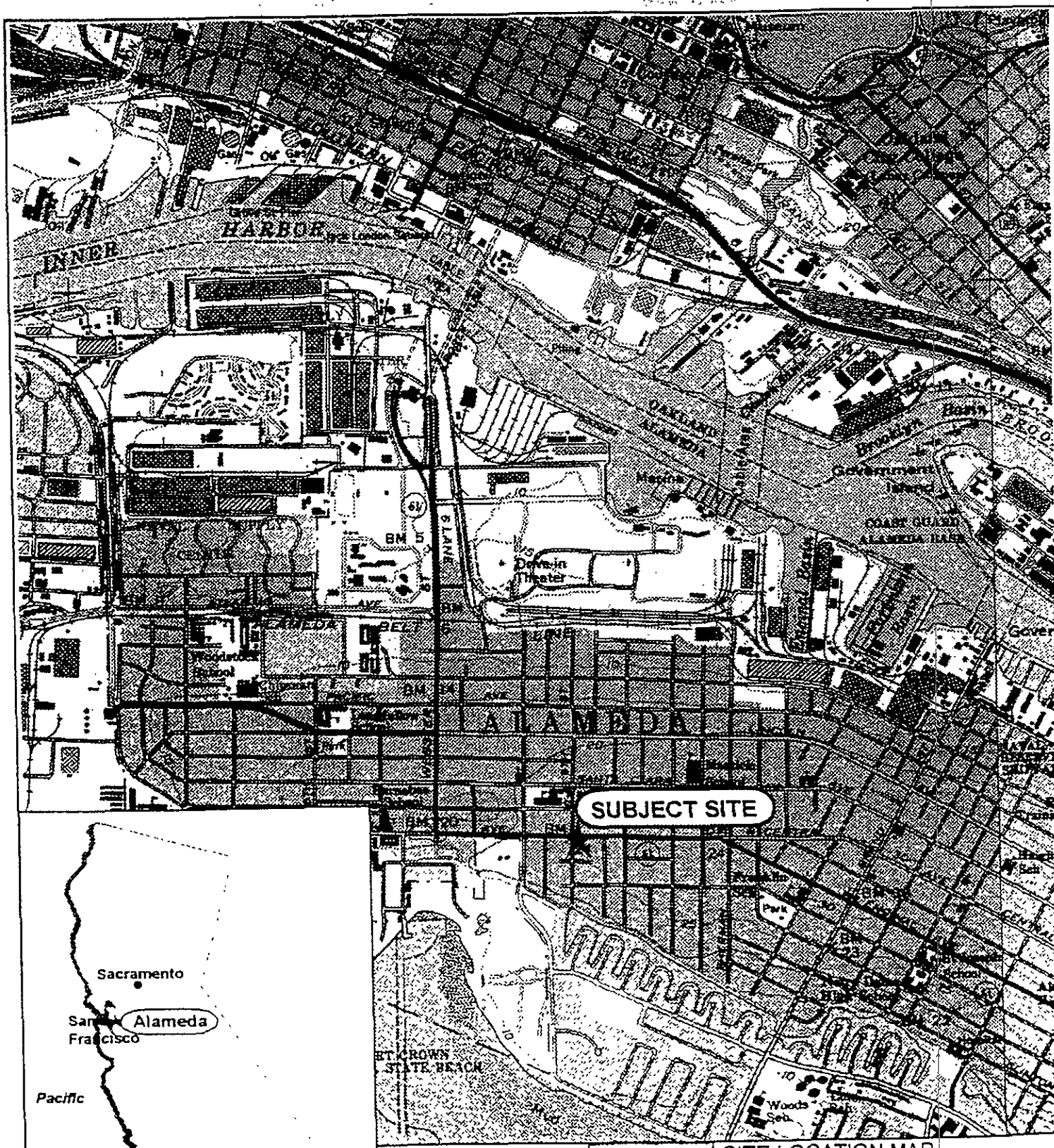
900 Central Avenue, Alameda, California

Well Number	Sampling Date	TPH-g	Benzene	Toluene	Ethyl-benzene	Xylene	MTBE	TPH-d	TPH-m
MW-1	11/27/1998	360	5.8	5.5	9.2	40	< 5	<.50	< 500
	03/12/1999	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 50	< 500
	06/01/1999	930	< 0.5	19	52	230	< 5	540	< 500
	09/03/1999	14,000	300	1,900	890	5,600	< 5	2,100	< 500
MW-2	11/27/1998	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 50	< 500
	03/12/1999	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 50	< 500
	06/01/1999	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 50	< 500
	09/03/1999	< 50	< 0.5	< 0.5	< 0.5	1.8	< 5	< 50	< 500
MW-3	11/27/1998	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 50	< 500
	03/12/1999	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 50	< 500
	06/01/1999	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 50	< 500
	09/03/1999	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 50	< 500
MCLs		n/a	**1(5)**	**150 (1000)**	**700 (700)**	**1750 (10000)**	n/a	n/a	n/a

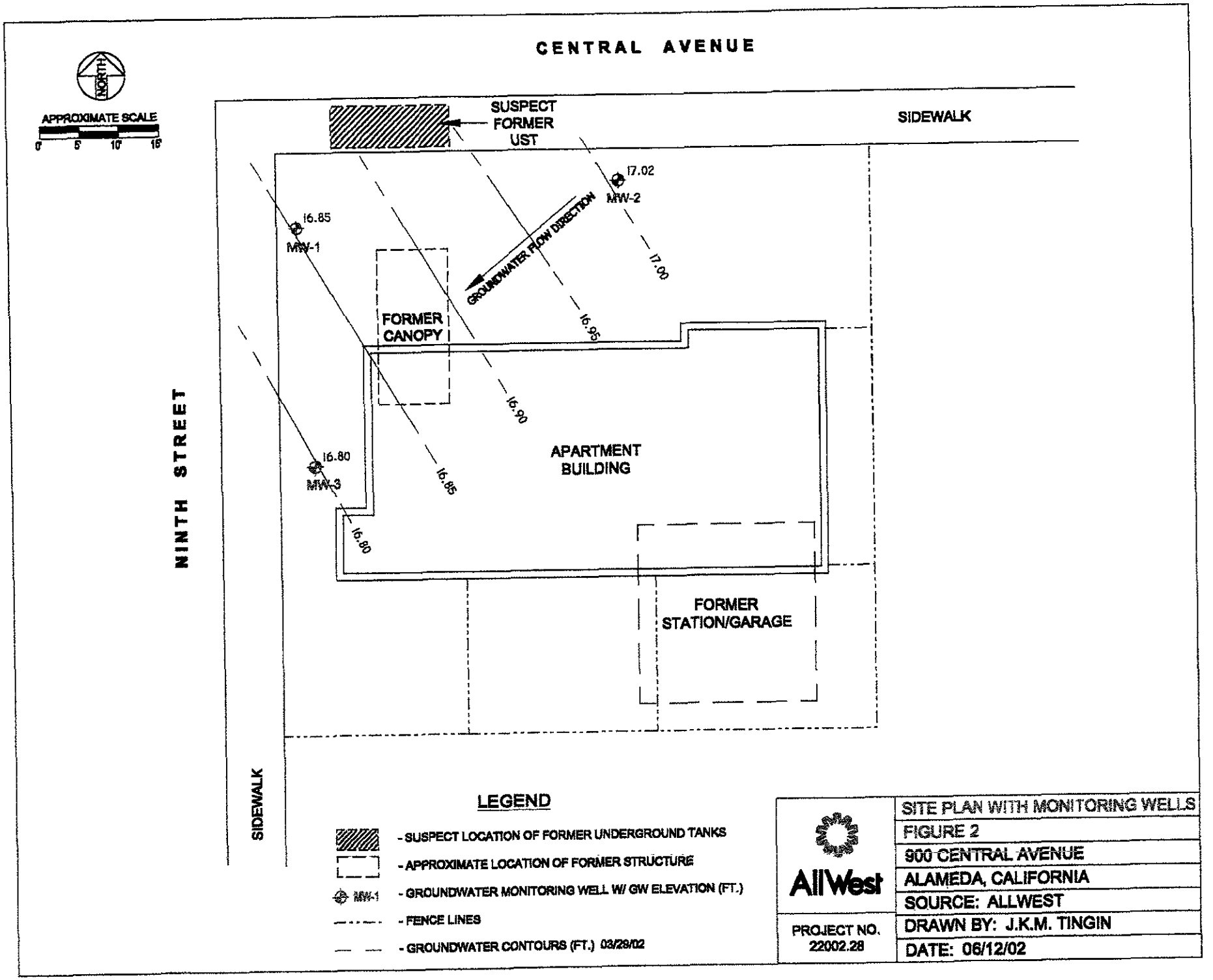
Notes:

1. TPH-g, TPH-d, and TPH-m stands for total petroleum hydrocarbons in the gasoline, diesel, and motor oil range, respectively.
2. All concentrations are in units of µg/L, equivalent to parts per billion (ppb)
3. <x stands for non-detected at or above the method reporting limit of x
4. Analytical results were reported by Chromalab. Analytical methods are U.S. EPA mehtods 8015-mod and 8020
5. MCLs stands for maximum contaminant levels in ppb. First MCL listed is California Department of Health Services primary MCL and the MCL listed in parenthesis is U.S. EPA primary MCL. MCL values are in ppb. n/a stands for no MCL available.

FIGURES



	SITE LOCATION MAP
	FIGURE 1
	900 CENTRAL AVENUE
AllWest	ALAMEDA, CALIFORNIA
	SOURCE: USGS TOPO MAP
PROJECT NO. 98115.23	PREPARED BY: S. POON
NOT TO SCALE	DATE: 12/14/98


CENTRAL AVENUE
NORTH
APPROXIMATE SCALE
0' 5' 10' 15'
SUSPECT FORMER UST
SIDEWALK
17.02
MW-2
16.85
MW-1
GROUNDWATER FLOW DIRECTION
17.00
16.95
FORMER CANOPY
16.90
APARTMENT BUILDING
16.80
MW-3
16.85
16.80
NINTH STREET
FORMER STATION/GARAGE
SIDEWALK
LEGEND
- SUSPECT LOCATION OF FORMER UNDERGROUND TANKS
- APPROXIMATE LOCATION OF FORMER STRUCTURE
MW-1 - GROUNDWATER MONITORING WELL W/ GW ELEVATION (FT.)
- FENCE LINES
- GROUNDWATER CONTOURS (FT.) 03/29/02
AllWest
PROJECT NO. 22002.28
SITE PLAN WITH MONITORING WELLS
FIGURE 2
900 CENTRAL AVENUE
ALAMEDA, CALIFORNIA
SOURCE: ALLWEST
DRAWN BY: J.K.M. TINGIN
DATE: 06/12/02

LABORATORY RESULTS

Submission #: 2002-04-0020

Date: April 5, 2002

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www stl-inc.com
www.chromalab.com
CA DHS ELAP#1094

Allwest Environmental
530 Howard Street, Suite #300
San Francisco, CA 94105

Attn: Mr. Robert Horwath

Project: 2202.28
Central Monitor

Dear Mr. Horwath,

Attached is our report for your samples received on Friday March 29, 2002
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after May 13, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: vvancil@chromalab.com

Sincerely,

Vincent Vancil
Project Manager

Submission #: 2002-04-0020

Fuel Oxygenates by 8260B (Low Level)

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Allwest Environmental	✉ 530 Howard Street, Suite #300 San Francisco, CA 94105
Attn: Robert Horwath	Phone: (415) 391-2510 Fax: (415) 391-2008
2202.28	Project: Central Monitor

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
AW-1	Water	03/29/2002	1
AW-2	Water	03/29/2002	2
AW-3	Water	03/29/2002	3

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Fuel Oxygenates by 8260B (Low Level)

Allwest Environmental
Attn: Robert Horwath

Test Method: 8260B
Prep Method: 5030B

Sample ID:	**AW-1**	Lab Sample ID:	2002-04-0020-001
Project:	2202.28 Central Monitor	Received:	03/29/2002 16:45
		Extracted:	04/02/2002 13:45
Sampled:	03/29/2002	QC-Batch:	2002/04/02-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	04/02/2002 13:45	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	04/02/2002 13:45	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	1.00	04/02/2002 13:45	
Ethyl tert-butyl ether (ETBE)	ND	0.50	ug/L	1.00	04/02/2002 13:45	
tert-Amyl methyl ether (TAME)	ND	0.50	ug/L	1.00	04/02/2002 13:45	
Surrogate(s)						
1,2-Dichloroethane-d4	96.7	76-114	%	1.00	04/02/2002 13:45	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Fuel Oxygenates by 8260B (Low Level)

Allwest Environmental
Attn: Robert Horwath

Test Method: 8260B
Prep Method: 5030B

Sample ID:	**AW-2**	Lab Sample ID:	2002-04-0020-002
Project:	2202 28 Central Monitor	Received:	03/29/2002 16.45
		Extracted:	04/02/2002 14:09
Sampled:	03/29/2002	QC-Batch:	2002/04/02-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1 00	04/02/2002 14:09	
Methyl tert-butyl ether (MTBE)	ND	0 50	ug/L	1 00	04/02/2002 14:09	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	1 00	04/02/2002 14:09	
Ethyl tert-butyl ether (ETBE)	ND	0 50	ug/L	1.00	04/02/2002 14:09	
tert-Amyl methyl ether (TAME)	ND	0.50	ug/L	1.00	04/02/2002 14:09	
Surrogate(s)						
1,2-Dichloroethane-d4	101.1	76-114	%	1.00	04/02/2002 14:09	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Fuel Oxygenates by 8260B (Low Level)

Allwest Environmental
Attn: Robert Horwath

Test Method: 8260B
Prep Method: 5030B

Sample ID:	**AW-3**	Lab Sample ID:	2002-04-0020-003
Project:	2202.28 Central Monitor	Received:	03/29/2002 16 45
		Extracted:	04/02/2002 14:34
Sampled:	03/29/2002	QC-Batch:	2002/04/02-01.27
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	04/02/2002 14:34	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	04/02/2002 14:34	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	1.00	04/02/2002 14:34	
Ethyl tert-butyl ether (ETBE)	ND	0.50	ug/L	1.00	04/02/2002 14:34	
tert-Amyl methyl ether (TAME)	ND	0.50	ug/L	1.00	04/02/2002 14:34	
Surrogate(s)						
1,2-Dichloroethane-d4	102.1	76-114	%	1.00	04/02/2002 14:34	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Fuel Oxygenates by 8260B (Low Level)

Batch QC report

Test Method: 8260B Prep Method: 5030B

Method Blank **Water** **QC Batch # 2002/04/02-01.27**

MB: 2002/04/02-01.27-005 Date Extracted: 04/02/2002 12:09

Compound	Result	Rep Limit	Unit	Analyzed	Flag
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	04/02/2002 12:09	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/02/2002 12:09	
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L	04/02/2002 12:09	
Ethyl tert-butyl ether (ETBE)	ND	0.5	ug/L	04/02/2002 12:09	
tert-Amyl methyl ether (TAME)	ND	0.5	ug/L	04/02/2002 12:09	
Surrogate(s)					
1,2-Dichloroethane-d4	105.5	76-114	%	04/02/2002 12:09	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Fuel Oxygenates by 8260B (Low Level)

Batch QC report

Test Method: 8260B Prep Method: 5030B

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2002/04/02-01.27**

LCS: 2002/04/02-01.27-003 Extracted: 04/02/2002 11:15 Analyzed: 04/02/2002 11:15

LCSD: 2002/04/02-01.27-004 Extracted: 04/02/2002 11:44 Analyzed: 04/02/2002 11:44

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Methyl tert-butyl ether	21.8	22.0	25.0	25.0	87.2	88.0	0.9	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	505	514	500	500	101.0	102.8		76-114			

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www chromalab.com

CA DHS ELAP#1094

Fuel Oxygenates by 8260B (Low Level)

Batch QC Report

Test Method: 8260B Prep Method: 5030B

Matrix Spike (MS / MSD)	**Water**	**QC Batch # 2002/04/02-01.27**
Sample ID: **AW-1 >> MS**		Lab ID: 2002-04-0020-001
MS: 2002/04/02-01 27-007	Extracted: 04/02/2002 12:57	Analyzed: 04/02/2002 12:57
		Dilution: 1
MSD: 2002/04/02-01.27-008	Extracted: 04/02/2002 13:21	Analyzed: 04/02/2002 13:21
		Dilution: 1

Compound	Conc [ug/L]			Exp Conc. [ug/L]		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Methyl tert-butyl	19.3	20.9	ND	25.0	25.0	77.2	83.6	8.0	65-165	20		
Surrogate(s)												
1,2-Dichloroethan	495	507		500	500	99 1	101.3		76-114			

Submission #: 2002-04-0020

TEPH w/ Silica Gel Clean-up

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Allwest Environmental	✉ 530 Howard Street, Suite #300 San Francisco, CA 94105
Attn: Robert Horwath	Phone: (415) 391-2510 Fax: (415) 391-2008
2202.28	Project: Central Monitor

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
AW-1	Water	03/29/2002	1
AW-2	Water	03/29/2002	2
AW-3	Water	03/29/2002	3

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

TEPH w/ Silica Gel Clean-up

Allwest Environmental
Attn: Robert Horwath

Test Method: 8015M
Prep Method: 3510/8015M

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Sample ID: **AW-1**
Project: 2202.28
Central Monitor

Sampled: 03/29/2002
Matrix: Water
Sample/Analysis Flag: rl (See Legend & Note section)

Lab Sample ID: 2002-04-0020-001
Received: 03/29/2002 16:45

Extracted: 04/02/2002 17:44
QC-Batch: 2002/04/02-05 10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	ND	61	ug/L	1 22	04/04/2002 03:31	
Motor Oil	ND	610	ug/L	1.22	04/04/2002 03:31	
Surrogate(s)						
o-Terphenyl	82.1	60-130	%	1.22	04/04/2002 03:31	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

TEPH w/ Silica Gel Clean-up

Allwest Environmental
Attn: Robert Horwath

Test Method: 8015M
Prep Method: 3510/8015M

Sample ID:	**AW-2**	Lab Sample ID:	2002-04-0020-002
Project:	2202.28 Central Monitor	Received	03/29/2002 16:45
		Extracted:	04/02/2002 17:44
Sampled:	03/29/2002	QC-Batch:	2002/04/02-05 10
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1 00	04/04/2002 04:10	
Motor Oil	ND	500	ug/L	1 00	04/04/2002 04:10	
Surrogate(s)						
o-Terphenyl	74.7	60-130	%	1.00	04/04/2002 04:10	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

TEPH w/ Silica Gel Clean-up

Allwest Environmental
Attn: Robert Horwath

Test Method: 8015M
Prep Method: 3510/8015M

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Sample ID:	**AW-3**	Lab Sample ID:	2002-04-0020-003
Project:	2202.28 Central Monitor	Received:	03/29/2002 16:45
		Extracted:	04/02/2002 17:44
Sampled:	03/29/2002	QC-Batch:	2002/04/02-05.10
Matrix:	Water		

Compound	Result	Rep Limit	Units	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1 00	04/04/2002 05:27	
Motor Oil	ND	500	ug/L	1.00	04/04/2002 05.27	
Surrogate(s)						
o-Terphenyl	88.7	60-130	%	1.00	04/04/2002 05:27	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

TEPH w/ Silica Gel Clean-up

Batch QC report

Test Method: 8015M

Prep Method: 3510/8015 M

Method Blank | **Water** | **QC Batch # 2002/04/02-05.10**

MB: 2002/04/02-05.10-001 | Date Extracted: 04/02/2002 17:44

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	04/04/2002 02:52	
Motor Oil	ND	500	ug/L	04/04/2002 02:52	
Surrogate(s)					
o-Terphenyl	88.7	60-130	%	04/04/2002 02.52	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

TEPH w/ Silica Gel Clean-up

Batch QC report

Test Method: 8015M Prep Method: 3510/8015M

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2002/04/02-05.10**

LCS: 2002/04/02-05.10-002 Extracted: 04/02/2002 17:44 Analyzed: 04/04/2002 01:34

LCSD: 2002/04/02-05.10-003 Extracted: 04/02/2002 17:44 Analyzed: 04/04/2002 02:13

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Diesel	1080	951	1250	1250	86.4	76.1	12.7	60-130	25		
Surrogate(s)											
o-Terphenyl	18.2	16.5	20.0	20.0	90.8	82.3		60-130	0		

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

TEPH w/ Silica Gel Clean-up

Legend & Notes

Test Method: 8015M

Prep Method: 3510/8015M

Analysis Flags

rl

Reporting limits raised due to reduced sample size.

Submission #: 2002-04-0020

Gas/BTEX by 8015M/8021

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab com

CA DHS ELAP#1094

Allwest Environmental	✉ 530 Howard Street, Suite #300 San Francisco, CA 94105
Attn: Robert Horwath	Phone: (415) 391-2510 Fax: (415) 391-2008
2202.28	Project: Central Monitor

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
AW-1	Water	03/29/2002	1
AW-2	Water	03/29/2002	2
AW-3	Water	03/29/2002	3

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

Gas/BTEX by 8015M/8021

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Allwest Environmental

Attn: Robert Horwath

Test Method: 8015M
8021B

Prep Method: 5030

Sample ID:	**AW-1**	Lab Sample ID:	2002-04-0020-001
Project:	2202.28 Central Monitor	Received.	03/29/2002 16.45
		Extracted:	04/04/2002 18:47
Sampled:	03/29/2002	QC-Batch:	2002/04/04-01.02
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/04/2002 18:47	
Benzene	ND	0.50	ug/L	1.00	04/04/2002 18:47	
Toluene	ND	0.50	ug/L	1.00	04/04/2002 18:47	
Ethyl benzene	ND	0.50	ug/L	1.00	04/04/2002 18:47	
Xylene(s)	ND	0.50	ug/L	1.00	04/04/2002 18:47	
Surrogate(s)						
Trifluorotoluene	87.8	58-124	%	1.00	04/04/2002 18:47	
4-Bromofluorobenzene-FID	98.2	50-150	%	1.00	04/04/2002 18:47	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Gas/BTEX by 8015M/8021

Allwest Environmental

Attn: Robert Horwath

Test Method: 8015M
8021B

Prep Method: 5030

Sample ID:	**AW-2**	Lab Sample ID:	2002-04-0020-002
Project.	2202.28 Central Monitor	Received:	03/29/2002 16.45
		Extracted:	04/04/2002 19.19
Sampled:	03/29/2002	QC-Batch:	2002/04/04-01.02
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/04/2002 19:19	
Benzene	ND	0.50	ug/L	1.00	04/04/2002 19:19	
Toluene	ND	0.50	ug/L	1.00	04/04/2002 19:19	
Ethyl benzene	ND	0.50	ug/L	1.00	04/04/2002 19:19	
Xylene(s)	ND	0.50	ug/L	1.00	04/04/2002 19:19	
Surrogate(s)						
Trifluorotoluene	83.5	58-124	%	1.00	04/04/2002 19:19	
4-Bromofluorobenzene-FID	94.4	50-150	%	1.00	04/04/2002 19:19	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Gas/BTEX by 8015M/8021

Allwest Environmental

Attn: Robert Horwath

Test Method: 8015M
8021B

Prep Method: 5030

Sample ID:	**AW-3**	Lab Sample ID:	2002-04-0020-003
Project:	2202.28 Central Monitor	Received:	03/29/2002 16.45
		Extracted:	04/04/2002 19.50
Sampled:	03/29/2002	QC-Batch.	2002/04/04-01.02
Matrix:	Water		

Compound	Result	Rep Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	04/04/2002 19:50	
Benzene	ND	0 50	ug/L	1.00	04/04/2002 19:50	
Toluene	ND	0.50	ug/L	1.00	04/04/2002 19:50	
Ethyl benzene	ND	0.50	ug/L	1.00	04/04/2002 19:50	
Xylene(s)	ND	0.50	ug/L	1.00	04/04/2002 19:50	
Surrogate(s)						
Trifluorotoluene	92.1	58-124	%	1.00	04/04/2002 19:50	
4-Bromofluorobenzene-FID	102.0	50-150	%	1.00	04/04/2002 19:50	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Gas/BTEX by 8015M/8021

Batch QC report

Test Method: 8015M
8021B

Prep Method: 5030

Method Blank | **Water** | **QC Batch # 2002/04/04-01.02**

MB: 2002/04/04-01.02-005 | Date Extracted: 04/04/2002 10:18

Compound	Result	Rep Limit	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/04/2002 10:18	
Benzene	ND	0 5	ug/L	04/04/2002 10:18	
Toluene	ND	0.5	ug/L	04/04/2002 10:18	
Ethyl benzene	ND	0 5	ug/L	04/04/2002 10:18	
Xylene(s)	ND	0.5	ug/L	04/04/2002 10:18	
Surrogate(s)					
Trifluorotoluene	87.1	58-124	%	04/04/2002 10:18	
4-Bromofluorobenzene-FID	101.4	50-150	%	04/04/2002 10:18	

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Gas/BTEX by 8015M/8021

Batch QC report

Test Method: 8021B Prep Method: 5030

Laboratory Control Spike (LCS/LCSD) Water QC Batch # 2002/04/04-01.02

LCS: 2002/04/04-01.02-006 Extracted: 04/04/2002 10:49 Analyzed: 04/04/2002 10:49

LCSD: 2002/04/04-01.02-007 Extracted: 04/04/2002 11:21 Analyzed: 04/04/2002 11:21

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery		RPD	Ctrl Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Benzene	95.8	92.9	100 0	100.0	95.8	92.9	3.1	77-123	20		
Toluene	95.3	92.0	100.0	100 0	95.3	92.0	3.5	78-122	20		
Ethyl benzene	98.8	95 3	100.0	100 0	98 8	95.3	3.6	70-130	20		
Xylene(s)	292	281	300	300	97.3	93.7	3.8	75-125	20		
Surrogate(s)											
Trifluorotoluene	451	458	500	500	90.2	91.6		58-124			

Submission #: 2002-04-0020

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Gas/BTEX by 8015M/8021

Batch QC report

Test Method: 8015M Prep Method: 5030

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2002/04/04-01.02**

LCS: 2002/04/04-01.02-008 Extracted: 04/04/2002 11:52 Analyzed: 04/04/2002 11:52

LCSD: 2002/04/04-01.02-009 Extracted: 04/04/2002 12:23 Analyzed: 04/04/2002 12:23

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Gasoline	527	511	500	500	105 4	102.2	3.1	75-125	20		
Surrogate(s)											
4-Bromofluorobenzene	538	530	500	500	107.6	106.0		50-150			

Reference #: 65587

CHROMALAB, INC.

Environmental Services (SDB) (DOHS 1094)

1220 Quarry Lane • Pleasanton, California 94566-4756

(925) [illegible] • Fax (925) 484-1096

2002-04-0020

Chain of Custody

DATE 3/29/02 PAGE 1 of 1

PROJ MGR Robert M Horwath

COMPANY AllWest Environmental

ADDRESS 550 Howard Street, #300

S.F., CA 94105

SAMPLERS (SIGNATURE) R. Horwath

(PHONE NO.) 1-415-391-2510

(FAX NO.) 1-415-391-2808

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH-(EPA 8015,8020) X Gas w/ X BTEX ☐MTBE	PURGEABLE AROMATICS BTEX (EPA 8020)	TPH-Diesel (EPA.8015M)	TEPH (EPA 8015M) X Diesel ☐M.O. ☐Other Gel	PURGEABLE HALOCARBONS, (HVOCs) (EPA 8010)	VOLATILE ORGANICS (VOCs) (EPA 8260)	SEMIVOLATILES (EPA 8270)	TOTAL OIL AND GREASE (SM 5520 B+F, E+F)	MTBE + other oxygenates 8260	☐ PESTICIDES(EPA 8080) ☐ PCB'S (EPA 8080)	PNA's by ☐ 8270 ☐ 8310	☐ Spec. Cond. ☐ TSS ☐ TDS	LUFT METALS: Cd, Cr, Pb, Ni, Zn	CAM'17 METALS (EPA 6010/7470/7471)	TOTAL LEAD	☐ W.E.T. (STLC) ☐ TCLP	☐ Hexavalent Chromium ☐ pH (24 hr hold time for H20)				NUMBER OF CONTAINERS
AW-1	3/29/02		GW	4°C	X			X					X												7
AW-2	"		"	"	X			X					X												7
AW-3	"		"	"	X			X					X												7

PROJECT INFORMATION

PROJECT NAME: Central Monitor

PROJECT NUMBER: 22002.28

P.O. #

SAMPLE RECEIPT

TOTAL NO OF CONTAINERS

HEAD SPACE

TEMPERATURE 3.4°C

CONFORMS TO RECORD

TAT: STANDARD 5-DAY | 24 | 48 | 72 | OTHER

SPECIAL INSTRUCTIONS/COMMENTS.

Report: X Routine ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Electronic Report

Silica Gel clean-up on TEPH

RELINQUISHED BY 1	RELINQUISHED BY 2	RELINQUISHED BY 3
(SIGNATURE) R. Horwath (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) (TIME)
(PRINTED NAME) R. Horwath (DATE) 3/29/02	(PRINTED NAME) Musa 1645 (DATE)	(PRINTED NAME) (DATE)
(COMPANY) AllWest	(COMPANY) 03/29/02 STL-SF	(COMPANY)
RECEIVED BY 1	**RECEIVED BY 2**	**RECEIVED BY (LABORATORY) 3**
(SIGNATURE) (TIME)	(SIGNATURE) (TIME)	(SIGNATURE) M. Harrington (TIME)
(PRINTED NAME) Musa 1600 (DATE)	(PRINTED NAME) (DATE)	(PRINTED NAME) D. Harrington 1645 (DATE)
(COMPANY) 03/29/02	(COMPANY)	(LAB) STL-SF 3/29/02

Appendix A

Groundwater Monitoring Well Sampling Field Log

Project No.: 22002.28 Project Name: 900 Central Avenue

Well No.: MW-1 Well Location: Northwest, California

Well Depth: 18.31 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 8.2 (ft.) Date: 03/29/02 Time: 10:05

Water Column in Well: 12.10 (ft.) x 0.17 Well Volume: 2.06 (gal.) x 3 = 6.18
(Ft. X 0.17 for 2", ft. x 0.65 x 4")

Odor? No Free Product? No Thickness: NA

Purging Method: Hand Pump____ Submersible Pump____ Bailer X Other____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
10:50	7.35	210	62.7	-	0.25	Clear
10:57	6.78	235	64.3	-	1.75	Silty brown
11:02	6.89	232	64.4	-	3.60	Light Brown
11:11	6.88	225	69.8	-	5.25	Light brown

Purging Start Time: 10:50 Purging Stop Time: 11:11

Total Volume Purged: 6.0 (gal.) Well Dewater? No

Water Level Prior to Sampling: _____(ft.) Time: _____

Sampling Method: Teflon Bailer____ Disposable Bailer X Sampling Pump____

Sample Collected: 6x40 - ml and 1- liter Sample No.: MW-1

Remark: _____

Sampler: R. Howarth Date/Time: 03/21/02 11:20

22002.20Groundwater Monitoring Well Sampling Field Log

Project No.: 22002.28 Project Name: 900 Central Avenue

Well No.: MW-3 Well Location: Southwest Corner

Well Depth: 18.18 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 7.78 (ft.) Date: 03/29/02 Time: 10:01

Water Column in Well: 10.36 10.17 (ft.) Well Volume: 1.75 (gal.)

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump____ Submersible Pump____ Bailer X Other____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
10:10	8.46	237	65.3	138	0.25	Clear
10:15	7:54	252	63.3	108	1.25	Light Brown
10:27	7.33	265	6.26	109	3.1	Light brown
10:33	7:21	271	6.22	105	8.25	

Purging Start Time: 10:10 Purging Stop Time: 10:33

Total Volume Purged: 5.25 (gal.) Well Dewater? No

Water Level Prior to Sampling: - (ft.) Time: -

Sampling Method: Teflon Bailer____ Disposable Bailer X Sampling Pump____

Sample Collected: 6x40-ml and 1-liter Sample No.: MW-3

Remark: _____

Sampler: R. Howarth Date/Time: 03/29/02 10:40

Groundwater Monitoring Well Sampling Field Log

Project No.: 22002.28 Project Name: 900 Central Avenue

Well No.: MW-2 Well Location: Northeast, California

Well Depth: 11.72 (ft.) Casing Diameter: 2 (in.)

Depth to Water: 8.10 (ft.) Date: 03/29/02 Time: 9 57

Water Column in Well: 3.62 (ft.) x .17 Well Volume: 0.65 (gal.) x 3 = 6.18
(Ft. X 0.17 for 2", ft. x 0.65 x 4")

Odor? No Free Product? No Thickness: N/A

Purging Method: Hand Pump____ Submersible Pump____ Bailer X Other____

Time	pH	Conduc. (μS)	Temp. (°F)	Water Level	Volume Removed	Remark
11:31	6.49	182	62.1		0.25	Clear
11:37	6.50	114	61.1		0.75	Light Brown
11:43	6.45	113	60.4	60.4	1.50	Light Brown
11:50	6.54	111	60.2	60.2	2.25	Light Brown

Purging Start Time: 11:31 Purging Stop Time: 11:50

Total Volume Purged: 2.25 (gal.) Well Dewater? No

Water Level Prior to Sampling: _____(ft.) Time: _____

Sampling Method: Teflon Bailer____ Disposable Bailer X Sampling Pump____

Sample Collected: _____ Sample No.: MW-2

Remark: Sediments in the bottom of wells

Sampler: R. Howarth Date/Time: 03/21/02 11:20