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John S. Hahn
(202) 408-6430

November 5, 1996



**VIA FEDERAL EXPRESS**

Ms. Juliet Shin
Hazardous Materials Specialist
Alameda County Department of
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

**Re: STID 3856; 1055 Eastshore Highway, Albany, CA**

Dear Ms. Shin:

Enclosed is AllWest's Groundwater Monitoring Report for the third quarter of 1996. The new data indicate that the TPH and BTEX levels are continuing to decrease at the site.

Please call me if you have any comments concerning the latest monitoring data.

Sincerely,

John S. Hahn

Enclosure

cc: John Frank (w/enclosure)
Marc Cunningham (w/o enclosure)
John T. Lynch (w/o enclosure)
Randall T. Smith (w/enclosure)

8060242

**AllWest Environmental, Inc.**

Specialists in Environmental Due Diligence and Remedial Services

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San Francisco, CA 94104
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# GROUNDWATER MONITORING REPORT
## Third Quarter 1996

***1055 Eastshore Highway***
***Albany, California***

ALLWEST PROJECT 96208.28
October 18, 1996

PREPARED BY:

Keith Craig
Project Manager

REVIEWED BY:

12/31/97

Long Ching, PE
Senior Engineer

# TABLE OF CONTENTS

AllWest

# MONITORING WELLS SAMPLING REPORT
## Third Quarter 1996

*1055 Eastshore Highway*
*Albany, California*

## I. INTRODUCTION

This report presents the Third Quarter 1996 results of a quarterly groundwater monitoring program performed by *AllWest Environmental* at 1055 Eastshore Highway, Albany, California. The monitoring program was initiated in response to an *Alameda County Department of Environmental Health (ACDEH)* request for quarterly sampling. The objective of the sampling program was to investigate the groundwater in the vicinity of the former underground storage tank (UST).

The scope of *AllWest's* services included sampling of four wells (MW-1 through MW-4), the measuring of groundwater levels in all four wells, and the submittal of the samples to a state certified laboratory, *Global Environmental Laboratory, Inc. (Global Lab)*. The samples were submitted for analysis of total petroleum hydrocarbons as gasoline (TPH-g), and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX). After receipt of the analytical results, a written report was prepared to present the results.

## II. SITE HISTORY

The subject property lies in the western-most area of Albany, Alameda County, California in an industrial area (See Figures 1 and 2). The subject property is located on the east side of Eastshore Highway, approximately 200 feet south of the Albany off-ramp from Highway I-80. San Francisco Bay is located approximately 2,000 feet west of the subject property.

The subject property facility currently is occupied by the City of Albany Corporation Yard. One underground storage tank (UST) containing gasoline was removed by *Resna Industries* on September 2, 1992. The former UST was located south of the building. A generalized site plan with the former UST location is presented on Figure 3.

Soil near the UST excavation was removed in September 1992. A preliminary site assessment (PSA) was conducted in July 1994. The PSA consisted of the advancement of seven boreholes, the installation of three groundwater monitoring wells (MW-1 through MW-3), and the submittal of soil and groundwater samples to an analytical laboratory for analyses. The PSA indicated that gasoline constituents were present in soil and groundwater at the site.

In June 1995, monitoring well MW-4 was installed and sampled. All four monitoring wells were sampled in June, September and December of 1995, and March and June of 1996 as requested by the *ACDEH*. Additionally, groundwater elevations were measured as part of the quarterly groundwater monitoring program.

## III. GROUNDWATER SAMPLING ACTIVITIES

Activities for the Third Quarter 1996 monitoring event included sampling and measuring the groundwater elevation of all four monitoring wells (MW-1 through MW-4). The work was conducted by *AllWest* personnel on September 17, 1996.

*AllWest's* groundwater sampling protocols, presented in Appendix A of this report, were followed. Groundwater parameters including conductivity, temperature, and pH were collected at three gallon intervals and recorded on the sampling logs (See Appendix B). At least three well casing volumes were purged prior to sampling. After purging, three 40-milliliter samples were collected from each of the four monitoring wells. No product sheen was noted.

The September 17, 1996 groundwater levels as well as the cumulative groundwater level measurements from wells MW-1 through MW-4 are presented in Table 1. Groundwater flow direction was calculated to be towards the northwest with an average gradient of 0.003 ft/ft.

## IV. LABORATORY TEST RESULTS

The four collected water samples were submitted to a State of California certified analytical laboratory, *Global Environmental Laboratory, Inc.* (*Global Lab*), of Fremont, California. All water samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX).

The laboratory results indicated concentrations of TPH-g at 190 $\mu$g/L (approximately equivalent to parts per billion [ppb]) in well MW-2 only. No TPH-g was detected in samples from MW-1, MW-3, and MW-4 at or above the laboratory reporting limit of 50 ppb. BTEX concentrations for MW-2 were reported as 9 ppb Benzene, 8.2 ppb Toluene, 10 ppb Ethylbenzene, and 26 ppb Xylene. No BTEX concentrations were detected in MW-1, MW-3, and MW-4 at or above the laboratory reporting limit of 0.5 ppb except for 2.3 ppb of Toluene and 1.4 ppb of Xylene in MW-4.

A summary of analytical results for wells MW-1 through MW-4 to date are presented in Table 2. A copy of the laboratory test reports and Chain-of-Custody documents are displayed in Appendix C.

## V. CONCLUSIONS

As indicated by the laboratory test results, low levels of TPH-g and BTEX were detected in groundwater samples from monitoring well MW-2. The concentrations of TPH-g and BTEX in well MW-2 are significantly lower than all of the previous results. This suggests that natural bio-degradation of the groundwater contaminants is occurring at the site. The non-detectable results from MW-1, MW-3 and MW-4 continue to indicate the extent of contaminated groundwater is limited and within the immediate vicinity of MW-2.

## VI. REPORT LIMITATIONS

The work described in this report has been performed accordance with generally accepted engineering principles an practices. The conclusions and recommendations contained herein are presented based on environmental conditions of the site and laboratory test results of the groundwater sample. It must be recognized that changes can occur in groundwater conditions due to seasonal variations, or other reasons. Furthermore, the distribution of chemical concentrations in the groundwater can vary both temporally and spatially. The chemical analyses results 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 laboratory, nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratory.

KBC115: 96208-28.Q03

# TABLE 1
# CUMULATIVE SUMMARY OF GROUNDWATER ELEVATION MEASUREMENTS

1055 Eastshore Highway
Albany, California

| Well Number and Sampling Date | Well Casing Elevation | Depth to Water (In feet) | Groundwater Elevation (Assumed Datum equals 12') | Change Since Last Measurement (In feet) | Average Hydraulic Gradient |
|---|---|---|---|---|---|
| **MW-1** | | | | | |
| 6/28/94 | 6.62 feet | 6.06 | 0.56 | | 0.009 ft/ft SSE |
| 6/29/94 | | 6.04 | 0.58 | +0.02 | 0.004 ft/ft WNW |
| 7/20/94 | | 6.08 | 0.54 | -0.04 | 0.003 ft/ft S |
| 6/9/95 | | 4.85 | 1.77 | +1.53 | 0.004 ft/ft SW |
| 6/29/95 | | 4.79 | 1.90 | +0.13 | 0.005 ft/ft SW |
| 9/7/95 | | 5.90 | 0.72 | -1.18 | 0.004 ft/ft SW |
| 12/20/95 | | 3.98 | 2.64 | +1.92 | 0.005 ft/ft SW |
| 3/22/96 | | 3.55 | 3.07 | +0.43 | 0.007 ft/ft SE |
| 6/21/96 | | 5.20 | 1.42 | -1.65 | 0.005 ft/ft W |
| 9/17/96 | | 5.86 | 0.76 | -0.66 | 0.003 ft/ft NW |
| **MW-2** | | | | | |
| 6/28/94 | 6.92 feet | 6.26 | 0.66 | | 0.009 ft/ft SSE |
| 6/29/94 | | 6.34 | 0.58 | -0.08 | 0.004 ft/ft WNW |
| 7/20/94 | | 6.33 | 0.59 | +0.01 | 0.003 ft/ft S |
| 6/9/95 | | 5.13 | 1.79 | +1.20 | 0.004 ft/ft SW |
| 6/29/95 | | 4.99 | 1.93 | +0.14 | 0.005 ft/ft SW |
| 9/7/95 | | 6.23 | 0.69 | -1.24 | 0.004 ft/ft SW |
| 12/20/95 | | 4.12 | 2.80 | +2.11 | 0.005 ft/ft SW |
| 3/22/96 | | 3.70 | 3.33 | +0.42 | 0.007 ft/ft SE |
| 6/21/96 | | 5.44 | 1.48 | -1.85 | 0.005 ft/ft W |
| 9/17/96 | | 6.11 | 0.81 | -0.67 | 0.003 ft/ft NW |
| **MW-3** | | | | | |
| 6/28/94 | 7.02 feet | 6.30 | 0.72 | | 0.009 ft/ft SSE |
| 6/29/94 | | 6.29 | 0.73 | +0.01 | 0.004 ft/ft WNW |
| 7/20/94 | | 6.36 | 0.66 | -0.07 | 0.003 ft/ft S |
| 6/9/95 | | 5.16 | 1.86 | +1.20 | 0.004 ft/ft SW |
| 6/29/95 | | 5.03 | 1.99 | +0.13 | 0.005 ft/ft SW |
| 9/7/95 | | 6.42 | 0.60 | -1.39 | 0.004 ft/ft SW |
| 12/20/95 | | 4.02 | 3.00 | +1.61 | 0.005 ft/ft SW |
| 3/22/96 | | 3.67 | 3.35 | +0.35 | 0.007 ft/ft SE |
| 6/21/96 | | 5.45 | 1.57 | -1.78 | 0.005 ft/ft W |
| 9/17/96 | | 6.17 | 0.85 | -0.72 | 0.003 ft/ft NW |
| **MW-4** | | | | | |
| 6/29/95 | 6.46 feet | 4.60 | 1.86 | | 0.005 ft/ft SW |
| 9/7/95 | | 5.79 | 0.64 | -1.22 | 0.004 ft/ft SW |
| 12/20/95 | | 3.66 | 2.80 | +2.16 | 0.005 ft/ft SW |
| 3/22/96 | | 3.29 | 3.17 | +0.37 | 0.007 ft/ft SE |
| 6/21/96 | | 4.93 | 1.53 | -1.64 | 0.005 ft/ft W |
| 9/17/96 | | 5.62 | 0.84 | -0.69 | 0.003 ft/ft NW |

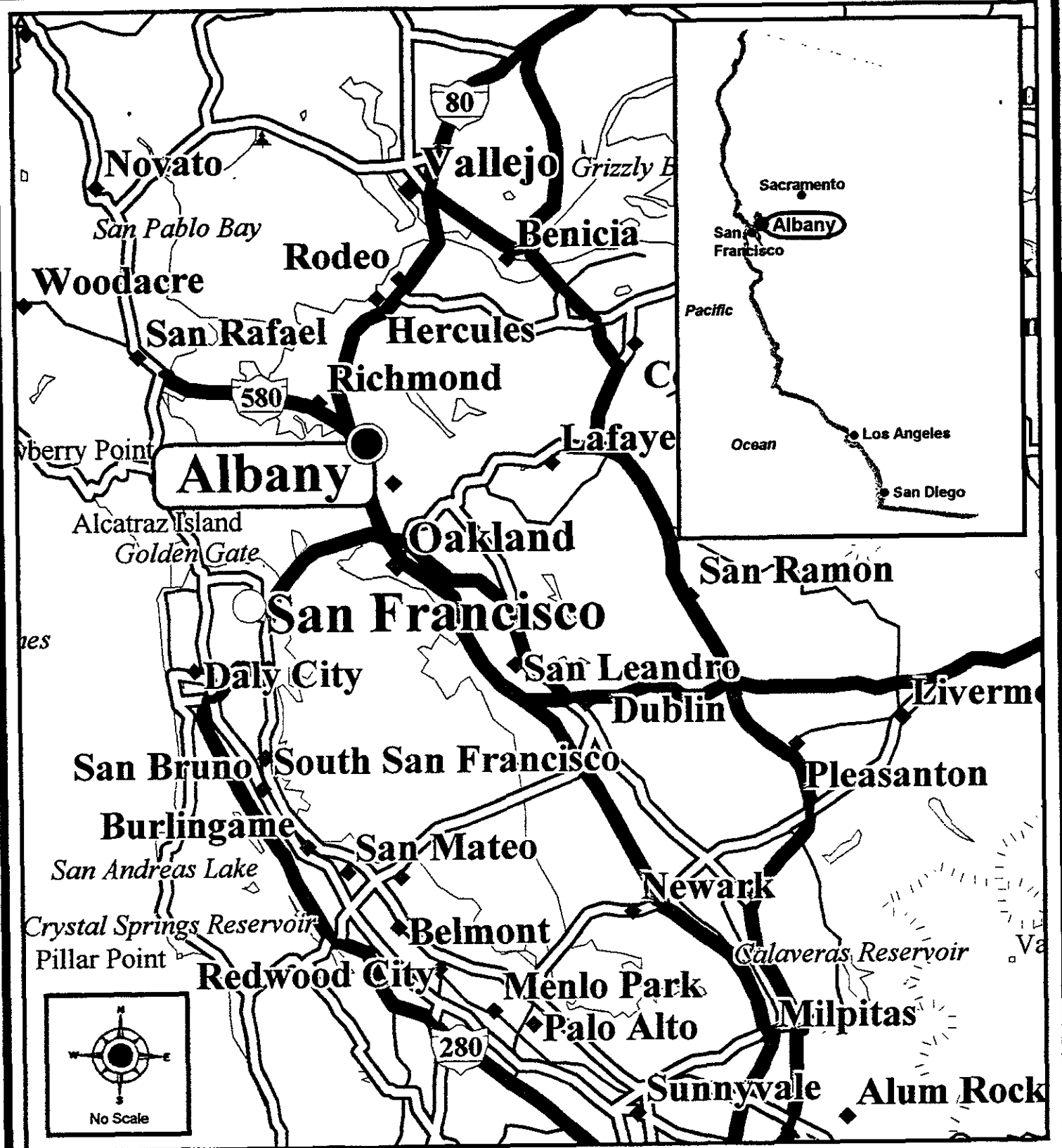
Notes: MW-4 was installed in June 1995.

# TABLE 2
# CUMULATIVE SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

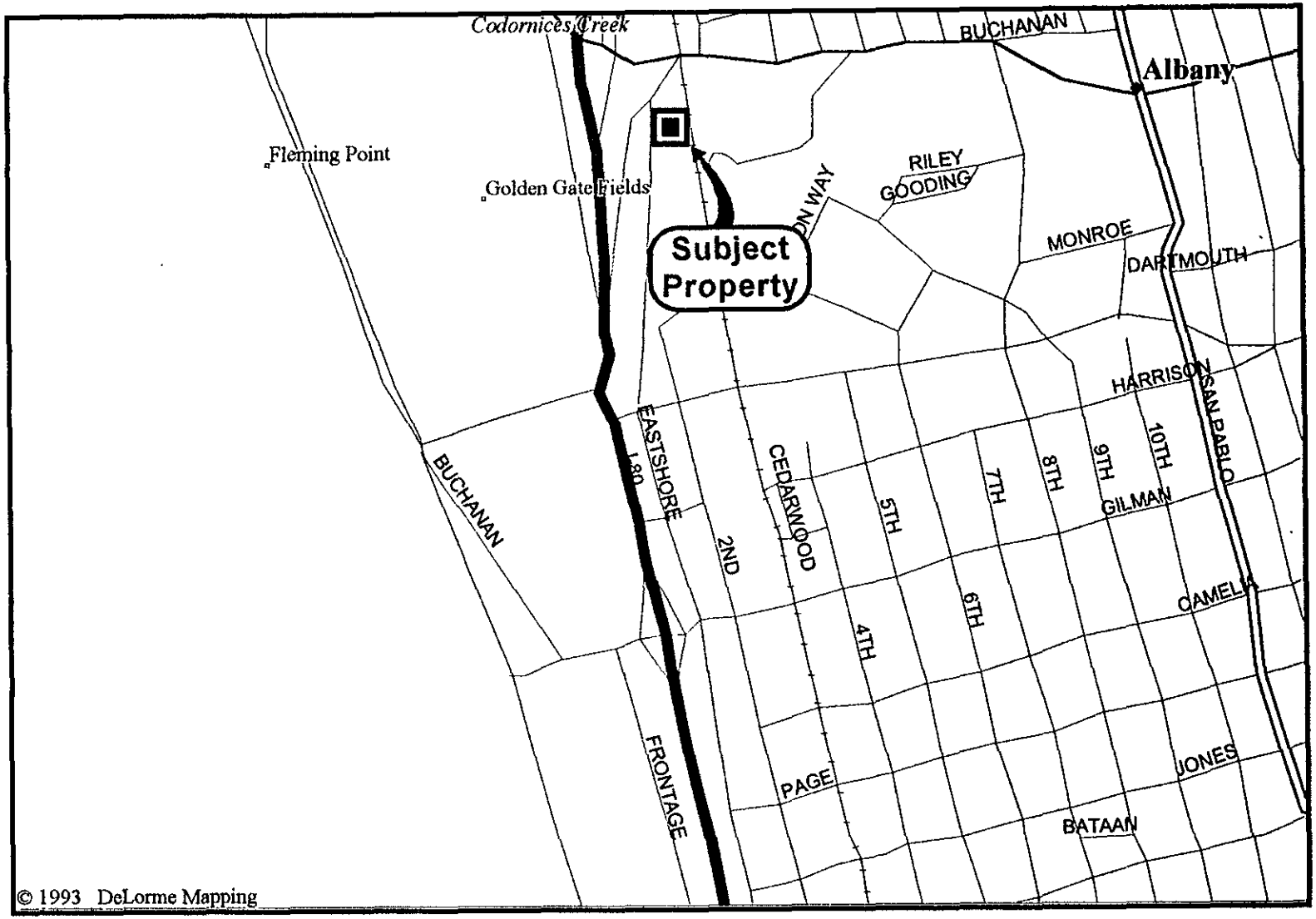
1055 Eastshore Highway
Albany, California

| Monitoring Well No. and Sampling Date | TPH-Gasoline | Benzene | Toluene | Ethylbenzene | Xylenes |
|---|---|---|---|---|---|
| **MW-1** | | | | | |
| 6/23/94 | ND (<50) | ND (<0.3) | 0.60 | 2.5 | 9.0 |
| 6/29/95 | ND (<50) | 0.8 | ND (<0.5) | 1.3 | 3.2 |
| 9/7/95 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 12/20/95 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 3/22/96 | ND (<50) | ND (<0.5) | 2.5 | ND (<0.5) | 2.2 |
| 6/21/96 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 9/17/96 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| **MW-2** | | | | | |
| 6/23/94 | 330 | 130 | 11 | 20 | 10 |
| 6/29/95 | 3,800 | 260 | 9.8 | 190 | 310 |
| 9/7/95 | 2,700 | 100 | 1.9 | 92 | 210 |
| 12/20/95 | 1,500 | 170 | 50 | 30 | 170 |
| 3/22/96 | 4,500 | 920 | 30 | 360 | 1,300 |
| 6/21/96 | 1,100 | 140 | 1.6 | 62 | 160 |
| 9/17/96 | 190 | 9.0 | 8.2 | 10 | 26 |
| **MW-3** | | | | | |
| 6/23/94 | 52.0 | ND (<0.3) | ND (<0.3) | 4.0 | 13 |
| 6/29/95 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 9/7/95 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 12/20/95 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 3/22/96 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 6/21/96 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 9/17/96 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| **MW-4** | | | | | |
| 6/29/95 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 9/7/95 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 12/20/95 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 3/22/96 | 60 | 0.8 | 2.8 | 1.1-ppb | 4.7 |
| 6/21/96 | ND (<50) | ND (<0.5) | ND (<0.5) | ND (<0.5) | ND (<0.5) |
| 9/17/96 | ND (<50) | ND (<0.5) | 2.3 | ND (<0.5) | 1.4 |

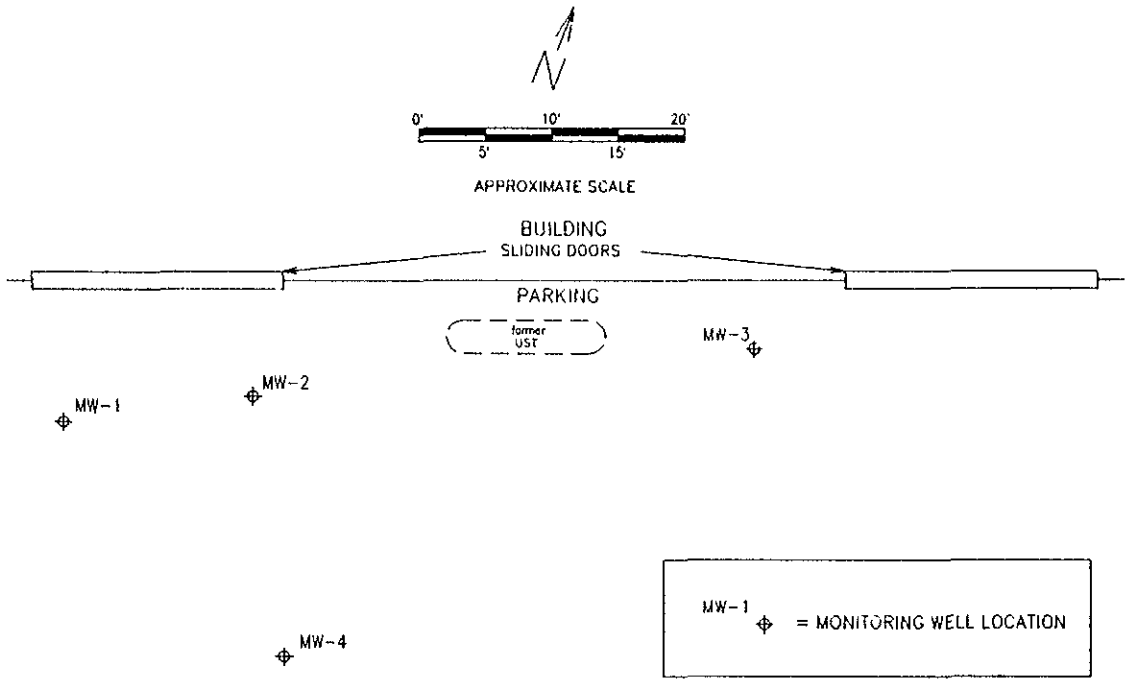
Notes: ND = Not-detected at or above the laboratory reporting limit.
All numerical values are in units of µg/L, approximately equivalent to ppb.
MW-4 installed June 1995.



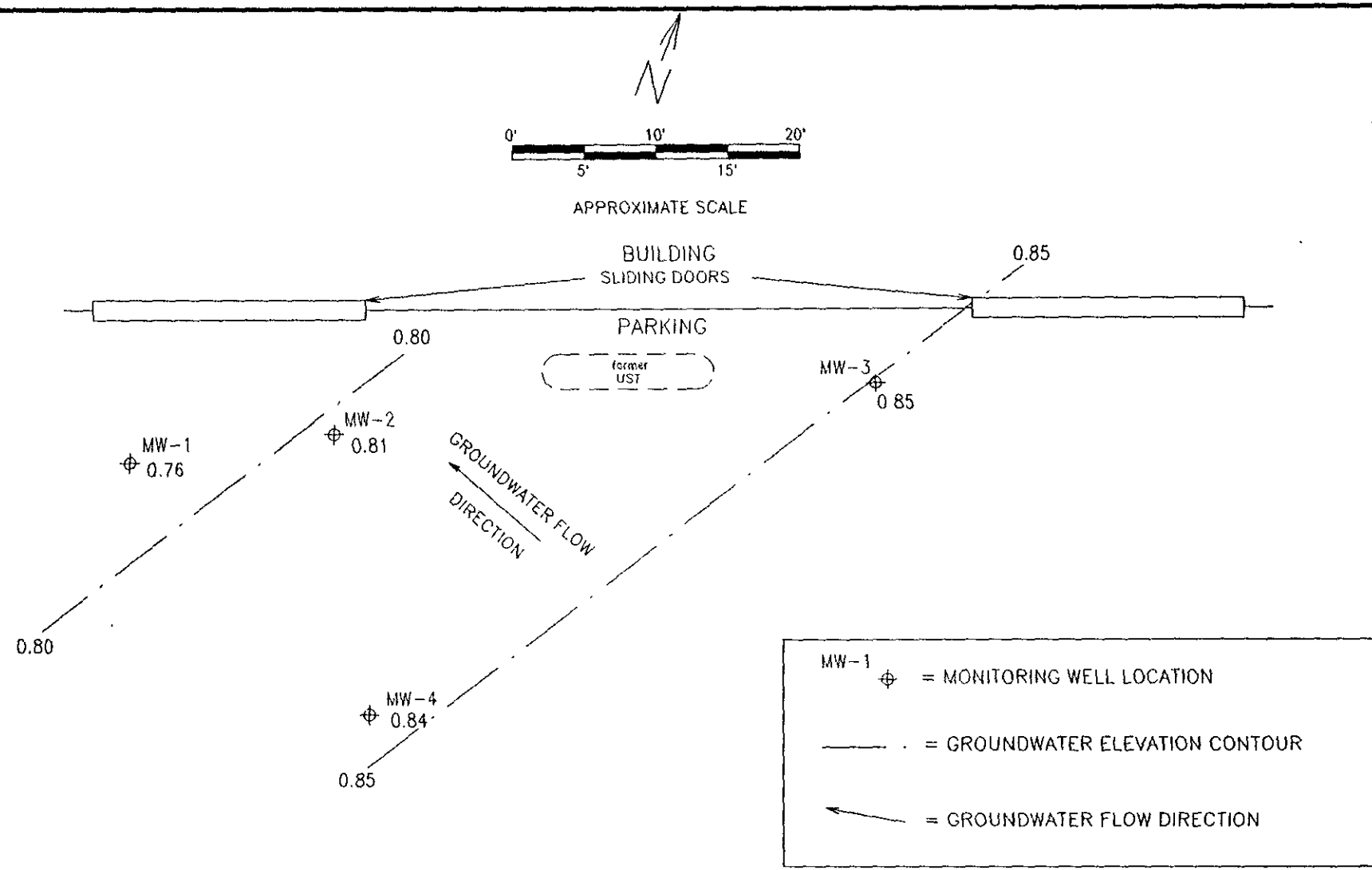

| | | | | |
|---|---|---|---|---|
| AllWest | October 1996 | **Site Regional Map** | Project 96208.28 | Figure 1 |
| | 1055 East Shore Highway Albany, California | | | Source *DeLorme* |




| | | | | |
|---|---|---|---|---|
| AllWest | October 1996 | **Site Vicinity Map** | Project No. 96208.28 | Figure 2 |
| | 1055 East Shore Highway<br>Albany, California | | | Scale<br>*1" = 1300'* |




| | | | | |
|---|---|---|---|---|
| AllWest | October 1996 | **Generalized Site Plan** | Project No. 96208.28 | Figure 3 |
| | 1055 East Shore Highway<br>Albany, California | | | Source<br>*AllWest* |




AllWest

| | | | |
|---|---|---|---|
| October 1996 | **Groundwater Contour Map** | Project No. 96208.28 | Figure 4 |
| 1055 East Shore Highway<br>Albany, California | | | Source<br>*AllWest* |

## Appendix A

## GROUNDWATER SAMPLING PROCEDURES

Upon arriving at the groundwater monitoring well site, each monitoring well vault and well casing are first examined for damage which could render the well inoperable. Any water collected during the recent rains were purged from the well vault to avoid contamination from rain water. The upper end-cap was then removed and an organic vapor meter (OVM) was used to detect hydrocarbon vapor that might exist inside the well casing. The reading of the OVM was then recorded onto the groundwater sampling field log. After an appreciable time for groundwater levels to equilibrate, electric water level sounder was lowered into the well casing to measure the depth to water to the nearest 0.01 feet. A clear polyethylene bailer was then lowered into the well casing and partially submerged. Upon retrieval of the clear bailer, the surface of the water column retained in the bailer was carefully examined for floating product or product sheen.

After initial measurements were completed and recorded, each monitoring well was purged by an electrical submersible pump or decontaminated teflon bailer. A minimum of 3 well volumes of groundwater was purged. Groundwater quality parameters (temperature, pH, and conductivity) were monitored with a combination meter after each well volume was removed. Purging was considered complete when purging indicators were stabilized (consecutive readings within 10% of each other) or the purged water was relatively free of sediments. All purged water was temporarily stored on-site in labeled 55-gallon drums pending test results to determine the proper disposal method. If no contamination was found then the purge water was disposed of as nonhazardous.

Groundwater sampling was conducted after the water level in the well recovered to at least 80% of the initial level that was recorded before purging. The groundwater sample was collected using a disposable bailer, which was discarded after the sampling event. Upon retrieval of the disposable bailer, the retained water was carefully transferred to appropriate glass container(s) (three 40-ml VOAs) furnished by the analytical laboratory. A bottom emptying device was placed on the bailer to minimize the loss of volatile organic compounds during transfer. All sample containers were fitted with teflon lined septum/cap and filled such that no headspace was present. After the water sample was properly transferred to the appropriate containers, the containers were labeled and immediately placed on ice in an insulated cooler to preserve the chemical characteristics of the sample.

To prevent cross contamination, all groundwater sampling equipment that came into contact with the groundwater was thoroughly cleaned by washing in Alconox (a non-phosphate detergent) solution and double rinsed with distilled water prior to each well sampling event. Groundwater samples were stored and transported in an insulated cooler filled with crushed ice. The analytical laboratory collected the samples from the site or from the *AllWest* office. The samples were delivered to the analytical laboratory by a special courier of the laboratory. All samples were transported under strict Chain-of-Custody document protocol from the time of sample collection to the time of arrival at the laboratory.

# Groundwater Monitoring Well Sampling Field Log

Project No.: 96208.28 Project Name: X Monitor 96

Well No.: MW - 1 Well Location: _____

Well Depth: 24.95 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 5.86 (ft.) Date: 09/17/96 Time: 1250

Water Column in Well: 19.09 (ft.) Well Volume: 3.24 (gal.)

Odor? no Free Product? no Thickness: no

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ___

| Time | pH | Conduc. ($\mu$S) | Temp. (°F) | Water Level | Volume Removed | Remark |
|---|---|---|---|---|---|---|
| 1255 | 7.69 | 1200 | 69.22 | | 0.5 | Moderately turbidity |
| 1257 | 7.35 | 1250 | 70.1 | | 2.5 | |
| 1300 | 7.02 | 1260 | 70.5 | | 5.0 | Slight turbidity |
| 1302 | 6.98 | 1260 ✓ | 70.0 ✓ | | 7.5 | Dewatered |
| 1305 | 6.97 ✓ | 1290 | 69.8 | | 11.0 | Dewatered |
| | | | | | | |
| | | | | | | |

Purging Start Time: 1255 Purging Stop Time: 1305

Total Volume Purged: 11.0 (gal.) Well Dewater? yes

Water Level Prior to Sampling: 6.70 (ft.) Time: 1330

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-1

Remarks: _____

Sampler: Keith Craig Date/Time: 09/17/96 1350

# Groundwater Monitoring Well Sampling Field Log

Project No.: 96208.28 Project Name: X Monitor 96

Well No.: MW - 2 Well Location: _____

Well Depth: 19.75 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 6.11 (ft.) Date: 09/17/96 Time: 1400

Water Column in Well: 13.64 (ft.) Well Volume: 2.31 (gal.)

Odor? slight Free Product? no Thickness: no

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

| Time | pH | Conduc. ($\mu$S) | Temp. (°F) | Water Level | Volume Removed | Remark |
|---|---|---|---|---|---|---|
| 1410 | 7.54 | 1230 | 71.2 | | 0.5 | Highly turbid |
| 1413 | 7.44 | 1300 | 71.8 | | 2.5 | |
| 1416 | 7.20 | 1340 | 70.2 | | 5.0 | Moderate turbid |
| 1418 | 7.02 | 1320 | 70.2 | | 7.5 | Dewatered |
| 1421 | 7.03 | 1330 | 70.4 | | 10.0 | Slight turbid |
| 1423 | 6.98 | 1330 | 70.2 | | 12.0 | Dewatered |
| | | | | | | |

Purging Start Time: 1410 Purging Stop Time: 1423

Total Volume Purged: 12.0 (gal.) Well Dewater? yes

Water Level Prior to Sampling: 7.20 (ft.) Time: 1430

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-2

Remarks: _____

Sampler: Keith Craig Date/Time: 09/17/96 1450

KC\96208-28.mw2

# Groundwater Monitoring Well Sampling Field Log

Project No.: 96208.28 Project Name: X Monitor 96

Well No.: MW - 3 Well Location: _____

Well Depth: 19.90 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 6.17 (ft.) Date: 09/17/96 Time: 1200

Water Column in Well: 13.73 (ft.) Well Volume: 2.33 (gal.)

Odor? no Free Product? no Thickness: no

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ____

| Time | pH | Conduc. ($\mu$S) | Temp. (°F) | Water Level | Volume Removed | Remark |
|---|---|---|---|---|---|---|
| 1210 | 7.53 | 1020 | 69.9 | | 0.5 | Highly turbid |
| 1212 | 7.21 | 980 | 71.0 | | 2.0 | Moderate turbid |
| 1214 | 6.98 | 920 | 70.5 | | 4.5 | |
| 1217 | 6.91 | 900 | 70.6 | | 7.5 | Slight turbidity dewatered |
| 1219 | 6.94 | 890 | 70.6 | | 10.0 | Dewatered |
| | | | | | | |
| | | | | | | |

Purging Start Time: 1210 Purging Stop Time: 1219

Total Volume Purged: 10.0 (gal.) Well Dewater? yes

Water Level Prior to Sampling: 6.90 (ft.) Time: 1220

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 3 - 40 ml VOAs Sample No.: MW-3

Remarks: _____

Sampler: Keith Craig Date/Time: 09/17/96 1240

# Groundwater Monitoring Well Sampling Field Log

Project No.: 96208.28 Project Name: X Monitor 96

Well No.: MW - 4 Well Location: _____

Well Depth: 24.75 (ft.) Casing Diameter: 2" (in.)

Depth to Water: 5.62 (ft.) Date: 09/17/96 Time: 800

Water Column in Well: 19.13 (ft.) Well Volume: 3.25 (gal.)

Odor? no Free Product? no Thickness: no

Purging Method: Hand Pump ____ Submersible Pump X Bailer ____ Other ___

| Time | pH | Conduc. ($\mu$S) | Temp. (°F) | Water Level | Volume Removed | Remark |
|---|---|---|---|---|---|---|
| 830 | 7.43 | 1010 | 68.9 | | 0.5 | Moderately turbidity |
| 832 | 7.23 | 1000 | 67.7 | | 3.0 | Slight turbidity |
| 835 | 6.98 | 890 | 67.9 | | 5.0 | |
| 838 | 6.91 | 900 | 67.8 | | 8.0 | Clear |
| 841 | 6.87 | 920 | 67.4 | | 11.0 | Dewatered |
| 845 | 6.95 | 950 | 67.9 | | 13.5 | Dewatered |
| | | | | | | |

Purging Start Time: 830 Purging Stop Time: 845

Total Volume Purged: 13.5 (gal.) Well Dewater? yes

Water Level Prior to Sampling: 8.92 (ft.) Time: 900

Sampling Method: Teflon Bailer ____ Disposable Bailer X Sampling Pump ____

Sample Collected: 4 - 40 ml VOAs Sample No.: MW-4

Remarks: _____

_____

_____

Sampler: Keith Craig Date/Time: 09/17/96 920

KC\96208-28.mw4

Global Environmental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

September 25, 1996

All West Environmental
One Sutter Street, Suite 600
San Francisco, CA 94104

Regarding: **Analytical Results**
**Client Project: 96117.28**
**Global Lab Project: 960917B**

Dear Mr. Keith Craig:

Enclosed are the lab results for the samples submitted to Global Lab for the project above. The samples will be disposed of by the laboratory after 30 days from the time they were received.

We appreciate the opportunity to be of assistance to you. If you have any questions or comments, please feel free to contact me at (510) 498-1991.

Sincerely,

Lisheng Wu
Laboratory Manager

GE Global Environmental Laboratory, Inc.
4118 CLIPPER COURT, FREMONT, CA 94538 PHONE (510) 498-1991 FAX (510) 498-1994

## DHS (LUFT) TPH-GASOLINE / BTEX REPORT
(ug/L)

| | | | |
|---|---|---|---|
| Client: | Keith Craig | Date Sampled: | 09-17-96 |
| | All West Environmental, Inc. | Date Received: | 09-17-96 |
| | One Sutter Street, Suite 600 | Date Analyzed: | 09-19-96 |
| | San Francisco, CA 94104 | Date Reported: | 09-23-96 |
| Project: | 96117.28 | Lab Job #: | 960917B |
| Matrix: | Water | | |

| Client I.D. | Lab. I.D. | | Benzene | Toluene | Ethyl Benzene | Total Xylenes | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| MW-1 | 960917B01 | | ND | ND | ND | ND | 1 |
| MW-2 | 960917B02 | | 9.0 | 8.2 | 10 | 26 | 1 |
| MW-3 | 960917B03 | | ND | ND | ND | ND | 1 |
| MW-4 | 960917B04 | | ND | 2.3 | ND | 1.4 | 1 |
| | | | | | | | |
| Reporting Limit | | | 0.5 ug/L | 0.5 ug/L | 0.5 ug/L | 0.5 ug/L | |

| Client I.D. | Lab. I.D. | | | 8015M Gasoline | | | Dilution Factor |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| MW-1 | 960917B01 | | | ND | | | 1 |
| MW-2 | 960917B02 | | | 190 | | | 1 |
| MW-3 | 960917B03 | | | ND | | | 1 |
| MW-4 | 960917B04 | | | ND | | | 1 |
| | | | | | | | |
| Reporting Limit | | | | 50 ug/L | | | |

ND Not Detected. All analytes recorded as ND were found to be at or below the Reporting Limit.

Reviewed By:

Lisheng Wu, Laboratory Manager

ELAP#: 2132

EPA METHOD TEST QA/QC TABLE

**GLOBAL PROJECT #: 960917B**

| | | | |
|---|---|---|---|
| Lab I.D.: | 960917B-MSP | Analytical Method: | EPA M8015 |
| Project: | 96117.28 | Analysis date: | 09-19-96 |
| Ext/Prep. Method: | EPA 5030 | Matrix: | Water |
| Date: | 09-19-96 | Unit: | ug/L |

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery % | Matrix Spike Dul. Result | MSD Recovery % | Average Recovery %R | LCL %R | UCL %R | RPD % | UCL %RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.0 | 20.0 | 19.2 | 95.8 | 19.7 | 98.5 | 97.2 | 76.0 | 127.0 | 2.8 | 11.0 |
| Toluene | 0.0 | 20.0 | 18.4 | 91.8 | 18.9 | 94.6 | 93.2 | 76.0 | 125.0 | 3.0 | 13.0 |
| Chlorobenzene | 0.0 | 20.0 | 18.2 | 90.8 | 18.4 | 91.8 | 91.3 | 75.0 | 130.0 | 1.0 | 13.0 |
| Gasoline | 0.0 | 1000.0 | 888.4 | 88.8 | 835.0 | 83.5 | 86.2 | 70.0 | 130.0 | 6.2 | 30.0 |

Notes:
Sample Result-Concentration of Sample which is to used for Sample Spike & Sample Spike Duplicate
Spike Level- Level of Concentration Added to the Sample
MSP Result- Matrix Spike Result
MSP %R- Matrix Spike Percent Recovery
MSPD Result- Matrix Spike Duplicate Result
MSPD %R- Matrix Spike Dublicate Percent Recovery
AVG. %R - Average Recovery for MSP & MSPD % Recovery
LCL- Lower Criteria Level
UCL- Upper Criteria Level
RPD- Relative Percent Difference

# GE Global Environmental Laboratory, Inc.

Tel: (510) 498-1991 Fax: (510) 498-1994

## CHAIN OF CUSTODY

LOG NO. 1056

CLIENT NAME: AllWest Environmental
ADDRESS: 1 Sutter St #600
San Francisco Ca 94104
PROJECT NAME: Project X
PROJECT MANAGER: Keith Leary PHONE# (415) 391-2510
SAMPLED BY: Keith Leary
JOB DESCRIPTION: GW Sampling
SITE LOCATION: 1055 East Shore

CLIENT JOB NUMBER: 96117.29

DESTINATION LABORATORY:
- [x] GE
  4118 Clipper Court
  Fremont, CA 94538
- [ ] Other

FIELD CONDITIONS: Sunny

COMPOSITE:

SPECIAL INSTRUCTIONS:

| DATE | TIME | SAMPLE IDENTIFICATION | METHOD | MATRIX | CONTAINER NO. | CONTAINER TYPE | PRESERVATIVES | ANALYSIS REQUESTED: 8015 cmj TPH gas/BTEX only | 8020 - BTEX only | | | | TURN AROUND TIME: 24 HOURS | 48 HOURS | 1 WEEK | OTHERS | NOTE / FIELD READINGS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9-17-96 | 1330 | MW-1 | | Ground Water | 3 | 40ml VOA | No | X | X | | | | | | X | | |
| | 1410 | MW-2 | | | 3 | | | X | X | | | | | | X | | |
| | 1230 | MW-3 | | | 3 | | | X | X | | | | | | X | | |
| | 900 | MW-4 | | | 3 | | | X | X | | | | | | X | | |
| | 1350 | MW-1D | | | 3 | | | | | | | | | | | | Hold |

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) $HNO_3$ (3) = COLD (4)

| RELINQUISHED BY (SIGN) | PRINT NAME / COMPANY | DATE / TIME | RECEIVED BY (SIGN) | PRINT NAME / COMPANY |
|---|---|---|---|---|
| Keith Leary | Keith Leary AllWest | 9-17-96 1420 | Lisha Wi | |
| | | | | |

REC'D AT LAB BY: DATE / TIME: CONDITIONS / COMMENTS:

SHIPPED VIA: [x] FED X [x] UPS [ ] OTHER _____ AIR BILL #