**Mark Borsuk**
**Attorney at Law**
**mborsuk@ix.netcom.com**
**(415) 922-4740 / Fax 922-1485**
**1626 Vallejo Street**
**San Francisco, CA 94123-5116**

February 16, 1999

Mr. Thomas Peacock
Supervising HMS, LOP
ACHCSA
1131 Harbor Bay Parkway
Alameda, CA 94501
(510) 567-6700 / FAX 337-9335
tpeacock@co.alameda.ca.us

SUBJECT: IVQ'98 Monitoring Report
1432 Harrison Street, Oakland, CA 94612
SITE ID 498

Dear Mr. Peacock:

The IVQ'98 groundwater monitoring data is attached. If you have a question, please contact me.

Sincerely yours,

Mark Borsuk

BLAINE
TECH SERVICES INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE

February 11, 1999

Mark Borsuk
1626 Vallejo Street
San Francisco, CA 94123-5116

Site:
1432 Harrison Street
Oakland, California

Date:
December 23, 1998

## GROUNDWATER SAMPLING REPORT 981223-G-1

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results, or become involved with the marketing or installation of remedial systems.

This report deals with the groundwater well sampling performed by our firm in response to your request. Data collected in the course of our work at the site are presented in the TABLE OF WELL MONITORING DATA. This information was collected during our inspection and sample collection. Measurements include the total depth of the well and the depth to water. Water surfaces were further inspected for the presence of immiscibles. A series of electrical conductivity, pH, turbidity, and temperature readings were obtained during sample collection.

# STANDARD PRACTICES

## Sampling Equipment

Samples were collected using disposable bailers.

**Bailers:** A bailer, in its simplest form, is a hollow tube which has been fitted with a check valve at the lower end. The device can be lowered into a well by means of a cord. When the bailer enters the water, the check valve opens and liquid flows into the interior of the bailer. The bottom check valve prevents water from escaping when the bailer is drawn up and out of the well.

Two types of bailers are used in groundwater wells at sites where fuel hydrocarbons and/or solvents are of concern. The first type of bailer is made of a clear material such as acrylic plastic and is used to obtain a sample of the surface and the near-surface liquids, in order to detect the presence of visible or measurable fuel hydrocarbon floating on the surface. The second type of bailer is made of polyethylene, Teflon, or stainless steel, and is used as an evacuation and/or sampling device. Disposable bailers are made of polyethylene plastic, decontaminated by the manufacturer, individually packaged for one-time only use, and are inexpensive. Teflon and stainless steel bailers are relatively easy to clean and are considered reusable with proper decontamination.

Because bailers are manually operated, variations in operator technique may have a greater influence on performance than would be found when using more automated sampling equipment. Also, in cases where fuel hydrocarbons are involved the bailer may include near-surface contaminants that are not representative of water located deeper in the well.

## Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site.

## Sampling Methodology

Samples were obtained by standardized sampling procedures that follow a non-purge sample collection protocol. The sampling methodology conforms to both State and Regional Water Quality Control Board standards for no purge sampling and specifically adheres to EPA requirements for apparatus, sample containers and sample handling as specified in publication SW 846 and T.E.G.D. which is published separately.

## Sample Containers

Sample containers are supplied by the laboratory performing the analyses.

## Sample Handling Procedures

Following collection, samples are promptly placed in an ice chest containing ice or an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

## Sample Designations

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days, as jobs and projects often do.

## Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under our standard chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date and signature of person accepting custody of the samples).

## Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to Sequoia Analytical Services in Redwood City, California. Sequoia is certified by the California Department of Health Services as a Hazardous Materials Testing Laboratory, and is listed as DOHS HMTL #1210.

## Personnel

All Blaine Tech Services, Inc. personnel receive 29 CFR 1910.120(e)(2) training as soon after being hired as is practical. In addition, many of our personnel have additional certifications that include specialized training in level B supplied air apparatus and the supervision of employees working on hazardous materials sites. Employees are not sent to a site unless we are confident they can adhere to any site safety provisions in force at the site and unless we know that they can follow the written provisions of an SSP and the verbal directions of an SSO.

In general, employees sent to a site to perform groundwater well sampling will assume an OSHA level D (wet) environment exists unless otherwise informed. The use of gloves and double glove protocols protects both our employees and the integrity of the samples being collected. Additional protective gear and procedures for higher OSHA levels of protection are available.

**Reportage**

Submission to the Regional Water Quality Control Board and the local implementing agency should include copies of the sampling report, the chain of custody and the certified analytical report issued by the Hazardous Materials Testing Laboratory.

The following addresses have been listed here for your convenience:

Water Quality Control Board
San Francisco Bay Region
2101 Webster Street
Suite 500
Oakland, CA 94612
ATTN: Chuck Headlee

Oakland Fire Prevention Bureau
One City Hall Plaza
Oakland, CA 94612
ATTN: Stanley Y. Chi

Please call if we can be of any further assistance.

William Jones

WRJ/pc

attachments: cumulative table of well monitoring data
certified professional report and gradient map
certified analytical report
chain of custody
field data sheets

cc: John Riggi
Cambria Environmental Technology, Inc.
1144 65th St., Suite C
Oakland, CA 94608

# Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

| DATE | Well Head Elev. | Ground Water Elev. | Depth To Water | Notes | TPH-Gasoline | Benzene | Toluene | Ethyl-Benzene | Xylene | MTBE | Motor Oil |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-1** | | | | | | | | | | | |
| 12/21/94 | 34.95 | 15.42 | 19.53 | -- | 180,000 | 41,000 | 64,000 | 3,100 | 100,000 | -- | -- |
| 03/13/95 | 34.95 | 16.29 | 18.66 | -- | 150,000 | 31,000 | 45,000 | 2,500 | 17,000 | -- | -- |
| 06/27/95 | 34.95 | 16.75 | 18.20 | -- | 71,000 | 17,000 | 18,000 | 1,600 | 7,700 | -- | -- |
| 07/07/95 | 34.95 | 16.60 | 18.35 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 09/28/95 | 34.95 | 16.75 | 18.20 | -- | 110,000 | 27,000 | 34,000 | 1,700 | 14,000 | -- | -- |
| 12/20/95 | 34.95 | 14.99 | 19.96 | -- | 120,000 | 33,000 | 43,000 | 2,300 | 15,000 | -- | -- |
| 03/26/96 | 34.95 | 15.68 | 19.27 | * | 140,000 | 29,000 | 36,000 | 1,900 | 13,000 | ND | -- |
| 06/20/96 | 34.95 | 16.31 | 18.64 | * | 110,000 | 30,000 | 38,000 | 2,200 | 13,000 | ND | -- |
| 09/26/96 | 34.95 | 15.60 | 19.35 | ** | 170,000 | 28,000 | 40,000 | 2,200 | 15,000 | ND | -- |
| 10/28/96 | 34.95 | 15.37 | 19.58 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 12/12/96 | 34.95 | 15.27 | 19.68 | * | 110,000 | 36,000 | 47,000 | 2,500 | 16,000 | ND | -- |
| 03/31/97 | 34.95 | 16.15 | 18.80 | * | 160,000 | 24,000 | 39,000 | 1,900 | 13,000 | ND | -- |
| 06/27/97 | 34.95 | 15.69 | 19.26 | * | 130,000 | 25,000 | 36,000 | 2,000 | 14,000 | ND | -- |
| 09/09/97 | 34.95 | 15.25 | 19.70 | * | 99,000 | 22,000 | 27,000 | 1,600 | 13,000 | 270 | -- |
| 12/18/97 | 34.95 | 15.70 | 19.25 | *** | 160,000 | 30,000 | 44,000 | 2,200 | 15,000 | ND | -- |
| 03/12/98 | 34.95 | 17.43 | 17.52 | *** | 190,000 | 20,000 | 49,000 | 2,500 | 18,000 | ND | -- |
| 06/22/98 | 34.95 | 16.32 | 18.63 | -- | 90,000 | 19,000 | 40,000 | 2,100 | 16,000 | -- | -- |
| 09/18/98 | 34.95 | 16.35 | 18.60 | -- | 190,000 | 29,000 | 48,000 | 2,400 | 17,000 | -- | -- |
| 12/23/98 | 34.95 | 15.77 | 19.18 | -- | 140,000+ | 24,000 | 44,000 | 2,000 | 8,200 | -- | -- |

# Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

| DATE | Well Head Elev. | Ground Water Elev. | Depth To Water | Notes | TPH-Gasoline | Benzene | Toluene | Ethyl-Benzene | Xylene | MTBE | Motor Oil |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-2** | | | | | | | | | | | |
| 12/21/94 | 35.18 | 15.27 | 19.91 | -- | 200,000 | 140,000 | 200,000 | 3,500 | 22,000 | -- | -- |
| 03/13/95 | 35.18 | 16.03 | 19.15 | -- | 500,000 | 9,200 | 23,000 | 7,000 | 36,000 | -- | -- |
| 06/27/95 | 35.18 | 16.44 | 18.74 | -- | 120,000 | 23,000 | 30,000 | 2,700 | 13,000 | -- | -- |
| 07/07/95 | 35.18 | 16.38 | 18.80 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 09/28/95 | 35.18 | 15.88 | 19.30 | -- | 110,000 | 23,000 | 29,000 | 2,500 | 11,000 | -- | -- |
| 12/20/95 | 35.18 | 14.94 | 20.24 | -- | 83,000 | 980 | 1,800 | 2,200 | 10,000 | -- | -- |
| 03/26/96 | 35.18 | 15.49 | 19.69 | * | 150,000 | 23,000 | 32,000 | 2,800 | 12,000 | ND | -- |
| 06/20/96 | 35.18 | 20.98 | 14.20 | * | 94,000 | 15,000 | 23,000 | 2,400 | 12,000 | ND | -- |
| 09/26/96 | 35.18 | 15.38 | 19.80 | ** | 150,000 | 20,000 | 29,000 | 2,800 | 12,000 | ND | -- |
| 10/28/96 | 35.18 | 15.00 | 20.18 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 12/12/96 | 35.18 | 15.01 | 20.17 | * | 58,000 | 3,100 | 11,000 | 1,700 | 8,100 | 220 | -- |
| 03/31/97 | 35.18 | 15.51 | 19.67 | * | 38,000 | 6,000 | 7,900 | 690 | 3,300 | ND | -- |
| 06/27/97 | 35.18 | 15.50 | 19.68 | * | 62,000 | 13,000 | 16,000 | 1,300 | 6,000 | ND | -- |
| 09/09/97 | 35.18 | 14.98 | 20.20 | *** | 81,000 | 16,000 | 18,000 | 1,800 | 8,600 | ND | -- |
| 12/18/97 | 35.18 | 15.38 | 19.80 | *** | 110,000 | 18,000 | 26,000 | 2,200 | 9,500 | ND | -- |
| 03/12/98 | 35.18 | 17.11 | 18.07 | *** | 120,000 | 16,000 | 26,000 | 2,200 | 9,400 | ND | -- |
| 06/22/98 | 35.18 | 16.89 | 18.29 | -- | 38,000 | 9,800 | 9,500 | 1,500 | 6,000 | -- | -- |
| 09/18/98 | 35.18 | 16.09 | 19.09 | -- | 68,000 | 12,000 | 16,000 | 1,400 | 5,900 | -- | -- |
| 12/23/98 | 35.18 | 15.51 | 19.67 | -- | **180,000+** | **16,000** | **22,000** | **2,200** | **8,300** | -- | -- |

# Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

| DATE | Well Head Elev. | Ground Water Elev. | Depth To Water | Notes | TPH-Gasoline | Benzene | Toluene | Ethyl-Benzene | Xylene | MTBE | Motor Oil |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-3** | | | | | | | | | | | |
| 12/21/94 | 33.97 | 15.15 | 18.82 | -- | ND | ND | ND | ND | ND | -- | ND |
| 03/13/95 | 33.97 | 16.11 | 17.86 | -- | ND | ND | ND | ND | ND | -- | ND |
| 07/07/95 | 33.97 | 15.72 | 18.25 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 09/28/95 | 33.97 | 15.97 | 18.00 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 12/20/95 | 33.97 | 15.23 | 18.74 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 03/26/96 | 33.97 | 15.72 | 18.25 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 06/20/96 | 33.97 | 15.62 | 18.35 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 09/26/96 | 33.97 | 14.85 | 19.12 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 10/28/96 | 33.97 | 14.86 | 19.11 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 12/12/96 | 33.97 | 15.36 | 18.61 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 03/31/97 | 33.97 | 15.62 | 18.35 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 06/27/97 | 33.97 | 15.16 | 18.81 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 09/09/97 | 33.97 | 14.79 | 19.18 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 12/18/97 | 33.97 | 15.33 | 18.64 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 03/12/98 | 33.97 | 16.41 | 17.56 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 06/22/98 | 33.97 | 15.33 | 18.64 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 09/18/98 | 33.97 | 15.64 | 18.33 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 12/23/98 | 33.97 | 15.37 | 18.60 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| **MW-4** | | | | | | | | | | | |
| 10/28/96 | 30.77 | 11.45 | 19.32 | -- | NA | NA | NA | NA | NA | NA | -- |
| 12/12/96 | 30.77 | 11.35 | 19.42 | * | 11,000 | 4,200 | 410 | 420 | 260 | 32 | -- |
| 03/31/97 | 30.77 | 12.10 | 18.67 | * | ND | ND | ND | ND | ND | ND | -- |
| 06/27/97 | 30.77 | 11.69 | 19.08 | * | 160 | 49 | 1.2 | ND | 5.9 | ND | -- |
| 09/09/97 | 30.77 | 11.44 | 19.33 | * | 7,400 | 5,000 | 410 | 230 | 470 | 33 | -- |
| 12/18/97 | 30.77 | 11.60 | 19.17 | *** | 710 | 170 | 8.0 | ND | 39 | ND | -- |
| 03/12/98 | 30.77 | 13.09 | 17.68 | *** | 1,300 | 410 | 21 | ND | 57 | ND | -- |
| 06/22/98 | 30.77 | 13.14 | 17.63 | -- | ND | ND | ND | ND | ND | -- | -- |
| 09/18/98 | 30.77 | 12.19 | 18.58 | -- | ND | 42 | 1.6 | ND | 4.8 | -- | -- |
| 12/23/98 | 30.77 | 11.76 | 19.01 | -- | 1,900 | 1,000 | 76.0 | 50 | 120 | -- | -- |

# Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

| DATE | Well Head Elev. | Ground Water Elev. | Depth To Water | Notes | TPH-Gasoline | Benzene | Toluene | Ethyl-Benzene | Xylene | MTBE | Motor Oil |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-5** | | | | | | | | | | | |
| 10/28/96 | 31.61 | 11.73 | 19.88 | -- | NA | NA | NA | NA | NA | NA | -- |
| 12/12/96 | 31.61 | 11.52 | 20.09 | * | 230 | 5.6 | 0.9 | ND | 0.9 | 3.6 | -- |
| 03/31/97 | 31.61 | 12.37 | 19.24 | * | 90 | 3.1 | ND | ND | ND | ND | -- |
| 06/27/97 | 31.61 | 12.45 | 19.16 | * | ND | ND | ND | ND | ND | ND | -- |
| 09/09/97 | 31.61 | 11.68 | 19.93 | * | ND | ND | ND | ND | ND | ND | -- |
| 12/18/97 | 31.61 | 11.84 | 19.77 | *** | ND | ND | ND | ND | ND | ND | -- |
| 03/12/98 | 31.61 | 11.84 | 19.77 | * | 79 | 2.3 | ND | 0.8 | ND | ND | -- |
| 06/22/98 | 31.61 | 13.53 | 18.08 | -- | ND | ND | ND | ND | ND | -- | -- |
| 09/18/98 | 31.61 | 12.49 | 19.12 | -- | ND | ND | ND | ND | ND | -- | -- |
| 12/23/98 | 31.61 | 12.01 | 19.60 | -- | ND | 0.83 | 0.85 | ND | ND | -- | -- |

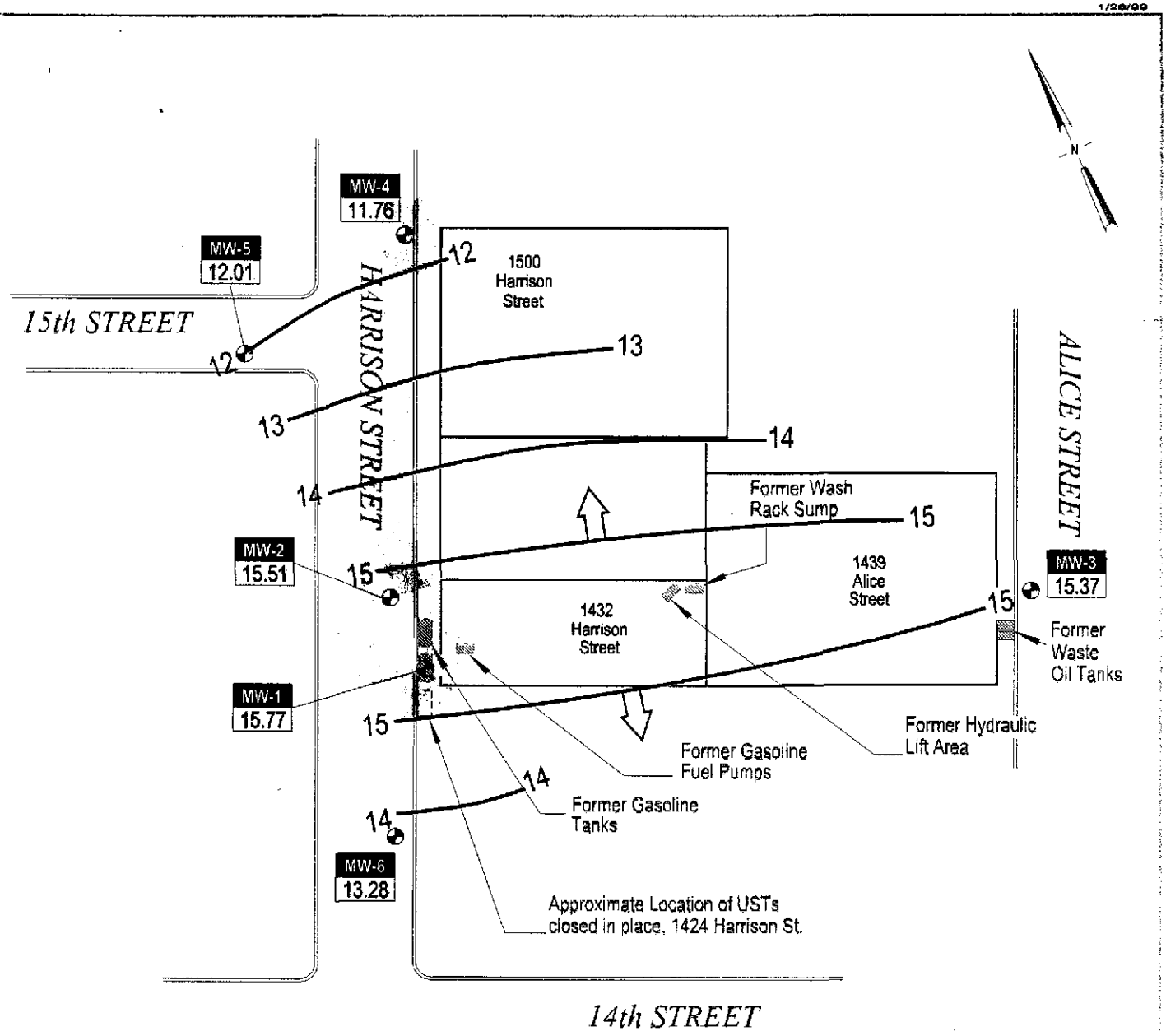
# Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

| DATE | Well Head Elev. | Ground Water Elev. | Depth To Water | Notes | TPH-Gasoline | Benzene | Toluene | Ethyl-Benzene | Xylene | MTBE | Motor Oil |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-6** | | | | | | | | | | | |
| 10/28/96 | 32.89 | 12.87 | 20.02 | -- | NA | NA | NA | NA | NA | NA | -- |
| 12/12/96 | 32.89 | 12.71 | 20.18 | * | ND | ND | ND | ND | ND | ND | -- |
| 03/31/97 | 32.89 | 13.08 | 19.81 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 06/27/97 | 32.89 | 13.13 | 19.76 | Gauge Only | -- | -- | -- | -- | -- | -- | -- |
| 09/09/97 | 32.89 | 12.83 | 20.06 | * | ND | ND | ND | ND | ND | ND | -- |
| 12/18/97 | 32.89 | 12.99 | 19.90 | -- | ND | ND | ND | ND | ND | -- | -- |
| 03/12/98 | 32.89 | 14.89 | 18.00 | * | ND | ND | ND | ND | ND | ND | -- |
| 06/22/98 | 32.89 | 14.46 | 18.43 | -- | ND | ND | ND | ND | ND | -- | -- |
| 09/18/98 | 32.89 | 13.79 | 19.10 | -- | ND | ND | ND | ND | ND | -- | -- |
| 12/23/98 | 32.89 | 13.28 | 19.61 | -- | ND | ND | ND | ND | ND | -- | -- |

*=MTBE results by EPA method 8020.
**=MTBE results by EPA method 8240.
***=MTBE results by EPA method 8260.
+=Chromatogram pattern indeicates gas.

ABBREVIATIONS:
TPH = Total Petroleum Hydrocarbons
ND = Not detected at or above the minimum quantitation limit. See laboratory reports for minimum quantitation limits.
MTBE = Methyl-t-Butyl Ether




**EXPLANATION**

- Ground Water Monitoring Well
- Ground Water Elevation Contour, Feet Above msl, Dashed Where Inferred
- Ground Water Flow Direction
- Well Designation
- ELEV. — Ground Water Elevation, Feet Above Mean Sea Level (msl)

NOTE: Wells MW-4, MW-5, and MW-6 installed in October, 1996.

0 50 100
Scale (ft)

FIGURE
1

H:\SB-2004\OAK-188\FIGURES\4QM98-MF.DWG

**Borsuk**
1432 Harrison Street
Oakland, California

CAMBRIA

**Ground Water Elevation Contours**
December 23, 1988

CAMBRIA

January 27, 1999

Kent Brown
Blaine Tech Services
1680 Rogers Avenue
San Jose, California 95112

Re: **Fourth Quarter 1998 Monitoring Report**
1432 Harrison Street
Oakland, California
Cambria Project #180-0214

Dear Mr. Brown:

As you requested, Cambria Environmental Technology, Inc. (Cambria) has summarized the results of the fourth quarter 1998 ground water sampling at the site referenced above. Presented below are sampling activities performed in the fourth quarter 1998, the hydrocarbon distribution in ground water, and the anticipated first quarter 1999 activities.

## FOURTH QUARTER 1999 ACTIVITIES AND RESULTS

***Ground Water Sampling:*** On December 23, 1998, Blaine Tech Services (Blaine) gauged all site wells and collected ground water samples from site wells MW-1, MW-2, MW-4, MW-5, and MW-6. Ground water elevations are shown on Figure 1. Analytical results are included as Attachment A.

***System Design:*** Cambria is awaiting cost pre-approval from the state clean up fund to complete the system design for a future remediation system installation bid.

### Hydrocarbon Distribution In Ground Water

As during previous sampling events, ground water analytical data suggest that hydrocarbon concentrations are highest in wells MW-1 and MW-2, which are located near the former underground storage tank area. Total petroleum hydrocarbons as gasoline (TPHg) concentrations increased in wells MW-1 and MW-2 to 140,000 parts per billion (ppb) and 180,000 ppb respectively. However, these concentrations are typical for historical fourth quarter analytical results. In addition, the sample collected from down gradient well MW-4 contained 1,900 ppb TPHg this quarter, compared to a non-detect result for MW-4 during the third quarter sampling event, also typical of previous fourth quarter analytical results.

Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

**Cambria Environmental Technology, Inc.**

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

## ANTICIPATED FIRST QUARTER 1999 ACTIVITIES

***Ground Water Sampling:*** Blaine will gauge all site wells and collect ground water samples from wells MW-1, MW-2, MW-4, MW-5, and MW-6. Cambria will prepare a ground water monitoring report summarizing the sampling data.

## CLOSING

We appreciate this opportunity to provide environmental consulting services to Blaine Tech Services. Please call if you have any questions or comments.

Sincerely,
**Cambria Environmental Technology, Inc.**

Jacquelyn Jones
Staff Geologist

David Elias, R.G.
Senior Geologist


Figure: 1 - Ground Water Elevation Contours
Attachment: A - Analytical Results for Ground Water Sampling

H:\SB-2004\Oakl-188-Borsuk\QM\QM-4-98.WPD

CAMBRIA

**Attachment A**

Analytical Results for Ground Water Sampling

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: 981223-G1/Mark Borsuk | Received: 12/28/98 |
| 1680 Rogers Avenue | | |
| San Jose, CA 95112 | Lab Proj. ID: 9812G21 | Reported: 01/08/99 |
| Attention: WR Jones | | |

## LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 1 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

**SEQUOIA ANALYTICAL**

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: 981223-G1/Mark Borsuk | Sampled: 12/23/98 |
| 1680 Rogers Avenue | Sample Descript: MW-1 | Received: 12/28/98 |
| San Jose, CA 95112 | Matrix: LIQUID | |
| | Analysis Method: 8015Mod/8020 | Analyzed: 01/03/99 |
| Attention: WR Jones | Lab Number: 9812G21-01 | Reported: 01/08/99 |

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| **TPPH as Gas** | 2500 | 140000 |
| **Benzene** | 25 | 24000 |
| **Toluene** | 25 | 44000 |
| **Ethyl Benzene** | 25 | 2000 |
| **Xylenes (Total)** | 25 | 8200 |
| **Chromatogram Pattern:** | | Gas |

| Surrogates | Control Limits % | | % Recovery |
|---|---|---|---|
| Trifluorotoluene | 70 | 130 | 90 |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1849

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: 981223-G1/Mark Borsuk | Sampled: 12/23/98 |
| 1680 Rogers Avenue | Sample Descript: MW-2 | Received: 12/28/98 |
| San Jose, CA 95112 | Matrix: LIQUID | |
| | Analysis Method: 8015Mod/8020 | Analyzed: 01/03/99 |
| Attention: WR Jones | Lab Number: 9812G21-02 | Reported: 01/08/99 |

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| **TPPH as Gas** | 5000 | 180000 |
| **Benzene** | 50 | 16000 |
| **Toluene** | 50 | 22000 |
| **Ethyl Benzene** | 50 | 2200 |
| **Xylenes (Total)** | 50 | 8300 |
| **Chromatogram Pattern:** | | Gas |

| Surrogates | Control Limits % | | % Recovery |
|---|---|---|---|
| Trifluorotoluene | 70 | 130 | 77 |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1849

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: 981223-G1/Mark Borsuk | Sampled: 12/23/98 |
| 1680 Rogers Avenue | Sample Descript: MW-4 | Received: 12/28/98 |
| San Jose, CA 95112 | Matrix: LIQUID | |
| | Analysis Method: 8015Mod/8020 | Analyzed: 01/03/99 |
| Attention: WR Jones | Lab Number: 9812G21-03 | Reported: 01/08/99 |

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| **TPPH as Gas** | **50** | **1900** |
| **Benzene** | **0.50** | **1000** |
| **Toluene** | **0.50** | **76** |
| **Ethyl Benzene** | **0.50** | **50** |
| **Xylenes (Total)** | **0.50** | **120** |
| **Chromatogram Pattern:** | | **Gas** |

| **Surrogates** | **Control Limits %** | | **% Recovery** |
|---|---|---|---|
| Trifluorotoluene | 70 | 130 | 97 |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1849

Peggy Renner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: 981223-G1/Mark Borsuk | Sampled: 12/23/98 |
| 1680 Rogers Avenue | Sample Descript: MW-5 | Received: 12/28/98 |
| San Jose, CA 95112 | Matrix: LIQUID | |
| | Analysis Method: 8015Mod/8020 | Analyzed: 01/03/99 |
| Attention: WR Jones | Lab Number: 9812G21-04 | Reported: 01/08/99 |

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| TPPH as Gas | 50 | N.D. |
| **Benzene** | **0.50** | **0.83** |
| **Toluene** | **0.50** | **0.85** |
| Ethyl Benzene | 0.50 | N.D. |
| Xylenes (Total) | 0.50 | N.D. |
| Chromatogram Pattern: | | |

| Surrogates | Control Limits % | | % Recovery |
|---|---|---|---|
| Trifluorotoluene | 70 | 130 | 90 |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1849

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: 981223-G1/Mark Borsuk | Sampled: 12/23/98 |
| 1680 Rogers Avenue | Sample Descript: MW-6 | Received: 12/28/98 |
| San Jose, CA 95112 | Matrix: LIQUID | |
| | Analysis Method: 8015Mod/8020 | Analyzed: 01/03/99 |
| Attention: WR Jones | Lab Number: 9812G21-05 | Reported: 01/08/99 |

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| TPPH as Gas | 50 | N.D. |
| Benzene | 0.50 | N.D. |
| Toluene | 0.50 | N.D. |
| Ethyl Benzene | 0.50 | N.D. |
| Xylenes (Total) | 0.50 | N.D. |
| Chromatogram Pattern: | | |

| Surrogates | Control Limits % | | % Recovery |
|---|---|---|---|
| Trifluorotoluene | 70 | 130 | 97 |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1849

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: 981223-G1/Mark Borsuk
Matrix: Liquid
Work Order #: 9812G21 -01-05
Reported: Jan 12, 1999

## QUALITY CONTROL DATA REPORT

| Analyte: | Benzene | Toluene | Ethyl Benzene | Xylenes |
|---|---|---|---|---|
| QC Batch#: | 01V9004 | 01V9004 | 01V9004 | 01V9004 |
| Analy. Method: | EPA 8015M/8020 | EPA 8015M/8020 | EPA 8015M/8020 | EPA 8015M/8020 |
| Prep. Method: | EPA 5030 | EPA 5030 | EPA 5030 | EPA 5030 |
| Analyst: | - | - | - | - |
| LCS/LCSD #: | 8120352 | 8120352 | 8120352 | 8120352 |
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. |
| Prepared Date: | 1/2/99 | 1/2/99 | 1/2/99 | 1/2/99 |
| Analyzed Date: | 1/3/99 | 1/3/99 | 1/3/99 | 1/3/99 |
| Instrument I.D.#: | - | - | - | - |
| Conc. Spiked: | 20 µg/L | 20 µg/L | 20 µg/L | 60 µg/L |
| Result: | 20 | 20 | 20 | 57 |
| LCS % Recovery: | 100 | 100 | 100 | 95 |
| Dup. Result: | 22 | 22 | 22 | 64 |
| LCSD % Recov.: | 110 | 110 | 110 | 110 |
| RPD: | 9.5 | 9.5 | 9.5 | 11.6 |
| RPD Limit: | 0-30 | 0-30 | 0-30 | 0-30 |

| MS/MSD LCS Control Limits | 80-120 | 80-120 | 80-120 | 80-120 |
|---|---|---|---|---|

SEQUOIA ANALYTICAL
Elap #1849

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

**BLAINE** TECH SERVICES INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS #981223-61

CLIENT MARK BORSUK

SITE 1432 HARRISON ST.
OAKLAND, CA

C = COMPOSITE ALL CONTAINERS

CONDUCT ANALYSIS TO DETECT

LAB SEQUOIA DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

☐ EPA ☐ RWQCB REGION ____
☐ LIA
☐ OTHER

SPECIAL INSTRUCTIONS

INVOICE & REPORT TO
BLAINE TECH SERVICES
ATTN: JR JONES

9812921

| SAMPLE I.D. | DATE | TIME | MATRIX S = SOIL W = H2O | CONTAINERS TOTAL | | TPH-G/BTEX | ADD'L INFORMATION | STATUS | CONDITION | LAB SAMPLE # |
|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 12/23/98 | 840 | W | 3 | VOAs | X | | | | |
| MW-2 | | 855 | | 2 | | X | 1 VOA broken | | | |
| MW-4 | | 805 | | 3 | | X | | | | |
| MW-5 | | 815 | | | | X | | | | |
| MW-6 | | 825 | | | | X | | | | |

| SAMPLING COMPLETED | DATE | TIME |
|---|---|---|
| | 12/23/98 | 900 |

SAMPLING PERFORMED BY

RESULTS NEEDED NO LATER THAN ROUTINE

| RELEASED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| | 12.28.98 | 9:30 | | 12.28.98 | 9:30 |
| RELEASED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
| | 12-28-98 | | | | |
| RELEASED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
| | | | | 12-28-98 | 12:48 |

| SHIPPED VIA | DATE SENT | TIME SENT | COOLER # | |
|---|---|---|---|---|
| | | | | |

# WELL GAUGING DATA

Project # 981223-G1 Date 12/23/98 Client Mark Borsuk

Site 1432 Harrison St., Oakland, CA

| Well ID | Well Size (in.) | Sheen / Odor | Depth to Immiscible Liquid (ft.) | Thickness of Immiscible Liquid (ft.) | Volume of Immiscibles Removed (ml) | Depth to water (ft.) | Depth to well bottom (ft.) | Survey Point: TOB or TOC | |
|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 4 | Odor | | | | 19.18 | 25.05 | TOC | |
| MW-2 | 2 | | | | | 19.67 | 25.60 | | |
| MW-3 | 2 | | | | | 18.60 | 23.85 | | |
| MW-4 | 2 | | | | | 19.01 | 24.69 | | |
| MW-5 | 2 | | | | | 19.60 | 28.64 | | |
| MW-6 | 2 | ~~Odor~~ | | | | 19.61 | 28.28 | ↓ | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

# WELL MONITORING DATA SHEET

| | |
|---|---|
| Project #: 981223-61 | Client: Mark Borsuk |
| Sampler: MG | Start Date: 12/23/98 |
| Well I.D.: MW-1 | Well Diameter: (circle one) 2 3 (4) 6 ___ |
| Total Well Depth: Before ~~25.0~~ After 25.05 | Depth to Water: Before 19.18 After |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Measurements referenced to: PVC Grade Other: | |

| Well Diameter | VCF | Well Diameter | VCF |
|---|---|---|---|
| 1" | 0.04 | 6" | 1.47 |
| 2" | 0.16 | 8" | 2.61 |
| 3" | 0.37 | 10" | 4.08 |
| 4" | 0.65 | 12" | 5.87 |
| 5" | 1.02 | 16" | 10.43 |

___ x ___ = ___

1 Case Volume | Specified Volumes | gallons

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other_____

Sampling: Bailer
X Disposable Bailer
Extraction Port
Other_____

| TIME | TEMP. (F) | pH | COND. | TURBIDITY: | VOLUME REMOVED: | OBSERVATIONS: |
|---|---|---|---|---|---|---|
| | | No Purge | | | | |
| 845 | 62.0 | 6.5 | 750 | 12 | — | Odor |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: —

Sampling Time: 840 Sampling Date: 12/23/98

Sample I.D.: MW-1 Laboratory: Sequoia

Analyzed for: (TPH-G BTEX) TPH-D OTHER: (Circle)

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER: (Circle)

# WELL MONITORING DATA SHEET

| | |
|---|---|
| Project #: 981223-61 | Client: Mark Borsuk |
| Sampler: MG | Start Date: 12/23/98 |
| Well I.D.: MW-2 | Well Diameter: (circle one) (2) 3 4 6 ____ |
| Total Well Depth: Before ____ After 25.60 | Depth to Water: Before 19.67 After ____ |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Measurements referenced to: (PVC) | Grade Other: |

| Well Diameter | VCF | Well Diameter | VCF |
|---|---|---|---|
| 1" | 0.04 | 6" | 1.47 |
| 2" | 0.16 | 8" | 2.61 |
| 3" | 0.37 | 10" | 4.08 |
| 4" | 0.65 | 12" | 5.87 |
| 5" | 1.02 | 16" | 10.43 |

| | | | | |
|---|---|---|---|---|
| — | x | — | = | — |
| 1 Case Volume | | Specified Volumes | | gallons |

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other_____

Sampling: Bailer
Disposable Bailer
Extraction Port
Other_____

| TIME | TEMP. (F) | pH | COND. | TURBIDITY: | VOLUME REMOVED: | OBSERVATIONS: |
|---|---|---|---|---|---|---|
| 9 | | No Purge | | | | |
| 900 | 63.6 | 6.4 | 920 | 63 | — | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Did Well Dewater? No If yes, gals. Gallons Actually Evacuated:

Sampling Time: 855 Sampling Date: 12/23/98

Sample I.D.: MW-2 Laboratory: Sequoia

Analyzed for: (TPH-G BTEX) TPH-D OTHER:
(Circle)

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER:
(Circle)

# WELL MONITORING DATA SHEET

| | |
|---|---|
| Project #: 981223-61 | Client: Mobile Borscht |
| Sampler: MG | Start Date: 12/23/98 |
| Well I.D.: MW-6 | Well Diameter: (circle one) (2) 3 4 6 ___ |
| Total Well Depth: Before ___ After 28.28 | Depth to Water: Before 19.61 After ___ |
| Depth to Free Product: | Thickness of Free Product (feet): |
| Measurements referenced to: (PVC) Grade Other: | |

| Well Diameter | VCF | Well Diameter | VCF |
|---|---|---|---|
| 1" | 0.04 | 6" | 1.47 |
| 2" | 0.16 | 8" | 2.61 |
| 3" | 0.37 | 10" | 4.08 |
| 4" | 0.65 | 12" | 5.87 |
| 5" | 1.02 | 16" | 10.43 |

| | | | | |
|---|---|---|---|---|
| — | x | — | = | — |
| 1 Case Volume | | Specified Volumes | | gallons |

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other ___

Sampling: Bailer
~~Disposable Bailer~~
Extraction Port
Other ___

| TIME | TEMP. (F) | pH | COND. | TURBIDITY: | VOLUME REMOVED: | OBSERVATIONS: |
|---|---|---|---|---|---|---|
| | | No Purge | | | — | |
| 830 | 62.0 | 6.6 | 1330 | 14 | — | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: —

Sampling Time: 825 Sampling Date: 12/23/98

Sample I.D.: MW-6 Laboratory: Sequoia

Analyzed for: ~~TPH-G~~ BTEX TPH-D OTHER: (Circle)

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER: (Circle)