GROUNDWATER TECHNOLOGY, INC.

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# *COORDINATED MONITORING AND SAMPLING REPORT*
## CHEVRON SERVICE STATION NO. 9-0076
## 4265 FOOTHILL BOULEVARD
## OAKLAND, CALIFORNIA

**020104102**

3/14/94

**March 14, 1994**

Prepared for:
Mr. Mark Miller
Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, California 94583-0804

**Groundwater Technology, Inc.**
Written/Submitted by

Tim Watchers
Project Geologist

**Groundwater Technology, Inc.**
Reviewed/Approved by

Michael C. Blundell
Registered Geologist
No. 5146

REGISTERED GEOLOGIST MICHAEL C. BLUNDELL No. 5146 STATE OF CALIFORNIA

For:
Wendell W. Lattz
Vice President, General Manager
West Region

4102R014.010

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*COORDINATED MONITORING AND SAMPLING REPORT*
**CHEVRON SERVICE STATION NO. 9-0076**
**4265 FOOTHILL BOULEVARD**
**OAKLAND, CALIFORNIA**

**March 14, 1994**

## 1.0 INTRODUCTION

This report summarizes the coordinated monitoring and sampling events organized by Groundwater Technology, Inc. at the Chevron U.S.A. Products Company (Chevron) Service Station No. 9-0076 located at 4265 Foothill Boulevard in Oakland, California (Figure 1). Mr. Mark Miller, site assessment and remediation engineer for Chevron, asked Groundwater Technology to organize the coordinated monitoring and sampling of the Shell Service Station located at 4411 Foothill Boulevard and the British Petroleum Service Station located at 4280 Foothill Boulevard with the monitoring and sampling events for the Chevron Service Station located at 4265 Foothill Boulevard. The objective of this work was to evaluate the groundwater quality and flow direction of the two adjacent service stations. The work was performed from September through November 1993 and included one coordinated groundwater sampling event and three coordinated groundwater monitoring events. The work scope also included preparing potentiometric surface maps, evaluating the data, and preparing this report.

## 2.0 BACKGROUND

The site is located in Alameda County, Oakland, California, on the west corner of High Street and Foothill Boulevard (Figure 2). A Shell Service Station (Shell) is located east across High Street. A British Petroleum Service Station (BP) is located north across Foothill Boulevard. A school is located on the southeast corner between the Shell and BP Service Stations. Currently, the site is an operating Chevron Service Station. The surface elevation at the site is approximately 40 feet above

mean sea level. The Inner Harbor and San Leandro Bay are located approximately 1 mile south of the site.

The site is located on the Bay Plain in West Alameda County, which is separated from the bedrock of the East Bay hills by the Hayward Fault. The older undivided bedrock units of the East Bay hills above the City of San Leandro are Pliocene-Pleistocene to late Pleistocene in age. The sediments of the Bay Plain are derived from the East Bay hills. Groundwater in these sediments can be either confined or unconfined. The major groundwater-producing area in the East Bay region of Alameda County is the Bay Plain. Regional groundwater flow is generally west toward San Francisco Bay (Alameda County Flood Control and Water Conservation District, June 1988).

## 3.0 WORK SCOPE

### 3.1 Site-Specific *Health and Safety Plan*

Groundwater Technology prepared a site-specific *Health and Safety Plan* required by the Occupational Health and Safety Administration Standard Hazardous Waste Operations and Emergency Response guidelines (29 CFR 1910.120). The site-specific *Health and Safety Plan* was prepared after a review of site conditions and existing available site-specific health and safety plans for the site. The *Health and Safety Plan* was reviewed and signed by Groundwater Technology personnel and subcontractors before beginning work at the site.

### 3.2 Survey

Groundwater Technology organized the well elevation survey and the preparation of a site map showing the locations of the monitoring wells at the Shell, BP, and Chevron Service Stations. The survey was performed by Ronald Greenwell & Associates, Inc. during the coordinated monitoring and sampling event conducted on September 21, 1993. Top of casing elevations of the monitoring wells were surveyed relative to City of Oakland Bench Mark 1589 located at the intersection of High Street and Foothill Boulevard. Figure 2, the Site Plan, was drawn accurately to scale showing the horizontal locations of the monitoring wells at the Shell, BP, and chevron Service Stations by Ronald Greenwell & Associates. A copy of the survey report is presented in Appendix A.

### 3.3 Groundwater Monitoring

On September 21, October 21, and November 19, 1993, monitoring wells C-1 through C-8 at the Chevron site were monitored by Groundwater Technology to measure the depth to groundwater and the thickness of separate-phase hydrocarbons, if present. Water levels were measured using an ORS Environmental Equipment INTERFACE PROBE™ Well Monitoring System, which consists of a dual optical sensor and electrical conductivity probe that distinguishes between water and petroleum products. Groundwater monitoring was performed according to Groundwater Technology standard operating procedures (SOPs) (Appendix B). Separate-phase hydrocarbons were not detected in the monitoring wells at the Chevron site.

On September 21, October 21, and November 19, 1993, groundwater monitoring wells S-1, S-2 and S-3 located at the Shell Service Station were monitored for depth to water measurements. Groundwater monitoring was performed by Blaine Technologies under the supervision of Hydro-Environmental-Technologies, Inc. (Hydro).

On September 21, 1993, groundwater monitoring wells MW-2 through MW-9 located at the BP Service Station were monitored for depth to water measurements. Groundwater monitoring was performed by Birch Technical Services under the supervision of Alisto Engineering Group (Alisto).

### 3.4 Groundwater Sampling

On September 21, 1993, groundwater monitoring wells MW-1 through MW-8 at the Chevron Service Station were purged and groundwater samples were collected by Groundwater Technology. Groundwater sampling was performed according to Groundwater Technology's SOPs. Approximately 3 to 4 well-casing volumes of water were purged from each well before groundwater samples were collected. Immediately before each water sample was collected, a distilled-water rinsate blank was collected from the Teflon™ sampler as a quality control check on the cleanliness of the sampler. A trip/laboratory blank was also prepared for quality control. Each sample was acidified, labeled, placed on ice in an insulated container, and delivered to a California-certified laboratory. The samples were accompanied by a chain-of-custody record during transport. The samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and total petroleum hydrocarbons as gasoline (TPH-G) using Environmental Protection Agency (EPA)

Methods 5030/8020 and modified EPA Method 8015. Water generated during the purging and sampling process was transported for recycling to the Chevron Refinery in Richmond, California.

On September 21, 1993, groundwater samples were collected from monitoring wells S-1, S-2, and S-3 at the Shell Service Station by Blaine Technology working under the supervision of Hydro. The samples were analyzed for TPH-G and BTEX.

On September 21, 1993, groundwater samples were collected from monitoring wells located at the BP Service Station by Birch Technical Services working under the supervision of Alisto. The samples were analyzed for TPH-G and BTEX.

## 4.0 SITE CONDITIONS

### 4.1 Analytical Results of Groundwater Samples

Analytical results of groundwater samples collected from monitoring well C-8 at the Chevron site on September 21, 1993, reported benzene, toluene, ethylbenzene, xylenes, and TPH-G concentrations below method detection limits (MDLs). Analytical results of samples collected from monitoring well C-4 reported the highest concentrations of TPH-G and benzene for the Chevron site at 30,000 parts per billion (ppb) and 9,600 ppb, respectively. A summary of groundwater sample analytical results is presented in Table 1. Copies of the laboratory reports are included in Appendix C.

Analytical results of groundwater samples collected from monitoring well S-1 reported the highest concentrations of TPH-G for the Shell site at 34,000 ppb. Analytical results of groundwater samples collected from monitoring well S-3 reported the highest concentrations of benzene for the Shell site at 900 ppb.

Analytical results of groundwater samples collected at the BP station reported the highest concentrations of TPH-G and benzene in monitoring well MW-7 at 150 parts ppb and 690 ppb, respectively.

### 4.2 Hydrogeology

Groundwater levels measured on September 21, 1993, ranged from 10.08 feet below grade in monitoring well S-3 (Shell) to 35.46 feet below grade in monitoring well C-7 (Chevron). A potentiometric surface map (Figure 3) was prepared using the water level data collected on September 21, 1993, from the Chevron, Shell, and BP Service Stations. Based on this data, Figure 3 illustrates a southwest groundwater flow direction with a gradient of ranging between 0.02 and 0.12 foot per foot (ft/ft).

Groundwater levels measured on October 21, 1993, ranged from 10.20 feet below grade in monitoring well S-3 (Shell) to 35.71 feet below grade in monitoring well C-7 (Chevron). A potentiometric surface map (Figure 4) was prepared using the water level data collected on October 21, 1993 from the monitoring wells at the Shell and Chevron service stations. Figure 4 indicates a southwest groundwater flow direction with a gradient ranging between 0.07 and 0.03 ft/ft.

Groundwater levels measured on November 19, 1993, ranged from 10.27 feet below grade in monitoring well S-3 (Shell) to 36.05 in monitoring well C-7 (Chevron). A potentiometric surface map (Figure 5) was prepared using the water level data collected on November 19, 1993, from the monitoring wells located at the Chevron and Shell service stations. Figure 5 indicates a southwest groundwater flow direction with a gradient ranging between 0.07 and 0.03 ft/ft. Groundwater monitoring data is presented in Table 1. Monitoring data sheets are presented in Appendix D.

## 5.0 SUMMARY

- On September 21, 1993, groundwater monitoring wells located at the Chevron, Shell, and BP Service Stations were monitored and sampled. Monitoring and analytical data was exchanged with Hydro (Shell) and Allsto (BP) consultants.
- On October 21 and November 19, 1993, groundwater monitoring wells located at the Chevron and Shell Service Stations were monitored for depth to water measurements. Monitoring data was exchanged with Hydro (Shell).
- Results of the monitoring data collected during the three monitoring and sampling events indicate a groundwater flow direction toward the southeast with a gradient averaging between 0.05 and 0.06 ft/ft.

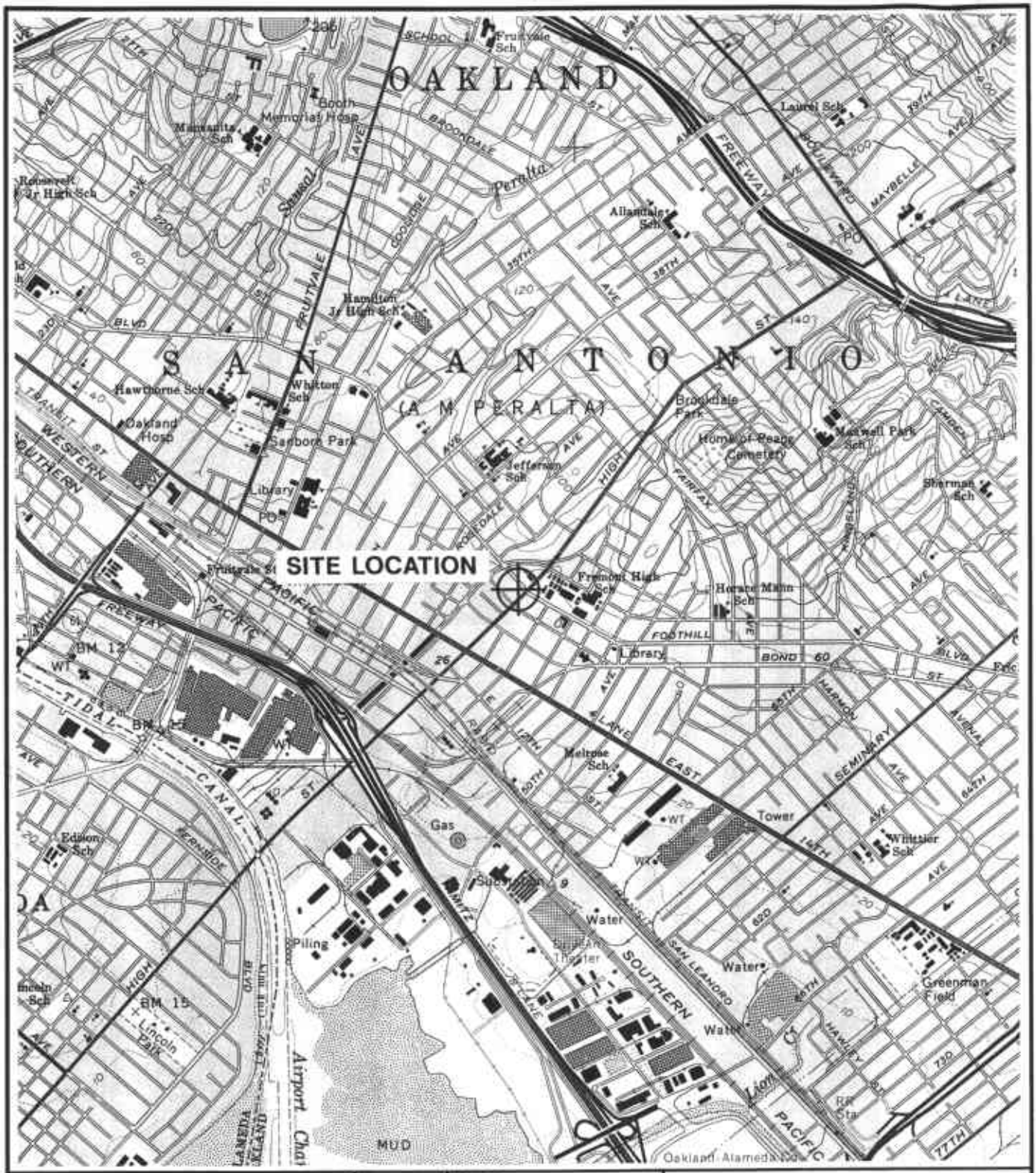
- Analytical results for groundwater samples collected on September 21, 1993, reported the highest concentrations of TPH-G and benzene at the Chevron Service Station in the samples collected from monitoring well C-4 at 30,000 ppb and 9,600 ppb, respectively. Analytical results for the September 21, 1993, sampling event reported the highest concentrations of TPH-G and benzene at the Shell Service Station in the samples collected from monitoring well S-1 and S-3 at 34,000 ppb and 900 ppb, respectively. Analytical results for the September 21, 1993, sampling event reported the highest concentrations of TPH-G at the BP station at 690 ppb in the samples collected from monitoring well MW-7.

## 6.0 REFERENCES

Alameda County Flood Control and Water Conservation District; June 1988; *Geohydrology and Groundwater--Quality Overview, East Bay Plain Area, Alameda County, California, 205(J) Report.*

Groundwater Technology; January 23, 1992; Health and Safety Plan, Chevron Service Station, 4265 Foothill Boulevard, Oakland, California.

## FIGURES




GROUNDWATER TECHNOLOGY

SOURCE: U.S.G.S. 7.5' QUAD SHEET
OAKLAND EAST, CALIFORNIA
PHOTOREVISED 1980

N

SCALE: 0 FEET 2000

# SITE LOCATION MAP

CLIENT: CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION No. 9-0076

DATE: 2/7/94

LOCATION: 4265 FOOTHILL BLVD.
OAKLAND, CALIFORNIA

FIGURE: 1

LEGEND

MONITORING WELL

E. 17th STREET

BOND STREET

HIGH STREET

FOOTHILL BLVD.

CHEVRON

SHELL

BP

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9

C-1 C-2 C-3 C-4 C-5 C-6 C-7 C-8

S-1 S-2 S-3

N

0 100 200

SCALE FEET

REGISTERED GEOLOGIST
MICHAEL C. BLUNDELL
No. 5148
STATE OF CALIFORNIA

GROUNDWATER TECHNOLOGY
4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2387

| REV. NO.: | DATE: | ACAD FILE: |
|---|---|---|
| 0 | 10/12/93 | SP1093 |

# SITE PLAN

CLIENT: CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION No. 9-0076

PM: JAW

LOCATION: 4265 FOOTHILL BLVD.
OAKLAND, CALIFORNIA

PE/RG:

| DESIGNED | DETAILED | PROJECT NO.: | FIGURE: |
|---|---|---|---|
| TW | ML | 020204102 | 2 |

LEGEND

- MONITORING WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION

E. 17th STREET

HIGH STREET

BOND STREET

FOOTHILL BLVD.

CHEVRON

SHELL

BP

MW-8 (18.48)

MW-2 (19.29)

MW-4 (19.97)

MW-6 (21.95)

MW-3 (23.55)

MW-5 (24.79)

MW-7 (25.92)

MW-9 (27.25)

C-1 (16.99)

C-2 (11.18)

C-3 (12.15)

C-4 (10.98)

C-5 (12.14)

C-6 (1.42)

C-8 (-0.62)

C-7 (-0.27)

S-1 (27.91)

S-2 (28.25)

S-3 (27.25)

0' 1' 3' 5' 7' 9' 11' 13' 15' 17' 19' 21' 23' 25' 27' 28'

N

REGISTERED GEOLOGIST
MICHAEL C. BLUNDELL
No. 5146
STATE OF CALIFORNIA

0 100 200
SCALE FEET

GROUNDWATER TECHNOLOGY
4057 PORT CHICAGO HWY
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(510) 671-2387

| REV. NO.: | DATE: | ACAD FILE: |
|---|---|---|
| 0 | 10/12/93 | PSM92193/SP1093 |

# POTENTIOMETRIC SURFACE MAP (9/21/93)

CLIENT: CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION No. 9-0076

PM: JHW

LOCATION: 4265 FOOTHILL BLVD.
OAKLAND, CALIFORNIA

PE/RG: MB

| DESIGNED | DETAILED | PROJECT NO.: | FIGURE: |
|---|---|---|---|
| TW | ML | 020204102 | 3 |

LEGEND

- MONITORING WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION
- (NA) NOT AVAILABLE – PUMPING WELL
- (NM) NOT MONITORED

E. 17th STREET

HIGH STREET

BOND STREET

FOOTHILL BLVD.

CHEVRON

SHELL

BP

MW-8 (NM)

MW-2 (NM)

MW-4 (NM)

MW-6 (NM)

MW-3 (NM)

MW-5 (NM)

MW-7 (NM)

MW-9 (NM)

C-1 (16.41)

C-2 (NA)

C-3 (11.80)

C-4 (9.83)

C-5 (12.69)

C-6 (1.01)

C-7 (-0.52)

C-8 (-0.91)

S-1 (27.21)

S-2 (28.26)

S-3 (27.13)

0' 2' 4' 6' 8' 10' 12' 14' 16' 18' 20' 22' 24' 26' 28'

N

0 100 200
SCALE FEET

REGISTERED GEOLOGIST
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4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2387

| REV. NO.: | DATE: | ACAD FILE: |
|---|---|---|
| 0 | 2/7/94 | PSM02193/SP1093 |

# POTENTIOMETRIC SURFACE MAP (10/21/93)

CLIENT: CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION No. 9-0076

PM: TW

LOCATION: 4265 FOOTHILL BLVD.
OAKLAND, CALIFORNIA

PE/RG: MB

| DESIGNED | DETAILED | PROJECT NO.: | FIGURE: |
|---|---|---|---|
| TW | ML | 020104102 | 4 |

LEGEND

- ⌖ MONITORING WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION
- —— POTENTIOMETRIC SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION
- (NM) NOT MONITORED

E. 17th STREET

HIGH STREET

BOND STREET

FOOTHILL BLVD.

CHEVRON

BP

SHELL

MW-8 (NM)

MW-2 (NM)

MW-4 (NM)

MW-6 (NM)

MW-3 (NM)

MW-5 (NM)

MW-7 (NM)

MW-9 (NM)

C-1 (16.11)

C-2 (DRY)

C-3 (11.39)

C-4 (10.33)

C-5 (11.50)

C-6 (0.71)

C-7 (-0.86)

C-8 (-1.25)

S-1 (27.29)

S-2 (28.07)

S-3 (27.06)

0' 2' 4' 6' 8' 10' 12' 14' 16' 18' 20' 22' 24' 26' 28'

0 100 200
SCALE FEET

N

REGISTERED GEOLOGIST
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(510) 671-2387

| REV. NO.: | DATE: | ACAD FILE: |
|---|---|---|
| 0 | 2/7/94 | PSMN1993/SP1093 |

# POTENTIOMETRIC SURFACE MAP (11/19/93)

| | | |
|---|---|---|
| CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-0076 | | PM |
| LOCATION: 4265 FOOTHILL BLVD. OAKLAND, CALIFORNIA | | PE/RG |
| DESIGNED: TW | DETAILED: ML | PROJECT NO.: 020104102 |
| | | FIGURE: 5 |

## TABLES

**TABLE 1**
**MONITORING DATA AND ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**
**Chevron Service Station No. 9–0076**
**4265 Foothill Boulevard**
**Oakland, California**

| Date | Well ID | TOC (msl) | DTW | GWE | Benzene | Toulene | Ethyl–benzene | Xylenes | TPH–G |
|---|---|---|---|---|---|---|---|---|---|
| **Chevron Service Station** | | | | | | | | | |
| 09/21/93 | C–1 | 38.41 | 21.42 | 16.99 | 12 | 1.2 | 5.8 | 3.7 | 360 |
| 10/21/93 | C–1 | 38.41 | 22 | 16.41 | | | | | |
| 11/19/93 | C–1 | 38.41 | 22.3 | 16.11 | | | | | |
| 09/21/93 | C–2 | 37.47 | 26.29 | 11.18 | 2,300 | 300 | 270 | 910 | 11,000 |
| 10/21/93 | C–2 | 37.47 | | --- | | | | | |
| 11/19/93 | C–2 | 37.47 | 35.67 | dry | | | | | |
| 09/21/93 | C–3 | 38.37 | 26.22 | 12.15 | 0.7 | <0.5 | <0.5 | <0.8 | <50 |
| 10/21/93 | C–3 | 38.37 | 26.57 | 11.8 | | | | | |
| 11/19/93 | C–3 | 38.37 | 26.98 | 11.39 | | | | | |
| 09/21/93 | C–4 | 36.49 | 25.51 | 10.98 | 9,600 | 130 | 390 | 1,300 | 30,000 |
| 10/21/93 | C–4 | 36.49 | 26.66 | 9.83 | | | | | |
| 11/19/93 | C–4 | 36.49 | 26.16 | 10.33 | | | | | |
| 09/21/93 | C–5 | 38.5 | 26.36 | 12.14 | 10 | 8.1 | 1.9 | 9.4 | 60 |
| 10/21/93 | C–5 | 38.5 | 25.81 | 12.69 | | | | | |
| 11/19/93 | C–5 | 38.5 | 27 | 11.5 | | | | | |
| 09/21/93 | C–6 | 35.4 | 33.98 | 1.42 | 1,200 | <50 | 75 | 130 | 4,100 |
| 10/21/93 | C–6 | 35.4 | 34.39 | 1.01 | | | | | |
| 11/19/93 | C–6 | 35.4 | 34.69 | 0.71 | | | | | |
| 09/21/93 | C–7 | 35.19 | 35.46 | –0.27 | 2,700 | 160 | 410 | 760 | 17,000 |
| 10/21/93 | C–7 | 35.19 | 35.71 | –0.52 | | | | | |
| 11/19/93 | C–7 | 35.19 | 36.05 | –0.86 | | | | | |
| 09/21/93 | C–8 | 34.68 | 35.3 | –0.62 | <0.5 | <0.5 | <0.5 | <0.8 | <50 |
| 10/21/93 | C–8 | 34.68 | 35.59 | –0.91 | | | | | |
| 11/19/93 | C–8 | 34.68 | 35.93 | –1.25 | | | | | |
| **Shell Service Station** | | | | | | | | | |
| 09/21/93 | S–1 | 38.31 | 10.4 | 27.91 | 480 | 5,000 | 3,800 | 18,000 | 34,000 |
| 10/21/93 | S–1 | 38.31 | 11 | 27.21 | | | | | |
| 11/19/93 | S–1 | 38.31 | 11.02 | 27.29 | | | | | |
| 09/21/93 | S–2 | 38.79 | 10.54 | 28.25 | 870 | 24 | 190 | 120 | 3,300 |
| 10/21/93 | S–2 | 38.79 | 10.53 | 28.26 | | | | | |
| 11/19/93 | S–2 | 38.79 | 10.72 | 28.07 | | | | | |
| 09/21/93 | S–3 | 37.33 | 10.08 | 27.25 | 900 | 2,200 | 2,600 | 11,000 | 15,000 |
| 10/21/93 | S–3 | 37.33 | 10.2 | 27.13 | | | | | |
| 11/19/93 | S–3 | 37.33 | 10.27 | 27.06 | | | | | |

**TABLE 1**
**MONITORING DATA AND ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**
**Chevron Service Station No. 9-0076**
**4265 Foothill Boulevard**
**Oakland, California**

| Date | Well ID | TOC (msl) | DTW | GWE | Benzene | Toulene | Ethyl-benzene | Xylenes | TPH-G |
|---|---|---|---|---|---|---|---|---|---|
| **British Petroleum Service Station** | | | | | | | | | |
| 09/21/93 | MW-2 | 41.22 | 21.93 | 19.29 | 0.9 | 0.7 | 0.7 | 2.6 | <50 |
| 09/21/93 | MW-3 | 40.13 | 16.58 | 23.55 | 7.9 | 0.9 | 4.7 | 2.4 | 540 |
| 09/21/93 | MW-4 | 40.11 | 20.14 | 19.97 | <0.5 | 1.9 | <0.5 | 2.1 | 71 |
| 09/21/93 | MW-5** | 39.14 | 14.35 | 24.79 | | | | | |
| 09/21/93 | MW-6 | 41.59 | 19.64 | 21.95 | <0.5 | <0.5 | <0.5 | 1.6 | <50 |
| 09/21/93 | MW-7 | 40.32 | 14.4 | 25.92 | 150 | 3.1 | 26 | 5.7 | 690 |
| 09/21/93 | MW-8 | 38.19 | 19.71 | 18.48 | 2.9 | 2.2 | 2.2 | 7.1 | <50 |
| 09/21/93 | MW-9 | 41.25 | 14 | 27.25 | <0.5 | <0.5 | <0.5 | 0.9 | <50 |

DTW= Depth to Water
DTP=Depth to Product
GWE= Groundwater Elevation
TOC=Top of casing elevation
msl= mean sea level relative to City of Oakland Benchmark 1589 located at the intersection of High Street and Foothill Boulevard.
--- = not measured, not sampled, not available
TPH-G= Total Petroleum Hydrocarbons-as-gasoline
* Hydrocarbon concentrations in parts per billion
** Sheen was detected in monitoring well MW-5. No groundwater samples were collected.
Note: Monitoring wells S-1, S-2, and S-3 were monitored to the top of the road box.
Chemical results for the British Petroleum Service Station are from Table 1 in the Groundwater Monitoring and Sampling Report, BP Oil Company Service Station No. 11109, 4280 Foothill Blvd., Oakland, California, November 14, 1993, prepared by Alisto Engineering Group.

**APPENDIX A**

**Survey Report**

**RONALD GREENWELL & ASSOCIATES, INC.**
10 South Lake Drive Suite 1
ANTIOCH, CALIFORNIA 94509-2057

**(510) 778-0626**

# LETTER OF TRANSMITTAL

| DATE | JOB NO. |
|---|---|
| October 5, 1993 | 1344.00U |

ATTENTION: Mr Tim Watchers

RE: GWMW @ Foothill Boulevard, Oakland

TO: Groundwater Technology, Inc.
4057 Port Chicago Highway
Concord, California 94520

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via mail the following items:

☒ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☒ Reports

| COPIES | DATE | NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 9/28/93 | 2 | Monitoring Wells Report |
| 1 | 9/93 | 1 | Groundwater Monitoring Well Locations plat |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit_____copies for approval
☒ For your use ☐ Approved as noted ☐ Submit_____copies for distribution
☒ As requested ☐ Returned for corrections ☐ Return_____corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19_____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS Please call if you have any questions.

COPY TO File

SIGNED: Brian R. Howard



*If enclosures are not as noted, kindly notify us at once.*

RONALD
GREENWELL
& ASSOCIATES, INC.

• Land Development • Surveying • G.P.S. •

10 S. Lake Drive, Suite 1
Antioch, CA 94509-2057
(510) 778-0626

# MONITORING WELLS

September 28, 1993

Shots are taken on the rim of the PVC at cut "v's" or slash and marked black on each well unless noted otherwise.

| | ELEVATION (NGVD29 DATUM) | | |
|---|---|---|---|
| WELL NO. | PVC | LID | ASPHALT OR CONCRETE |
| **Chevron Station - 4265 Foothill Boulevard, Oakland, California** | | | |
| C-1 | 38.41 | 38.89 | 38.89 |
| C-2 | 37.47 | 38.66 | 38.66 |
| C-3 | 38.37 | 38.77 | 38.77 |
| C-4 | 36.49 | 36.95 | 36.95 |
| C-5 | 38.50 | 38.84 | 38.84 |
| C-6 | 35.40 | 35.99 | 35.99 |
| C-7 | 35.19 | 35.66 | 35.4 * |
| C-8 | 34.68 | 35.16 | 35.16 |
| **BP Station - 4280 Foothill Boulevard, Oakland, California** | | | |
| MW-2 | 41.22 | 41.36 | 41.36 |
| MW-3 | 40.13 | 41.06 | 41.06 |
| MW-4 | 40.11 | 40.57 | 40.57 |
| MW-5 | 39.14 | 40.20 | 40.20 |
| MW-6 | 41.59 | 42.12 | 42.12 |
| MW-7 | 40.32 | 41.24 | 41.24 |
| MW-8 | 38.19 | 38.58 | 38.58 |
| MW-9 | 41.25 | 41.56 | 41.56 |
| **Shell Station - 4411 Foothill Boulevard, Oakland, California** | | | |
| S-1 | 38.06 | 38.31 | 38.31 |
| S-2 | 38.49 | 38.79 | 38.79 |
| S-3 | 36.86 | 37.33 | 37.33 |

* Ground elevation.

NOTES:

1. Bench mark used was City of Oakland Bench Mark 1589, a cut square at the intersection of High Street and Foothill Boulevard. Elevation = 38.54 (NGVD29). Subtract 3.00 feet from elevations to obtain City of Oakland Datum.

2. Field survey was conducted on September 21, 1993.


P.L.S. 4802, Expires 9/30/96

EAST 17th STREET

C-8

C-6

STREET

CHEVRON

C-5

C-1

MW-8

C-3

KIOSK

C-2

PUMP ISLANDS (TYP.)

C-4

BP

MW-2

MW-4

BUILDING

MW-6

MW-3

MW-5

MW-7

MW-9

BOULEVARD

HIGH

STREET

C-7

BOND

S-3

S-2

SHELL

S-1

BUILDING

FOOTHILL

LICENSED LAND SURVEYOR
10-04-93
RONALD C. GREENWELL
L.S. 4802
STATE OF CALIFORNIA

# GROUNDWATER MONITORING WELL LOCATIONS

OAKLAND CALIFORNIA

FOR

**GROUNDWATER TECHNOLOGY, INC.**

CONCORD CALIFORNIA

BY

**RONALD GREENWELL & ASSOC., INC.**

ANTIOCH CALIFORNIA

SCALE 1" = 50' SEPTEMBER, 1993

0 50 100 200'

W.O. 1344.00U

SHEET 1 OF 1

**APPENDIX B**

**Groundwater Technology's**
**Standard Operating Procedures (SOPs)**

**GROUNDWATER TECHNOLOGY, INC.**
**STANDARD OPERATING PROCEDURE NO. 8**
**GROUNDWATER MONITORING**

Groundwater monitoring of wells at the site shall be conducted using an ORS Environmental Equipment (ORS) INTERFACE PROBE™ or SURFACE SAMPLER™. The INTERFACE PROBE™ is a hand-held, battery-operated device for measuring depth to petroleum product and depth to water as measured from an established datum (*i.e.*, top of the well casing which has been surveyed). Floating separate-phase hydrocarbon (product) thickness is then calculated by subtracting the depth to product from the depth to water. In addition, water elevations are adjusted for the presence of floating product with the following calculation:

(Product Thickness) x (0.8) + (Water Elevation) = Corrected Water Elevation

Note: The factor of 0.8 accounts for the density difference between water and petroleum hydrocarbons.

The thickness of dense non-aqueous phase liquids (DNAPLs) is calculated by subtracting the depth at which the DNAPL is encountered from the total depth of the well. Water-level elevations are not typically corrected for the presence of DNAPLs.

The INTERFACE PROBE™ consists of a dual-sensing probe which utilizes an optical liquid sensor and electrical conductivity to distinguish between water and petroleum products. A coated steel measuring tape transmits the sensor's signals to the reel assembly where an audible alarm sounds a continuous tone when the sensor is immersed in petroleum product and an oscillating tone when immersed in water. The INTERFACE PROBE™ is accurate to 0.01 inch.

A SURFACE SAMPLER™ shall be used for visual inspection of the groundwater to note sheens (difficult to detect with the INTERFACE PROBE™), odors, microbial action, etc.

The SURFACE SAMPLER™ used consists of a 12-inch-long case acrylic tube with a Delrin ball which closes onto a conical surface creating a seal as the sampler is pulled up. The sampler is calibrated in inches and centimeters for visual inspection of product thickness.

To reduce the potential for cross contamination between wells, the monitoring shall take place in order from the least to the most contaminated wells. Wells containing separate-phase hydrocarbons (free product) should be monitored last. Between each monitoring the equipment shall be washed with laboratory-grade detergent and double rinsed with distilled water.

**GROUNDWATER TECHNOLOGY, INC.**
**STANDARD OPERATING PROCEDURE NO. 9**
**WATER SAMPLING METHODOLOGY**

Before water sampling, each well shall be purged by pumping a minimum of four well volumes or until the discharge water indicates stabilization of temperature conductivity and pH. If the well is evacuated before four well volumes are removed or stabilization is achieved, the sample should be taken when the water level in the well recovers to 80 percent of its initial level.

Retrieval of the water sample, sample handling and sample preservation shall be conducted according to Standard Operating Procedure 10 concerning "Sampling for Volatiles in Water." The sampling equipment used shall consist of a Teflon® and/or stainless steel samplers which meet U.S. Environmental Protection Agency (EPA) regulations. Glass vials with Teflon® lids should be used to store the collected samples.

To ensure sample integrity, each vial shall be filled with the sampled water in such a way that the water stands above the lip of the vial. The cap should then be quickly placed on the vial and tightened securely. The vial should then be checked to ensure that air bubbles are not present prior to labeling of the sample. Label information should include a sample identification number, job identification, date, time, type of analysis requested, and sampler's name. Chain-of-custody records shall be completed according to Standard Operating Procedure (SOP) 11 concerning chain of custody.

The vials should be immediately placed in high quality coolers for shipment to the laboratory. The coolers should be packed with sufficient ice or freezer packs to ensure that the samples are kept below 4° Celsius (C). To minimize sample degradation the prescribed analysis shall take place within seven days of sample collection unless specially prepared acidified vials are used.

To minimize the potential for cross contamination between wells, all the well development and water sampling equipment which contacts the groundwater shall be cleaned between each sampling. As a second precautionary measure, the wells shall be sampled in order of increasing contaminant concentrations (the least contaminated well first, the most contaminated well last) as established by previous analysis.

**GROUNDWATER TECHNOLOGY, INC.**
**STANDARD OPERATING PROCEDURE NO. 10**
**SAMPLING FOR VOLATILES IN WATER (DISSOLVED GASOLINE, SOLVENTS, ETC.)**

1. Use only vials properly washed and oven dried (prepared by the laboratory).

2. Use clean sampling equipment. Scrub with Alconox or equivalent laboratory detergent and water followed by a thorough water rinse. Complete with a distilled water rinse.

   Sampling equipment which has come into contact with liquid hydrocarbons (free product) should be regarded with suspicion. Such equipment should have tubing and cables replaced and all resilient parts washed with laboratory detergent solution as indicated above. Visible deposits may have to be removed with hexane. Solvent washing should be followed by detergent washing, as indicated above.

   This procedure is valid for volatile organic analysis only. For extractable organics (for example, pesticides, or base neutrals for U.S. Environmental Protection Agency [EPA] Method 625 a final rinse with pesticide-grade isopropyl alcohol), followed by overnight or oven drying will be necessary.

3. Take duplicate samples. Mark on forms as a single sample with two containers to avoid duplication of analyses.

4. Take a site blank using distilled water or known uncontaminated source. This sample will be run at the discretion of the project manager.

5. Fill out labels and forms as much as possible ahead of time. Use an indelible marker.

6. Preservatives are required for some types of samples. Use specially prepared vials marked as indicated below, or use the appropriate field procedure (SOP 12 for acidification). Make note on forms that samples were preserved. Always have extra vials in case of problems. Samples for volatile analyses should be acidified below pH 2. Eye protection, foot protection, and disposable vinyl gloves are required for handling. Samples designated for expedited service and analyzed within seven (7) days of sampling will be acceptable without preservation. Glasses or goggles (not contact lenses) are necessary for protection of the eyes. Flush eyes with water for 15 minutes if contact occurs and seek medical attention. Rinse off hands frequently with water during handling.

For sampling chlorinated drinking water supplies for chlorinated volatiles, samples shall be preserved with sodium thiosulfate. Use vials labeled "CONTAINS THIOSULFATE." No particular cautions are necessary.

7. Fill vial to overflowing with water, avoiding turbulence and bubbling as much as possible. Water should stand above lip of vial.

8. Carefully, but quickly, slip cap onto vial. Avoid dropping the Teflon® septum from cap by not inverting cap until it is in contact with the vial. Disc should have Teflon® face toward the water. Also avoid touching white Teflon® face with dirty fingers.

9. Tighten cap securely, invert vial, and tap against hand to see there are not bubbles inside.

10. Label vial, using indelible ink, as follows:

    A. Sample I.D. No.
    B. Job I.D. No.
    C. Date and Time
    D. Type of analysis required
    E. Your name

11. Unless the fabric-type label is used, place Scotch™ tape over the label to preserve its integrity.

12. For chain-of-custody reasons, sample vial should be wrapped end-for-end with Scotch™ tape or evidence tape and signed with indelible ink where the end of the tape seals on itself. The septum needs to be covered.

13. Chill samples immediately. Samples to be stored should be kept at 4° Celsius (C) (39.2° Fahrenheit [F]). Samples received at the laboratory above 10°C (as measured at glass surface by a thermocouple probe), after overnight shipping, will be considered substandard, so use a high quality cooler with sufficient ice or freezer packs.

14. Fill out Chain-of-Custody Manifest and Analysis Request Form (see Chain of Custody Procedures, SOP 11).

**GROUNDWATER TECHNOLOGY, INC.**
**STANDARD OPERATING PROCEDURE NO. 11**
**CHAIN-OF-CUSTODY PROTOCOL**

1. Samples must be maintained under custody until shipped or delivered to the laboratory. The laboratory will then maintain custody. A sample is under custody if:

    a) It is in your possession
    b) It is in your view after being in your possession
    c) You locked it up after it was in your possession
    d) It is in a designated secure area

2. Custody of samples may be transferred from one person to another. Each transferrer and recipient must date, sign and note the time on the chain-of-custody form.

3. In shipping, the container must be sealed with tape, and bear the sender's signature across the area of bonding at the ends of the tape to prevent undetected tampering. Each sampling jar should be taped and signed as well. Scotch tape works well.

4. Write "sealed by" and sign in the "Remarks" box at the bottom of the form before sealing the box. Place form in a plastic bag and seal it inside the box.

5. The "REMARKS" section of the form is for documenting details such as:

    a) Correlation of sample numbers if samples are split between labs.
    b) QC numbers when lab is logging in the samples.
    c) Sample temperature and condition when received by lab.
    d) Preservation notation.
    e) pH of samples when opened for analysis (if acidified).
    f) Sampling observation or sampling problem.

6. The chain-of-custody form should be included inside the shipping container. A copy should be sent to the project manager.

7. When the samples are received by the lab, the chain-of-custody form will be dated, signed, and the time noted by a laboratory representative. The form will be retained in the laboratory files along with shipping bills and receipts .

8. At the time of receipt of samples by the laboratory, the shipping container will be inspected and the sealing signature will be checked. The samples will be inspected for condition and bubbles, and the temperature of a representative sample container will be

measured externally by a thermocouple probe (held tightly between two samples) and recorded. The laboratory QC numbers will be placed on the labels, in the accession log, and on the chain-of-custody form. If samples are acidified, their pH will be measured by narrow range pH paper at the time of opening for analysis. All comments concerning procedures requiring handling of the samples will be dated and initialed on the form by the laboratory person performing the procedure. A copy of the completed chain-of-custody form with the comments on sample integrity will be returned to the sampler.

# APPENDIX C

## Laboratory Reports and Chain-of-Custody Records

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

**Midwest Region**
4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936
(316) 945-0506 (FAX)

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reissued: 10-20-93

October 6, 1993

Tim Watchers
Groundwater Technology, Inc.
4057 Port Chicago Hwy.
Concord, CA 94520

Dear Mr. Watchers:

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories on 09-29-93 under chain-of-custody record 27260.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified by the Department of Health Services under Certification Number 1845.

If you have any questions concerning this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,

Terry R. Loucks
Laboratory Director

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reported: 10-06-93
Date Reissued: 10-14-93
Date Reissued: 10-20-93

ANALYTICAL RESULTS
Aromatic Volatile Organics in Water
EPA Method 8020/8015 Modified[a]

| GTEL Sample Number | | 01 | 02 | 03 | 04 |
|---|---|---|---|---|---|
| Client Identification | | C-1 | C-2 | C-3 | C-4 |
| Date Sampled | | 09-22-93 | 09-22-93 | 09-22-93 | 09-22-93 |
| Date Analyzed | | 10-01-93 | 10-01-93 | 10-01-93 | 10-01-93 |
| Dilution Multiplier[b] | | 1 | 50 | 1 | 100 |
| Analyte | Reporting Limit, ug/L | Concentration, ug/L | | | |
| **Benzene** | 0.5 | **12** | **2300** | **0.7** | **9600** |
| **Toluene** | 0.5 | **1.2** | **300** | <0.5 | **130** |
| **Ethyl Benzene** | 0.5 | **5.8** | **270** | <0.5 | **390** |
| **Xylenes (total)** | 0.8 | **3.7** | **910** | <0.8 | **1300** |
| **BTEX (total)** | --- | **23** | **3800** | --- | **11000** |
| **TPH as Gasoline** | 50 | **360** | **11000** | <50 | **30000** |

| GTEL Sample Number | | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|
| Client Identification | | C-5 | C-6 | C-7 | C-8 |
| Date Sampled | | 09-22-93 | 09-22-93 | 09-22-93 | 09-22-93 |
| Date Analyzed | | 10-04-93 | 10-01-93 | 10-01-93 | 10-01-93 |
| Dilution Multiplier[b] | | 1 | 100 | 100 | 1 |
| Analyte | Reporting Limit, ug/L | Concentration, ug/L | | | |
| **Benzene** | 0.5 | **10** | **1200** | **2700** | <0.5 |
| **Toluene** | 0.5 | **8.1** | <50 | **160** | <0.5 |
| **Ethyl Benzene** | 0.5 | **1.9** | **75** | **410** | <0.5 |
| **Xylenes (total)** | 0.8 | **9.4** | **130** | **760** | <0.8 |
| **BTEX (total)** | --- | **29** | **1400** | **4000** | --- |
| **TPH as Gasoline** | 50 | **60** | **4100** | **17000** | <50 |

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Preparation by EPA Method 5030 (purge and trap).

b Dilution multiplier indicates the adjustments made for sample dilution.

NOTE: Sample temperature when received at the laboratory was 1°C.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reported: 10-06-93
Date Reissued: 10-14-93
Date Reissued: 10-20-93

ANALYTICAL RESULTS

Aromatic Volatile Organics in Water
EPA Method 8020/8015 Modified[a]

| GTEL Sample Number | | 09 | | | |
|---|---|---|---|---|---|
| Client Identification | | TB-LB | | | |
| Date Sampled | | 09-22-93 | | | |
| Date Analyzed | | 10-02-93 | | | |
| Dilution Multiplier[b] | | 1 | | | |
| Analyte | Reporting Limit, ug/L | Concentration, ug/L | | | |
| Benzene | 0.5 | <0.5 | | | |
| Toluene | 0.5 | <0.5 | | | |
| Ethyl Benzene | 0.5 | <0.5 | | | |
| Xylenes (total) | 0.8 | <0.8 | | | |
| BTEX (total) | --- | --- | | | |
| TPH as Gasoline | 50 | <50 | | | |

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Preparation by EPA Method 5030 (purge and trap).

b Dilution multiplier indicates the adjustments made for sample dilution.

NOTE: Sample temperature when received at the laboratory was 1°C.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reported: 10-06-93
Date Reissued: 10-20-93

# QA NONCONFORMANCE SUMMARY

## Aromatic Volatile Organics in Water
## EPA Method 8020/8015 Modified[a]

1.0 Sample Handling

1.1 Sample handling and holding time criteria were not met for **0** samples.

2.0 Surrogate Compound Recoveries

2.1 The recovery limits were exceeded for **0** surrogate compounds as shown in Table 2.

3.0 Matrix Spike (MS) Accuracy

3.1 The recovery limits were exceeded in the matrix spike for **0** compounds as shown in Table 3A.

4.0 Sample Duplicate Precision

4.1 The maximum percent difference (RPD) was exceeded for **0** compounds in the duplicate samples as shown in Table 3B.

5.0 Method Blanks

5.1 **Zero** target compounds were found in the method blank as shown in Table 4.

6.0 Independent QC Check Sample

6.1 The control limits were not met for **0** out of **4** compounds as shown in Table 5.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reported: 10-06-93
Date Reissued: 10-20-93

**Table 2**

SURROGATE RECOVERY SUMMARY

Aromatic Volatile Organics in Water
EPA Method 8020/8015 Modified[a]

Acceptability Limits[a]: 43 - 136% 43 - 133%

| GTEL No. | a,a,a,-Trifluorotoluene Surrogate Recovery % | 1,4-Bromofluorobenzene Surrogate Recovery % |
|---|---|---|
| QC-20 10-01-93 | 124 | 107 |
| QC-20 10-04-93 | 112 | 104 |
| Method Blank #1 | 107 | 95.9 |
| Method Blank #2 | 108 | 97.9 |
| W3-10-0076-01 | 105 | 102 |
| W3-10-0076-02 | 106 | 101 |
| W3-10-0076-03 | 106 | 96.6 |
| W3-10-0076-04 | 106 | 98.9 |
| W3-10-0076-05 | 110 | 101 |
| W3-10-0076-06 | 108 | 96.9 |
| W3-10-0076-06 DP | 102 | 92.1 |
| W3-10-0076-07 | 103 | 96.7 |
| W3-10-0076-08 | 105 | 85.2 |
| W3-10-0076-09 | 100 | 91.0 |
| W3-09-0539-02 | 105 | 89.9 |
| W3-09-0539-02 MS | 96.0 | 7.0 |
| W3-10-0078-10 | 104 | 93.6 |
| W3-10-0078-10 MS | 108 | 102 |
| W3-09-0593-01 | 99.0 | 94.8 |
| W3-09-0593-01 DP | 104 | 101 |
| W3-09-0578-07 | 110 | 114 |
| W3-09-0578-07 DP | 111 | 113 |

MS Matrix Spike Sample

DP Duplicate Sample

a Acceptability limits are derived from statistical analysis of laboratory samples.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reported: 10-06-93
Date Reissued: 10-20-93

**Table 3A**

MATRIX SPIKE SUMMARY

Aromatic Volatile Organics in Water
EPA Method 8020/8015 Modified[a]

Date of Analysis: 10-02-93
Sample Spiked: W3-09-0539-02

| Analyte | Spike Added, ug/L | Sample Concentration, ug/L | MS Concentration, ug/L | MS Percent Recovery | Acceptability Limits, %[a] |
|---|---|---|---|---|---|
| Benzene | 20.0 | <0.4 | 17.8 | 89.2 | 67-110 |
| Toluene | 20.0 | <0.5 | 18.5 | 92.8 | 68-115 |
| Ethylbenzene | 20.0 | <0.4 | 18.5 | 92.7 | 65-120 |
| Xylene | 60.0 | <0.8 | 61.0 | 102 | 62-119 |

Date of Analysis: 10-04-93
Sample Spiked: W3-10-0078-10

| Analyte | Spike Added, ug/L | Sample Concentration, ug/L | MS Concentration, ug/L | MS Percent Recovery | Acceptability Limits, %[a] |
|---|---|---|---|---|---|
| Benzene | 20.0 | <0.4 | 16.9 | 84.8 | 67-110 |
| Toluene | 20.0 | <0.5 | 18.2 | 91.3 | 68-115 |
| Ethylbenzene | 20.0 | <0.4 | 17.5 | 87.9 | 65-120 |
| Xylene | 60.0 | <0.8 | 61.1 | 102 | 62-119 |

a Acceptability limits are derived from statistical analysis of laboratory samples.



GTEL ENVIRONMENTAL LABORATORIES, INC.

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reported: 10-06-93
Date Reissued: 10-20-93

**Table 3B**

LABORATORY DUPLICATE SAMPLE RESULTS
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Aromatic Volatile Organics in Water
EPA Method 8020/8015 Modified[a]

Date of Analysis: 10-01-93
Sample: W3-09-0578-07

| Analyte | Sample Result ug/L | Duplicate Result ug/L | RPD, % | Acceptability Limits, %[a] |
|---|---|---|---|---|
| Benzene | 7590 | 7590 | 0.0 | 23.9 |
| Toluene | 8990 | 9044 | 0.6 | 27.2 |
| Ethylbenzene | 2900 | 2920 | 0.7 | 21.6 |
| Xylene (total) | 14200 | 14300 | 0.7 | 22.0 |

Date of Analysis: 10-01-93
Sample: W3-10-0076-06

| Analyte | Sample Result ug/L | Duplicate Result ug/L | RPD, % | Acceptability Limits, %[a] |
|---|---|---|---|---|
| Benzene | 1220 | 1220 | 0.0 | 23.9 |
| Toluene | <50 | <50 | NA | 27.2 |
| Ethylbenzene | 75 | 71 | 5.5 | 21.6 |
| Xylene (total) | 130 | 122 | 6.3 | 22.0 |

a Acceptability limits are derived from statistical analysis of laboratory samples. These limits are applicable for concentrations down to 10 times the detection limit. Below this level, the RPD should not exceed 60%.
NA Not applicable



GTEL ENVIRONMENTAL LABORATORIES, INC.

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reported: 10-06-93
Date Reissued: 10-20-93

**Table 3B**

LABORATORY DUPLICATE SAMPLE RESULTS
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Aromatic Volatile Organics in Water
EPA Method 8020/8015 Modified[a]

Date of Analysis: 10-04-93
Sample: W3-09-0593-01

| Analyte | Sample Result ug/L | Duplicate Result ug/L | RPD, % | Acceptability Limits, %[a] |
|---|---|---|---|---|
| Benzene | 301 | 347 | 14.2 | 23.9 |
| Toluene | 210 | 243 | 14.6 | 27.2 |
| Ethylbenzene | 56.6 | 64.3 | 12.7 | 21.6 |
| Xylene (total) | 542 | 617 | 12.9 | 22.0 |

a Acceptability limits are derived from statistical analysis of laboratory samples. These limits are applicable for concentrations down to 10 times the detection limit. Below this level, the RPD should not exceed 60%.
NA Not applicable



GTEL ENVIRONMENTAL LABORATORIES, INC.

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reported: 10-06-93
Date Reissued: 10-20-93

**Table 4**

METHOD BLANK REPORT

Aromatic Volatile Organics in Water
EPA Method 8020/8015 Modified[a]

Date of Analysis: 10-01-93 Time of Analysis: 10:13 (#1)

| Analyte | Concentration, ug/L |
|---|---|
| Benzene | <0.4 |
| Toluene | <0.5 |
| Ethyl Benzene | <0.4 |
| Xylene (total) | <0.8 |

Date of Analysis: 10-04-93 Time of Analysis: 10:29 (#2)

| Analyte | Concentration, ug/L |
|---|---|
| Benzene | <0.4 |
| Toluene | <0.5 |
| Ethyl Benzene | <0.4 |
| Xylene (total) | <0.8 |



GTEL ENVIRONMENTAL LABORATORIES, INC.

Project ID (Number): 02020412
Project ID (Name): Chevron 9-006
Work Order Number: W3-10-0076
Date Reported: 10-06-93
Date Reissued: 10-20-93

**Table 5**

QC CHECK SAMPLE RECOVERY

Aromatic Volatile Organics in Water
EPA Method 8020/8015 Modified[a]

Date of Analysis: 10-01-93

| Analyte | Expected Result ug/L | Observed Result ug/L | Recovery % | Acceptability Limits, %[a] |
|---|---|---|---|---|
| Benzene | 20.0 | 19.3 | 96.8 | 85-115 |
| Toluene | 20.0 | 19.6 | 98.0 | 85-115 |
| Ethylbenzene | 20.0 | 19.6 | 98.4 | 85-115 |
| Xylenes (total) | 60.0 | 65.8 | 110 | 85-115 |

Date of Analysis: 10-04-93

| Analyte | Expected Result ug/L | Observed Result ug/L | Recovery % | Acceptability Limits, %[a] |
|---|---|---|---|---|
| Benzene | 20.0 | 18.3 | 91.8 | 85-115 |
| Toluene | 20.0 | 18.7 | 93.9 | 85-115 |
| Ethylbenzene | 20.0 | 18.8 | 94.4 | 85-115 |
| Xylenes (total) | 60.0 | 63.4 | 106 | 85-115 |

QC Check Source: Macro ID # MB1131

a Acceptability limits are derived from laboratory practice.



GTEL ENVIRONMENTAL LABORATORIES, INC.

[redacted] Copy of Lab Report and COC to [redacted]

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-006
Facility Address 4265 Foothill Blvd
Consultant Project Number 02020 4012
Consultant Name GTI
Address 4057 Port Chicago Hwy
Project Contact (Name) Tim Watchers
(Phone) 671-2387 (Fax Number)

Chevron Contact ([redacted]) (Phone) 842-8130
Laboratory Name GTEL
Laboratory Release Number 8766690
Samples Collected by (Name) Tim Watchers / Schultz
Collection Date 9-22-93
Signature SC Schultz

Received @ 6°C seal intact -CB

Pg. 2 of 2

| Sample Number | Lab Sample Number | Number of Containers | Matrix S = Soil W = Water A = Air C = Charcoal | Grab Composite Type G = C = Discrete D = | Time | Sample Preservation | Iced (Yes or No) | Analyses To Be Performed: BTEX + TPH GAS (8020 + 8015) | TPH Diesel (8015) | Oil and Grease (5520) | Purgeable Halocarbons (8010) | Purgeable Aromatics (8020) | Purgeable Organics (8240) | Extractable Organics (8270) | Metals CAM/Pb/Zn/Ni (CAM or AA) | Hold | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Blank | | | | | | | | | | | | | | | | X | |
| RBC-1 | 14 | 1 | W | | | HCl | yes | X | | | | | | | | X | CB 9/23/93 |
| RBC-7 | 15 | 1 | W | | | HCl | yes | X | | | | | | | | X | |
| RBC-6 | 16 | 1 | W | | | HCl | yes | | | | | | | | | | |

C309046S

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
|---|---|---|---|---|---|
| SC Schultz | GTI | 9-22-93/8:45 | | | |
| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
| Relinquished By (Signature) | Organization | Date/Time | Received For Laboratory By (Signature) Ronald C. Jensen | | Date/Time 9/22/93 09:05 |

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

COC-3.DOC/05 91/NCH

10/11/1993 15:45 FROM *26 GTEL CONCORD TO GTI CONCORD P.04

Fax copy of Lab Report and COC to Chevron Contact: ☐ No [redacted] Chain-of-Custody-Rec

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-006
Facility Address 4265 Foothill Blvd, Oakland
Consultant Project Number 02020 4012
Consultant Name Groundwater Technology, Inc.
Address 4057 Port Chicago Hwy, Concord, CA
Project Contact (Name) Tim Watchers / Nicole Merchant
(Phone) 671-2387 (Fax Number)

Chevron Contact (Name) Mark Miller
(Phone) 842-8159
Laboratory Name [redacted] GTEL
Laboratory Release Number 876480
Samples Collected by (Name) SC Hunley / Tim Watchers
Collection Date 9-22-93
Signature SC Hunley

| Sample Number | Lab Sample Number | Number of Containers | Matrix (W = Water, S = Soil, A = Air) | Type (G = Grab, C = Composite, D = Discrete) | Time | Sample Preservation | Iced (Yes or No) | Analyses To Be Performed: BTEX + TPH GAS (8020 + 8015) | TPH Diesel (8015) | Oil and Grease (5520) | Purgeable Halocarbons (8010) | Purgeable Aromatics (8020) | Purgeable Organics (8240) | Extractable Organics (8270) | Metals (CAM-17 or As) | Hold | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C-1 | 01 | 2 | W | | | HCl | Yes | X | | | | | | | | | | | | | NOTE: DO NOT BILL TB-LB SAMP. RECEIVED @ 6°C. SEAL INTACT. |
| C-2 | 02 | | | | | | | | | | | | | | | | | | | | |
| C-3 | 03 | | | | | | | | | | | | | | | | | | | | |
| C-4 | 04 | | | | | | | | | | | | | | | | | | | | |
| C-5 | 05 | | | | | | | | | | | | | | | | | | | | |
| C-6 | 06 | | | | | | | | | | | | | | | | | | | | |
| C-7 | 07 | | | | | | | | | | | | | | | | | | | | |
| C-8 | 08 | | | | | | | | | | | | | | | | | | | | |
| TBLB | 09 | 3 | | | | | | | | | | | | | | | | | | | |
| [redacted] | | 1 | | | | | | | | | | | | | | X | | | | | |
| RBC-4 | 10 | 1 | | | | | | | | | | | | | | X | | | | | |
| RBL-3 | 11 | 1 | | | | | | | | | | | | | | X | | | | | |
| RBL-5 | 12 | 1 | | | | | | | | | | | | | | X | | | | | |
| RBC-2 | 13 | 1 | | | | | | | | | | | | | | X | | | | | |

Pg. 1 of 1

C309046

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
|---|---|---|---|---|---|
| SC Hunley | GTI | 9-22-93 / 0845 | | | |
| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
| | | | | | |
| Relinquished By (Signature) | Organization | Date/Time | Received For Laboratory By (Signature) | | Date/Time |
| | | | | | 9/22/93 |

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

10/11/1993 15:45 FROM #26 GTEL CONCORD TO GTI CONCORD P.05

**APPENDIX D**

**Monitoring Data Sheets**

# ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
## (GASOLINE WITH BTEX)
## ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9309279
Matrix : WATER
Date Sampled : 09/21/93

Project Number : 204-5508-3400
Date Released : 09/30/93

| | Reporting Limit | Sample I.D.# S-1 | Sample I.D.# S-2 | Sample I.D.# S-3 | Sample I.D.# DUP | Sample I.D.# TB |
|---|---|---|---|---|---|---|
| COMPOUNDS | (ug/L) | -01 | -02 | -03 | -04 | -05 |
| Benzene | 0.5 | 480 | 870 | 900 | 700 | ND |
| Toluene | 0.5 | 5000 | 24 | 2200 | 130 | ND |
| Ethylbenzene | 0.5 | 3800 | 190 | 2600 | 250 | ND |
| Total Xylenes | 0.5 | 18000 | 120 | 11000 | 550 | ND |
| TPH as Gasoline | 50 | 34000 | 3300 | 15000 | 4500 | ND |
| % Surrogate Recovery | | 109% | 110% | 124% | 128% | 116% |
| Instrument I.D. | | HP21 | HP21 | HP21 | HP21 | HP21 |
| Date Analyzed | | 09/28/93 | 09/27/93 | 09/24/93 | 09/24/93 | 09/24/93 |
| RLMF | | 250 | 25 | 250 | 25 | 1 |

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor (Dilution).

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Reggie Dawson 10/1/93
Analyst Date

Cheryl Balmer 10/1/93
Supervisor Date

# ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
## ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9309279
Matrix : WATER
Date Sampled : 09/21/93
Date Extracted: 09/27/93

Project Number : 204-5508-3400
Date Released : 09/30/93
Instrument I.D.: HP9

| Anametrix I.D. | Client I.D. | Date Analyzed | Reporting Limit (ug/L) | Amount Found (ug/L) | Surrogate %Rec |
|---|---|---|---|---|---|
| 9309279-01 | S-1 | 09/28/93 | 250 | 5900 | 39% |
| BS271121 | METHOD BLANK | 09/29/93 | 50 | ND | 89% |

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.
The surrogate recovery limits for C25 are 30-130%.

ND - Not detected at or above the practical quantitation limit for the method.

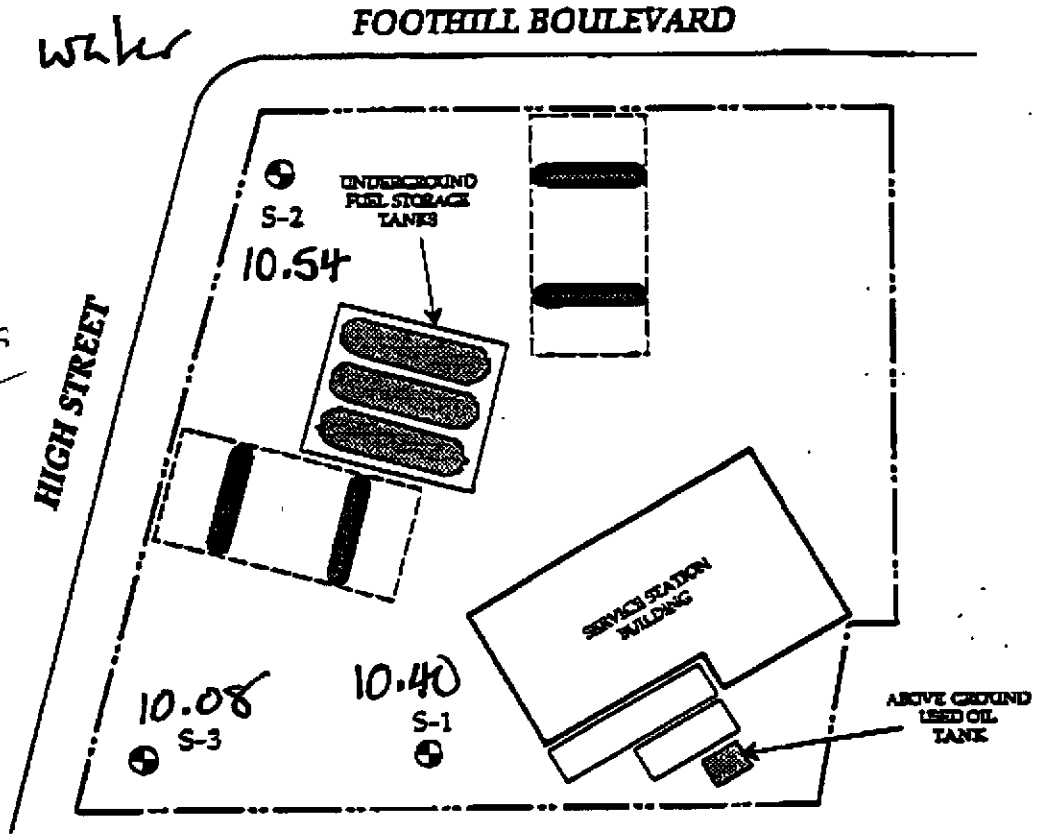
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3510.

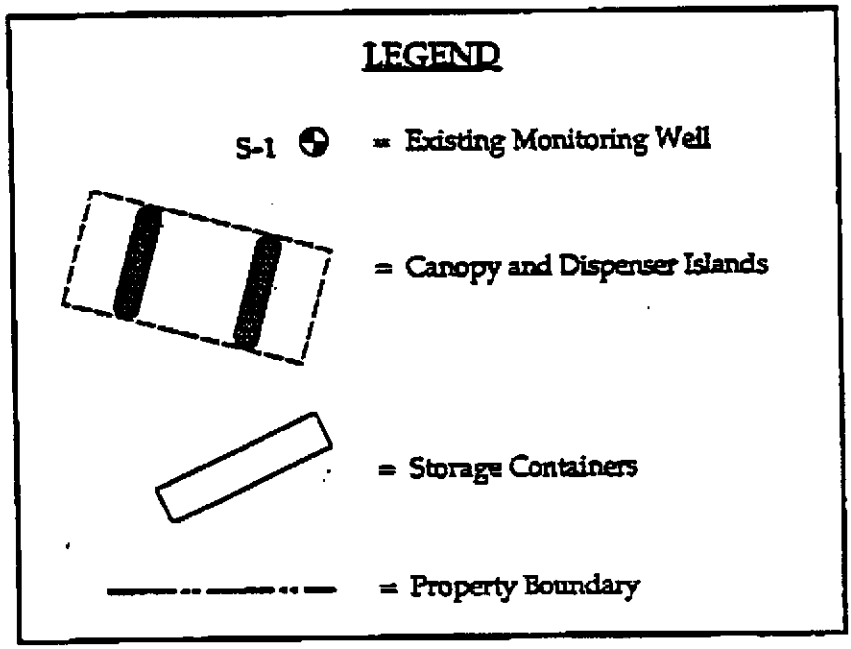
All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

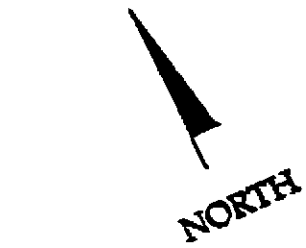
Peggie Davison 10/1/93
Analyst Date

Cheryl Brumer 10/1/93
Supervisor Date

Values shown are depth to water from TOB surface elevations





| | | |
|---|---|---|
| HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC. | **SITE PLAN**<br>Shell Service Station<br>4411 Foothill Boulevard<br>Oakland, California<br>WIC #204-5508-3400 | Figure<br>**2**<br>12-010 6/93 |

# WELL GAUGING DATA

Project # 93021-K2 Date 10/21/93 Client Shell

Site 4411 Foothill Blvd. Oakland

| Well I.D. | Well Size (in.) | Sheen/ Odor | Depth to Immiscible Liquid (feet) | Thickness of Immiscible Liquid (ft.) | Volume of Immiscibles Removed (ml) | Depth to Water (feet) | Depth to Well Bottom (feet) | Survey Point: TOB or TOC | |
|---|---|---|---|---|---|---|---|---|---|
| S-1 | 4 | gas odor | | | | 11.00 | 24.72 | TOB | L |
| S-2 | 4 | | | | | 10.53 | 22.41 | ↓ | L |
| S-3 | 4 | gas odor | | | | 10.20 | 2.53 | ↓ | L |

# WELL GAUGING DATA

Project # 931119-K1 Date 11/19 Client Shell

Site 4411 Foothill Blvd Oakland Sampler KCB

| Well I.D. | Well Size (in.) | Sheen/ Odor | Depth to Immisible Liquid (feet) | Thickness of Immisible Liquid (ft.) | Volume of Immisibles Removed (gal) | Depth to Water (feet) | Depth to Well Bottom (feet) | Measured to: Top of Pipe or Grade |
|---|---|---|---|---|---|---|---|---|
| S-1 | 4 | gas odor | | | | 1102 | 24.20 | TOB |
| S-2 | 4 | Slight gas odor | | | | 10.22 | 22.44 | ↓ |
| S-3 | 4 | gas odor | | | | 1027 | 20.53 | ↓ |

Birch Technical Services
116 Liberty st
Santa Cruz, CA 95060
(408) 459-0718

TOC

# Field Report / Data Sheet

X Groundwater Sampling O Groundwater Monitoring O Well Development O Drill Support O Stockpile Sampling

| Firm: ALISTO | Date: 9/21/93 | Station #: BP11109 | Day: M (Tu) W Th F |
|---|---|---|---|
| Project Number: 10-014-02-02 | Field Technician: Stephen Ryder | Address: 4280 Foothill Blvd Oakland | Weather: CLEAR |

| DTW order | Well ID | Lock | Cap | Total Depth (feet) | 1st Depth to Water (feet) | 2nd Depth to Water (feet) | Depth to Product (feet) | Product Thickness | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 3 | mw-2 | OK | OK | 30.1 | 21.93 | 21.93 | | | 4" |
| 6 | mw-3 | | | 31.8 | 16.58 | 16.58 | | | 4" |
| 4 | mw-4 | | | 34.28 | 20.14 | 20.14 | | | 4" |
| 8 | mw-5 | | | NM | 14.35 | 14.35 | | | 2" |
| 5 | mw-6 | | | 34.28 | 19.64 | 19.64 | | | 4" |
| 7 | mw-7 | | | 33.42 | 14.40 | 14.40 | | | 6" |
| 2 | mw-8 | | | 21.74 | 19.71 | 19.71 | | | 2" |
| 1 | mw-9 | OK | OK | 29.31 | 14.00 | 14.00 | | | 2" |

Pls prepare a Fig 3 Contam dostribution for this QMR

B.

**Notes:**
QC-1 is a duplicate of MW-7

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

| WELL ID | DATE OF SAMPLING/ MONITORING | CASING ELEVATION (a) (Feet) | DEPTH TO WATER (Feet) | PRODUCT THICKNESS (Feet) | GROUNDWATER ELEVATION (b) (Feet) | TPH-G (ppb) | TPH-D (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | TOG (ppb) | HVOC (ppb) | LAB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 01/31/90 | 38.19 | 15.41 | 0.00 | 22.78 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-1 (c) | 02/05/90 | -- | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 02/05/90 | 41.22 | 21.91 | 0.00 | 19.31 | 1300 | -- | 14 | ND<1.0 | 9 | 13 | -- | -- | SUP |
| MW-2 | 02/14/91 | 41.22 | 21.16 | 0.00 | 20.06 | ND<50 | ND<10000 | ND<0.3 | ND<0.3 | ND<0.3 | ND<0.3 | ND<5000 | 51 (d) | SUP |
| MW-2 | 05/13/91 | 41.22 | 21.32 | 0.00 | 19.90 | ND<50 | ND<50 | ND<0.3 | ND<0.3 | ND<0.3 | ND<0.3 | 6000 | 0.5 (e) | SUP |
| MW-2 | 07/24/91 | 41.22 | 22.92 | 0.00 | 18.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 10/03/91 | 41.22 | 24.90 | 0.00 | 16.32 | ND<50 | ND<50 | ND<0.3 | 0.6 | ND<0.3 | ND<0.3 | ND<5000 | 0.7 (e) | SUP |
| MW-2 | 10/15/91 | 41.22 | 24.10 | 0.00 | 17.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 12/04/91 | 41.22 | INACCESSIBLE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 12/16/91 | 41.22 | 23.95 | 0.00 | 17.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 01/06/92 | 41.22 | 23.30 | 0.00 | 17.92 | ND<50 | ND<50 | ND<0.3 | ND<0.3 | ND<0.3 | ND<0.3 | ND<5000 | ND | ANA |
| MW-2 | 01/22/92 | 41.22 | 23.14 | 0.00 | 18.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 01/28/92 | 41.22 | 22.99 | 0.00 | 18.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 02/05/92 | 41.22 | 22.63 | 0.00 | 18.59 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 02/12/92 | 41.22 | 22.04 | 0.00 | 19.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 02/17/92 | 41.22 | 20.84 | 0.00 | 20.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 04/03/92 | 41.22 | 18.29 | 0.00 | 22.93 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 04/08/92 | 41.22 | 18.86 | 0.00 | 22.36 | ND<50 | 63 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5000 | ND | ANA |
| MW-2 | 04/14/92 | 41.22 | 19.45 | 0.00 | 21.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 04/29/92 | 41.22 | 20.35 | 0.00 | 20.87 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 05/07/92 | 41.22 | 20.84 | 0.00 | 20.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 07/03/92 | 41.22 | 22.34 | 0.00 | 18.88 | ND<50 | -- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | ANA |
| MW-2 | 10/08/92 | 41.22 | 23.73 | 0.00 | 17.49 | ND<50 | -- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | ANA |
| MW-2 | 12/31/92 | 41.22 | 21.12 | 0.00 | 20.10 | ND<50 | -- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | -- | ANA |
| MW-2 | 04/21/93 | 41.22 | 17.68 | 0.00 | 23.54 | ND<50 | ND<50 (f) | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<5000 | ND | PACE |
| MW-2 | 07/07/93 | 41.22 | 20.30 | 0.00 | 20.92 | ND<50 | -- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | -- | 1.0 (e) | PACE |
| MW-2 | 09/21/93 | 41.22 | 21.93 | 0.00 | 19.29 | ND<50 | -- | 0.9 | 0.7 | 0.7 | 2.6 | -- | -- | PACE |
| MW-3 | 02/05/90 | 40.74 | 17.45 | 0.00 | 23.29 | 1400 | -- | 15 | ND<2.5 | 11 | 8 | -- | -- | SUP |
| MW-3 | 02/14/91 | 40.74 | 18.52 | 0.00 | 22.22 | 320 | -- | 8 | ND<0.3 | 8 | 1 | -- | -- | SUP |
| MW-3 | 05/13/91 | 40.74 | 19.32 | 0.00 | 21.42 | 640 | -- | 13 | ND<0.3 | 18 | 1 | -- | -- | SUP |
| MW-3 | 07/24/91 | 40.74 | 20.69 | 0.00 | 20.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 10/03/91 | 40.74 | 19.47 | 0.00 | 21.27 | 940 | -- | 21 | ND<0.3 | 23 | 2.1 | -- | -- | SUP |
| MW-3 | 10/15/91 | 40.74 | 20.46 | 0.00 | 20.28 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 12/04/91 | 40.74 | 18.29 | 0.00 | 22.45 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 12/16/91 | 40.74 | 18.34 | 0.00 | 22.40 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 01/06/92 | 40.74 | 18.50 | 0.00 | 22.24 | 580 | -- | 6.1 | 1 | 6.1 | 7.1 | -- | -- | ANA |
| MW-3 | 01/22/92 | 40.74 | 17.86 | 0.00 | 22.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 01/28/92 | 40.74 | 15.84 | 0.00 | 24.90 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 02/05/92 | 40.74 | 17.53 | 0.00 | 23.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 02/12/92 | 40.74 | 17.15 | 0.00 | 23.59 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 02/17/92 | 40.74 | 16.18 | 0.00 | 24.56 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 04/03/92 | 40.74 | 14.80 | 0.00 | 25.94 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 04/08/92 | 40.74 | 17.06 | 0.00 | 23.68 | 1100 | -- | 30 | 4.6 | 32 | 11 | -- | -- | ANA |
| MW-3 | 04/14/92 | 40.74 | 15.22 | 0.00 | 25.52 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 04/29/92 | 40.74 | 15.90 | 0.00 | 24.84 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 05/07/92 | 40.74 | 16.35 | 0.00 | 24.39 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 07/03/92 | 40.74 | 17.74 | 0.00 | 23.00 | 1200 | -- | 38 | ND<2.5 | 24 | ND<2.5 | -- | -- | ANA |
| MW-3 | 10/08/92 | 40.74 | 19.06 | 0.00 | 21.68 | 1400 | -- | 31 | ND<0.5 | 25 | 13 | -- | -- | ANA |
| MW-3 | 12/31/92 | 40.74 | 16.61 | 0.00 | 24.13 | 820 | -- | 12 | 4.1 | 13 | 5.9 | -- | -- | ANA |
| QC-1 (g) | 12/31/92 | -- | -- | -- | -- | 960 | -- | 11 | 3.6 | 10 | 3.8 | -- | -- | ANA |
| MW-3 | 04/21/93 | 40.74 | 14.24 | 0.00 | 26.50 | 420 | -- | 5.6 | ND<0.5 | 3.9 | 1.4 | -- | -- | PACE |
| QC-1 (g) | 04/21/93 | -- | -- | -- | -- | 390 | -- | 5.0 | ND<0.5 | 3.7 | 1.5 | -- | -- | PACE |
| MW-3 | 07/07/93 | 40.13 (h) | 15.19 | 0.00 | 24.94 | 54 | -- | 0.6 | 0.6 | ND<0.5 | ND<0.5 | -- | -- | PACE |
| MW-3 | 09/21/93 | 40.13 | 16.58 | 0.00 | 23.55 | 540 | -- | 7.9 | 0.9 | 4.7 | 2.4 | -- | -- | PACE |

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

| WELL ID | DATE OF SAMPLING/ MONITORING | CASING ELEVATION (a) (Feet) | DEPTH TO WATER (Feet) | PRODUCT THICKNESS (Feet) | GROUNDWATER ELEVATION (b) (Feet) | TPH-G (ppb) | TPH-D (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | TOG (ppb) | HVOC (ppb) | LAB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 02/05/90 | 40.11 | 20.75 | 0.00 | 19.36 | 620 | — | ND<0.5 | 9 | ND<0.5 | 10 | — | — | SUP |
| MW-4 | 02/14/91 | 40.11 | 21.73 | 0.00 | 18.38 | 180 | — | ND<0.3 | ND<0.3 | 0.4 | 2 | — | — | SUP |
| MW-4 | 05/13/91 | 40.11 | 18.55 | 0.00 | 21.56 | 72 | — | 0.7 | ND<0.3 | ND<0.3 | ND<0.3 | — | — | SUP |
| MW-4 | 07/24/91 | 40.11 | 21.31 | 0.00 | 18.80 | — | — | — | — | — | — | — | — | — |
| MW-4 | 10/03/91 | 40.11 | 22.57 | 0.00 | 17.54 | 57 | — | ND<0.3 | ND<0.3 | ND<0.3 | ND<0.3 | — | — | SUP |
| MW-4 | 10/15/91 | 40.11 | 22.88 | 0.00 | 17.23 | — | — | — | — | — | — | — | — | — |
| MW-4 | 12/04/91 | 40.11 | 22.54 | 0.00 | 17.57 | — | — | — | — | — | — | — | — | — |
| MW-4 | 12/16/91 | 40.11 | 22.59 | 0.00 | 17.52 | — | — | — | — | — | — | — | — | — |
| MW-4 | 01/06/92 | 40.11 | 22.00 | 0.00 | 18.11 | 480 | — | 0.8 | 3.2 | 1.9 | 7.7 | — | — | ANA |
| MW-4 | 01/22/92 | 40.11 | 21.58 | 0.00 | 18.53 | — | — | — | — | — | — | — | — | — |
| MW-4 | 01/28/92 | 40.11 | 21.42 | 0.00 | 18.69 | — | — | — | — | — | — | — | — | — |
| MW-4 | 02/05/92 | 40.11 | 21.10 | 0.00 | 19.01 | — | — | — | — | — | — | — | — | — |
| MW-4 | 02/12/92 | 40.11 | 20.74 | 0.00 | 19.37 | — | — | — | — | — | — | — | — | — |
| MW-4 | 02/17/92 | 40.11 | 19.78 | 0.00 | 20.33 | — | — | — | — | — | — | — | — | — |
| MW-4 | 04/03/92 | 40.11 | 16.80 | 0.00 | 23.31 | — | — | — | — | — | — | — | — | — |
| MW-4 | 04/08/92 | 40.11 | 17.13 | 0.00 | 22.98 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-4 | 04/14/92 | 40.11 | 17.74 | 0.00 | 22.37 | — | — | — | — | — | — | — | — | — |
| MW-4 | 04/29/92 | 40.11 | 18.56 | 0.00 | 21.55 | — | — | — | — | — | — | — | — | — |
| MW-4 | 05/07/92 | 40.11 | 19.10 | 0.00 | 21.01 | — | — | — | — | — | — | — | — | — |
| MW-4 | 07/03/92 | 40.11 | 20.71 | 0.00 | 19.40 | ND<50 | — | 0.6 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-4 | 10/08/92 | 40.11 | 22.43 | 0.00 | 17.68 | 270 | — | ND<0.5 | 2.1 | 2.5 | 3.2 | — | — | ANA |
| MW-4 | 12/31/92 | 40.11 | 19.58 | 0.00 | 20.53 | 160 | — | ND<0.5 | ND<0.5 | ND<0.5 | 1.3 | — | — | ANA |
| MW-4 | 04/21/93 | 40.11 | 17.79 | 0.00 | 22.32 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | PACE |
| MW-4 | 07/07/93 | 40.11 | 18.44 | 0.00 | 21.67 | 160 | — | 1.2 | 5.4 | 3.8 | 19 | — | — | PACE |
| MW-4 | 09/21/93 | 40.11 | 20.14 | 0.00 | 19.97 | 71 | — | ND<0.5 | 1.9 | ND<0.5 | 2.1 | — | — | PACE |
| MW-5 | 10/03/91 | 39.55 | 18.08 | 0.00 | 21.47 | 79000 | — | 13000 | 7400 | 1400 | 6200 | — | — | SUP |
| MW-5 | 10/15/91 | 39.55 | 18.55 | 0.00 | 21.00 | — | — | — | — | — | — | — | — | — |
| MW-5 | 12/04/91 | 39.55 | 18.44 | 0.13 | 21.21 | — | — | — | — | — | — | — | — | — |
| MW-5 | 12/16/91 | 39.55 | 18.66 | 0.01 | 20.90 | — | — | — | — | — | — | — | — | — |
| MW-5 | 01/06/92 | 39.55 | 19.12 | 0.11 | 20.51 | — | — | — | — | — | — | — | — | — |
| MW-5 | 01/22/92 | 39.55 | 14.59 | 0.00 | 24.96 | — | — | — | — | — | — | — | — | — |
| MW-5 | 01/28/92 | 39.55 | 15.25 | 0.00 | 24.30 | — | — | — | — | — | — | — | — | — |
| MW-5 | 02/05/92 | 39.55 | 15.58 | SHEEN | 23.97 | — | — | — | — | — | — | — | — | — |
| MW-5 | 02/12/92 | 39.55 | 15.54 | 0.01 | 24.02 | — | — | — | — | — | — | — | — | — |
| MW-5 | 02/17/92 | 39.55 | 13.98 | SHEEN | 25.57 | — | — | — | — | — | — | — | — | — |
| MW-5 | 04/03/92 | 39.55 | 13.63 | 0.04 | 25.95 | — | — | — | — | — | — | — | — | — |
| MW-5 | 04/08/92 | 39.55 | 13.17 | 0.01 | 26.39 | — | — | — | — | — | — | — | — | — |
| MW-5 | 04/14/92 | 39.55 | 13.45 | 0.01 | 26.11 | — | — | — | — | — | — | — | — | — |
| MW-5 | 04/29/92 | 39.55 | 13.75 | 0.07 | 25.85 | — | — | — | — | — | — | — | — | — |
| MW-5 | 05/07/92 | 39.55 | 16.15 | 0.04 | 23.43 | — | — | — | — | — | — | — | — | — |
| MW-5 | 07/03/92 | 39.55 | 17.67 | 0.08 | 21.94 | — | — | — | — | — | — | — | — | — |
| MW-5 | 08/01/92 | 39.55 | 17.83 | 0.50 | 22.10 | — | — | — | — | — | — | — | — | — |
| MW-5 | 10/08/92 | 39.55 | 17.86 | 0.92 | 22.38 | — | — | — | — | — | — | — | — | — |
| MW-5 | 12/31/92 | 39.55 | 15.20 | SHEEN | 24.35 | — | — | — | — | — | — | — | — | — |
| MW-5 | 04/21/93 | 39.55 | 12.64 | 0.02 | 26.93 | — | — | — | — | — | — | — | — | — |
| MW-5 | 07/07/93 | 39.14 (h) | 12.68 | 0.82 | 27.08 | — | — | — | — | — | — | — | — | — |
| MW-5 | 09/21/93 | 39.14 | 14.35 | SHEEN | 24.79 | — | — | — | — | — | — | — | — | — |

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

| WELL ID | DATE OF SAMPLING/ MONITORING | CASING ELEVATION (a) (Feet) | DEPTH TO WATER (Feet) | PRODUCT THICKNESS (Feet) | GROUNDWATER ELEVATION (b) (Feet) | TPH-G (ppb) | TPH-D (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | TOG (ppb) | HVOC (ppb) | LAB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-8 | 10/03/91 | 38.18 | 22.37 | 0.00 | 15.81 | ND<50 | — | ND<0.3 | 0.6 | ND<0.3 | 0.9 | — | — | SUP |
| MW-8 | 10/15/91 | 38.18 | 22.70 | 0.00 | 15.48 | — | — | — | — | — | — | — | — | — |
| MW-8 | 12/04/91 | 38.18 | 22.44 | 0.00 | 15.74 | — | — | — | — | — | — | — | — | — |
| MW-8 | 12/16/91 | 38.18 | 22.47 | 0.00 | 15.71 | — | — | — | — | — | — | — | — | — |
| MW-8 | 01/06/92 | 38.18 | 21.94 | 0.00 | 16.24 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-8 | 01/22/92 | 38.18 | 21.44 | 0.00 | 16.74 | — | — | — | — | — | — | — | — | — |
| MW-8 | 01/28/92 | 38.18 | 21.20 | 0.00 | 16.98 | — | — | — | — | — | — | — | — | — |
| MW-8 | 02/05/92 | 38.18 | 20.88 | 0.00 | 17.30 | — | — | — | — | — | — | — | — | — |
| MW-8 | 02/12/92 | 38.18 | 20.54 | 0.00 | 17.64 | — | — | — | — | — | — | — | — | — |
| MW-8 | 02/17/92 | 38.18 | 19.99 | 0.00 | 18.19 | — | — | — | — | — | — | — | — | — |
| MW-8 | 04/03/92 | 38.18 | 16.75 | 0.00 | 21.43 | — | — | — | — | — | — | — | — | — |
| MW-8 | 04/08/92 | 38.18 | 16.57 | 0.00 | 21.61 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-8 | 04/14/92 | 38.18 | INACCESSIBLE | — | — | — | — | — | — | — | — | — | — | — |
| MW-8 | 04/29/92 | 38.18 | 18.61 | 0.00 | 19.57 | — | — | — | — | — | — | — | — | — |
| MW-8 | 05/07/92 | 38.18 | 18.41 | 0.00 | 19.77 | — | — | — | — | — | — | — | — | — |
| MW-8 | 07/03/92 | 38.18 | 20.35 | 0.00 | 17.83 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-8 (i) | 10/08/92 | 38.18 | 21.74 | 0.00 | 16.44 | — | — | — | — | — | — | — | — | — |
| MW-8 | 12/31/92 | 38.18 | 19.09 | 0.00 | 19.09 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-8 | 04/21/93 | 38.18 | 18.92 | 0.00 | 19.26 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | PACE |
| MW-8 | 07/07/93 | 38.18 | 17.76 | 0.00 | 20.42 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | PACE |
| MW-8 | 09/21/93 | 38.18 | 19.71 | 0.00 | 18.47 | ND<50 | — | 2.9 | 2.2 | 2.2 | 7.1 | — | — | PACE |
| MW-9 | 10/03/91 | 41.25 | 14.12 | 0.00 | 27.13 | ND<50 | — | ND<0.3 | 0.4 | ND<0.3 | ND<0.3 | — | — | SUP |
| MW-9 | 10/15/91 | 41.25 | 14.27 | 0.00 | 26.98 | — | — | — | — | — | — | — | — | — |
| MW-9 | 12/04/91 | 41.25 | 13.84 | 0.00 | 27.41 | — | — | — | — | — | — | — | — | — |
| MW-9 | 12/16/91 | 41.25 | 14.18 | 0.00 | 27.07 | — | — | — | — | — | — | — | — | — |
| MW-9 | 01/06/92 | 41.25 | 13.42 | 0.00 | 27.83 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | 0.9 | — | — | ANA |
| MW-9 | 01/22/92 | 41.25 | 13.75 | 0.00 | 27.50 | — | — | — | — | — | — | — | — | — |
| MW-9 | 01/28/92 | 41.25 | 14.76 | 0.00 | 26.49 | — | — | — | — | — | — | — | — | — |
| MW-9 | 02/05/92 | 41.25 | 13.38 | 0.00 | 27.87 | — | — | — | — | — | — | — | — | — |
| MW-9 | 02/12/92 | 41.25 | 11.86 | 0.00 | 29.39 | — | — | — | — | — | — | — | — | — |
| MW-9 | 02/17/92 | 41.25 | 10.78 | 0.00 | 30.47 | — | — | — | — | — | — | — | — | — |
| MW-9 | 04/03/92 | 41.25 | 11.63 | 0.00 | 29.62 | — | — | — | — | — | — | — | — | — |
| MW-9 | 04/08/92 | 41.25 | 12.25 | 0.00 | 29.00 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-9 | 04/14/92 | 41.25 | 12.32 | 0.00 | 28.93 | — | — | — | — | — | — | — | — | — |
| MW-9 | 04/29/92 | 41.25 | 13.07 | 0.00 | 28.18 | — | — | — | — | — | — | — | — | — |
| MW-9 | 05/07/92 | 41.25 | 14.43 | 0.00 | 26.82 | — | — | — | — | — | — | — | — | — |
| MW-9 | 07/03/92 | 41.25 | 13.85 | 0.00 | 27.40 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-9 | 10/08/92 | 41.25 | 14.89 | 0.00 | 26.36 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-9 | 12/31/92 | 41.25 | 11.90 | 0.00 | 29.35 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-9 | 04/21/93 | 41.25 | 13.68 | 0.00 | 27.57 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | PACE |
| MW-9 | 07/07/93 | 41.25 | 13.12 | 0.00 | 28.13 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | PACE |
| MW-9 | 09/21/93 | 41.25 | 14.00 | 0.00 | 27.25 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | 0.9 | — | — | PACE |

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BP OIL COMPANY SERVICE STATION NO. 11109
4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-014

| WELL ID | | DATE OF SAMPLING/ MONITORING | CASING ELEVATION (a) (Feet) | | DEPTH TO WATER (Feet) | PRODUCT THICKNESS (Feet) | GROUNDWATER ELEVATION (b) (Feet) | TPH-G (ppb) | TPH-D (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | TOG (ppb) | HVOC (ppb) | LAB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-6 | | 10/03/91 | 41.59 | | 20.73 | 0.00 | 20.86 | ND<50 | — | 0.7 | 0.8 | ND<0.3 | 1.3 | — | — | SUP |
| MW-6 | | 10/15/91 | 41.59 | | 21.20 | 0.00 | 20.39 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 12/04/91 | 41.59 | | 21.26 | 0.00 | 20.33 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 12/16/91 | 41.59 | | 21.12 | 0.00 | 20.47 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 01/06/92 | 41.59 | | 20.29 | 0.00 | 21.30 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | 1.6 | — | — | ANA |
| MW-6 | | 01/22/92 | 41.59 | | 20.12 | 0.00 | 21.47 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 01/28/92 | 41.59 | | 20.20 | 0.00 | 21.39 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 02/05/92 | 41.59 | | 20.09 | 0.00 | 21.50 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 02/12/92 | 41.59 | | 19.15 | 0.00 | 22.44 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 02/17/92 | 41.59 | | 18.02 | 0.00 | 23.57 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 04/03/92 | 41.59 | | 16.62 | 0.00 | 24.97 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 04/08/92 | 41.59 | | 17.06 | 0.00 | 24.53 | ND<50 | — | 0.6 | ND<0.5 | 0.8 | ND<0.5 | — | — | ANA |
| MW-6 | | 04/14/92 | 41.59 | | 17.23 | 0.00 | 24.36 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 04/29/92 | 41.59 | | 18.12 | 0.00 | 23.47 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 05/07/92 | 41.59 | | 18.52 | 0.00 | 23.07 | — | — | — | — | — | — | — | — | — |
| MW-6 | | 07/03/92 | 41.59 | | 19.71 | 0.00 | 21.88 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-6 | | 10/08/92 | 41.59 | | 21.22 | 0.00 | 20.37 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| QC-1 | (g) | 10/08/92 | 41.59 | | 21.22 | 0.00 | 20.37 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-6 | | 12/31/92 | 41.59 | | 21.33 | 0.00 | 20.26 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| MW-6 | | 04/21/93 | 41.59 | | 16.45 | 0.00 | 25.14 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | PACE |
| MW-6 | | 07/07/93 | 41.59 | | 18.68 | 0.00 | 22.91 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | PACE |
| MW-6 | | 09/21/93 | 41.59 | | 19.64 | 0.00 | 21.95 | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | 1.6 | — | — | PACE |
| MW-7 | | 10/03/91 | 40.64 | | 14.93 | 0.00 | 25.71 | 360 | — | 62 | 13 | 3.4 | 20 | — | — | SUP |
| MW-7 | | 10/15/91 | 40.64 | | 15.16 | 0.00 | 25.48 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 12/04/91 | 40.64 | | 15.41 | 0.00 | 25.23 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 12/16/91 | 40.64 | | 15.21 | 0.00 | 25.43 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 01/06/92 | 40.64 | | 14.56 | 0.00 | 26.08 | 1100 | — | 170 | ND<0.5 | 24 | 23 | — | — | ANA |
| MW-7 | | 01/22/92 | 40.64 | | 14.63 | 0.00 | 26.01 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 01/28/92 | 40.64 | | 14.73 | 0.00 | 25.91 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 02/05/92 | 40.64 | | 14.58 | 0.00 | 26.06 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 02/12/92 | 40.64 | | 13.94 | 0.00 | 26.70 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 02/17/92 | 40.64 | | 13.10 | 0.00 | 27.54 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 04/03/92 | 40.64 | | 12.66 | 0.00 | 27.98 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 04/08/92 | 40.64 | | 12.77 | 0.00 | 27.87 | 750 | — | 150 | ND<0.5 | 23 | 9.9 | — | — | ANA |
| MW-7 | | 04/14/92 | 40.64 | | 13.02 | 0.00 | 27.62 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 04/29/92 | 40.64 | | 13.59 | 0.00 | 27.05 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 05/07/92 | 40.64 | | 13.95 | 0.00 | 26.69 | — | — | — | — | — | — | — | — | — |
| MW-7 | | 07/03/92 | 40.64 | | 14.73 | 0.00 | 25.91 | 660 | — | 210 | ND<2.5 | 33 | 8 | — | — | ANA |
| MW-7 | | 10/08/92 | 40.64 | | 15.75 | 0.00 | 24.89 | 320 | — | 49 | 1.4 | 13 | 6.2 | — | — | ANA |
| MW-7 | | 12/31/92 | 40.64 | | 13.57 | 0.00 | 27.07 | 900 | — | 100 | ND<2.5 | 28 | 4.3 | — | — | ANA |
| MW-7 | | 04/21/93 | 40.64 | | 14.56 | 0.00 | 26.08 | 510 | — | 83 | 1.2 | 10 | 5.8 | — | — | PACE |
| MW-7 | | 07/07/93 | 40.32 | (h) | 13.40 | 0.00 | 26.92 | 1100 | — | 160 | 2.0 | 27 | 4.0 | — | — | PACE |
| QC-1 | (g) | 07/07/93 | — | | — | — | — | 1100 | — | 170 | 1.9 | 29 | 2.8 | — | — | PACE |
| MW-7 | | 09/21/93 | 40.32 | | 14.40 | 0.00 | 25.92 | 690 | — | 150 | 3.1 | 26 | 5.7 | — | — | PACE |
| QC-1 | (g) | 09/21/93 | — | | — | — | — | 640 | — | 140 | 1.7 | 23 | 2.4 | — | — | PACE |

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| WELL ID | DATE OF SAMPLING/ MONITORING | CASING ELEVATION (a) (Feet) | DEPTH TO WATER (Feet) | PRODUCT THICKNESS (Feet) | GROUNDWATER ELEVATION (b) (Feet) | TPH-G (ppb) | TPH-D (ppb) | B (ppb) | T (ppb) | E (ppb) | X (ppb) | TOG (ppb) | HVOC (ppb) | LAB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC-2 | (j) 10/08/92 | — | — | — | — | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| QC-2 | (j) 12/31/92 | — | — | — | — | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | ANA |
| QC-2 | (j) 04/21/93 | — | — | — | — | — | — | — | — | — | — | — | ND | PACE |
| QC-2 | (j) 07/07/93 | — | — | — | — | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | 0.6 | — | — | PACE |
| QC-2 | (j) 09/21/93 | — | — | — | — | ND<50 | — | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | — | — | PACE |

ABBREVIATIONS:

| | |
|---|---|
| TPH-G | Total petroleum hydrocarbons as gasoline |
| TPH-D | Total petroleum hydrocarbons as diesel |
| B | Benzene |
| T | Toluene |
| E | Ethylbenzene |
| X | Total xylenes |
| TOG | Total oil and grease |
| HVOC | Halogenated volatile organic compounds |
| ppb | Parts per billion |
| — | Not analyzed/applicable |
| ND | Not detected above reported detection limit |
| SUP | Superior Analytical Laboratory |
| ANA | Anametrix, Inc. |
| PACE | Pace, Inc. |

NOTES:

(a) Top of casing elevations surveyed relative to the NGVD (1929) in feet above mean sea level.

(b) Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.

(c) Well destroyed during tank removal in November 1990.

(d) Methylene chloride.

(e) 1,2-dichloroethane.

(f) Sample collected from MW-2 for TPH-D analysis received in laboratory 7 days after collected; sample exceeded EPA-recommended holding time for TPH-D on a water matrix.

(g) Blind duplicate.

(h) Top of casing lowered.

(i) Not sampled due to abandoned vehicle parked over well.

(j) Travel blank.