CAMBRIA

November 15, 1997

Mr. Alex Perez
Shell Oil Products Company
P.O. Box 8080
Martinez, California 94553

Re: **Quarterly Monitoring Report - Third Quarter 1997**
Former Shell Service Station
2101 Park Boulevard
Oakland, California
WIC #204-5508-1206

Dear Mr. Perez:

This Quarterly Monitoring Report describes the recently completed activities associated with ground water monitoring and sampling at the referenced site (Plates 1 and 2). This report was prepared to meet quarterly reporting guidelines issued by the Regional Water Quality Control Board, San Francisco Bay Region and the Alameda County Health Care Services Agency (ACHCSA).

## Quarterly Monitoring & Sampling Summary

Ground water monitoring and sampling for the third quarter of 1997 are summarized below:

- Blaine Tech Services Inc. (Blaine), of San Jose, California measured ground water levels and collected ground water samples from Wells S-1, S-2, and S-3 on September 30, 1997. The samples were transported to Sequoia Analytical of Redwood City, California for chemical analysis.

- Ground water level measurement data were evaluated and used to prepare a ground water contour map (Plate 2). The ground water flow direction appears to be southerly at an approximate hydraulic gradient of 0.04.

- The ground water sample from Well S-3 contained 25,000 ppb TPPH. Wells S-2 and S-3 contained benzene concentrations of 1.5 ppb and 970 ppb, respectively.

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
270 PERKINS STREET,
P.O. B[illegible]

## Quarterly Sampling

Monitoring Wells S-1, S-2, and S-3 were sampled and analyzed for Total Purgeable Petroleum Hydrocarbons quantitated as gasoline (TPPH) according to EPA Method 8015 (Modified) and benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl-tertiary-butyl-ether (MTBE) according to EPA Method 8020. Monitoring Well S-1 was also analyzed for Total Extractable Petroleum Hydrocarbons quantitated as diesel (TEPH) according to EPA Method 8015 (Modified). Additionally, an equipment blank and a duplicate sample were prepared and analyzed for quality control purposes.

Field monitoring data and chemical analytical data have been included in Table 1. A ground water contour/benzene concentration map is presented as Plate 2. Blaine's quarterly ground water monitoring report is presented in Appendix A.

Quarterly monitoring, sampling, and reporting will continue on the established schedule for the next quarter.

If you have any questions regarding the contents of this document, please call.

Sincerely,
Cambria Environmental Technology, Inc.

Thomas N. Magney
Project Geologist

Diane M. Lundquist, P.E.
Senior Engineer
C46725

Attachments

Table 1. Well Concentrations

Plate 1. Vicinity Map
Plate 2. Ground Water Contour/Benzene Concentration Map

Appendix A

Blaine Tech Services Inc. - Quarterly Ground Water Monitoring Report

cc: Mr. Barney Chan, Alameda County Health Care Services Agency
Mr. Frank J. Schlessinger, Schlessinger & Associates
Mr. Steve Makara, Goodyear Tire & Rubber Company

# TABLE 1

## WELL CONCENTRATIONS
**Shell Oil Products Company**
**2101 Park Boulevard**
**Oakland, California**
**WIC #204-5508-1206**

| Sample Date | Measured GW Depth (ft) | Corrected GW Elev (ft) | SP (ft) | TPPH (ug/L) | TEPH (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | O & G by 5520 B (ug/L) | O & G by 5520 B/F (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **S-1** | **Top casing elevation (ft):** | | **11.93** | | | | | | | | | | |
| 20-Jun-95 | 4.67 | 7.26 | 0.00 | 160 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NA | NA | NA | |
| 12-Sep-95 | 4.19 | 7.74 | 0.00 | <50 | 250 | 3.0 | <0.5 | <0.5 | <0.5 | NA | <5000 | <5000 | |
| 28-Dec-95 | 5.30 | 6.63 | 0.00 | 70 | 160 | 1.1 | <0.5 | <0.5 | 1.3 | NA | <5000 | <5000 | |
| 25-Mar-96 | 3.44 | 8.49 | 0.00 | 70 | 220 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | NA | NA | |
| 27-Jun-96 | 3.15 | 8.78 | 0.00 | <50 | 140 | 0.59 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| 26-Sep-96 | 3.90 | 8.03 | 0.00 | <50 | 190 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| 10-Dec-96 | 2.46 | 9.47 | 0.00 | <50 | 84 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| 10-Mar-97 | 2.93 | 9.00 | 0.00 | <50 | 200 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| 26-Jun-97 | 3.91 | 8.02 | 0.00 | <50 | 99 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| 30-Sep-97 | 4.00 | 7.93 | 0.00 | <50 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| **S-2** | **Top casing elevation (ft):** | | **12.06** | | | | | | | | | | |
| 20-Jun-95 | 5.80 | 6.26 | 0.00 | 180 | NA | 1.1 | <0.5 | <0.5 | 0.6 | NA | NA | NA | |
| 12-Sep-95 | 5.78 | 6.28 | 0.00 | 190 | NA | 18 | <0.5 | 1.2 | 0.6 | NA | NA | NA | |
| 28-Dec-95 | 4.02 | 8.04 | 0.00 | 200 | NA | 11 | 1.0 | 1.0 | 4.0 | NA | NA | NA | |
| 25-Mar-96 | 5.56 | 6.50 | 0.00 | 180 | NA | 12 | 0.8 | 1.4 | 1.0 | <2.0 | NA | NA | |
| 27-Jun-96 | 6.00 | 6.06 | 0.00 | 150 | NA | 7.7 | 0.79 | 0.93 | 0.5 | <2.5 | NA | NA | |
| 26-Sep-96 | 5.73 | 6.33 | 0.00 | 83 | NA | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| 10-Dec-96 | 4.57 | 7.49 | 0.00 | 78 | NA | 1.4 | <0.50 | 0.57 | <0.50 | <2.5 | NA | NA | |
| 10-Mar-97 | 5.38 | 6.68 | 0.00 | 61 | NA | 1.6 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| 26-Jun-97 | 5.68 | 6.38 | 0.00 | 90 | NA | 1.5 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| 30-Sep-97 | 5.75 | 6.31 | 0.00 | <50 | NA | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |

# TABLE 1

## WELL CONCENTRATIONS
**Shell Oil Products Company**
**2101 Park Boulevard**
**Oakland, California**
**WIC #204-5508-1206**

| Sample Date | Measured GW Depth (ft) | Corrected GW Elev (ft) | SP (ft) | TPPH (ug/L) | TEPH (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | O & G by 5520 B (ug/L) | O & G by 5520 B/F (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S-2 (DUP) | | | | | | | | | | | | | |
| 10-Mar-97 | NA | NA | NA | 77 | NA | 2.0 | <0.50 | 0.69 | <0.50 | <2.5 | NA | NA | |
| 26-Jun-97 | 3.91 | 8.02 | 0.00 | <50 | 99 | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| 30-Sep-97 | 5.75 | 6.31 | 0.00 | <50 | NA | <0.50 | <0.50 | <0.50 | <0.50 | <2.5 | NA | NA | |
| S-3 | Top casing elevation (ft): | | 13.54 | | | | | | | | | | |
| 20-Jun-95 | 4.90 | 8.64 | 0.00 | 5500 | NA | 240 | 34 | 120 | 840 | NA | NA | NA | |
| 12-Sep-95 | 5.37 | 8.17 | 0.00 | 5200 | NA | 690 | 14 | 290 | 280 | NA | NA | NA | |
| 28-Dec-95 | 3.90 | 9.64 | 0.00 | 13000 | NA | 670 | 34 | 960 | 1400 | NA | NA | NA | |
| 25-Mar-96 | 4.30 | 9.24 | 0.00 | 7300 | NA | 560 | 65 | 540 | 820 | <200 | NA | NA | |
| 27-Jun-96 | 5.00 | 8.54 | 0.00 | 17000 | NA | 1100 | 83 | 1200 | 2700 | <250 | NA | NA | |
| 26-Sep-96 | 5.23 | 8.31 | 0.00 | 8900 | NA | 920 | 43 | 400 | 1100 | <125 | NA | NA | |
| 10-Dec-96 | 3.88 | 9.66 | 0.00 | 6100 | NA | 470 | 25 | 290 | 640 | <100 | NA | NA | |
| 10-Mar-97 | 4.10 | 9.44 | 0.00 | 7000 | NA | 720 | 29 | 340 | 620 | 110 | NA | NA | |
| 26-Jun-97 | 5.23 | 8.31 | 0.00 | 11000 | NA | 1100 | 63 | 470 | 1300 | 150 | NA | NA | |
| 30-Sep-97 | 5.36 | 8.18 | 0.00 | 25000 | NA | 970 | 170 | 1200 | 4600 | <50 | NA | NA | |
| S-3 (DUP) | | | | | | | | | | | | | |
| 20-Jun-95 | NA | NA | NA | 6300 | NA | 270 | 37 | 120 | 1100 | NA | NA | NA | |
| 12-Sep-95 | NA | NA | NA | 4700 | NA | 620 | 13 | 260 | 240 | NA | NA | NA | |
| 28-Dec-95 | NA | NA | NA | 13000 | NA | 800 | 34 | 1000 | 1600 | NA | NA | NA | |
| 25-Mar-96 | NA | NA | NA | 7400 | NA | 580 | 19 | 620 | 670 | <20 | NA | NA | |
| 27-Jun-96 | NA | NA | NA | 1903 | NA | 13 | 1.0 | 14 | 34 | 7.2 | NA | NA | |
| 26-Sep-96 | NA | NA | NA | 9800 | NA | 960 | 41 | 450 | 1300 | 120 | NA | NA | MTBE by 8260: <16 ppb (a) |

# TABLE 1

## WELL CONCENTRATIONS
## Shell Oil Products Company
## 2101 Park Boulevard
## Oakland, California
## WIC #204-5508-1206

| Sample Date | Measured GW Depth (ft) | Corrected GW Elev (ft) | SP (ft) | TPPH (ug/L) | TEPH (ug/L) | B (ug/L) | T (ug/L) | E (ug/L) | X (ug/L) | MTBE (ug/L) | O & G by 5520 B (ug/L) | O & G by 5520 B/F (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10-Dec-96 | NA | NA | NA | 7700 | NA | 550 | 33 | 380 | 880 | 120 | NA | NA | |
| 26-Jun-97 | NA | NA | NA | 12000 | NA | 1100 | 62 | 480 | 1400 | <100 | NA | NA | |

Abbreviations

TPPH = Total Purgeable Petroleum Hydrocarbons carbon range C6 to C12 by EPA Method 8015 (Modified)
(previously reported as Total Petroleum Hydrocarbons as Gasoline)

TEPH = Total Extractable Petroleum Hydrocarbons carbon range C9 to C24 by EPA Method 8015 (Modified)
(previously reported as Total Petroleum Hydrocarbons as Diesel)

O&G = Oil and Grease

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020

MTBE = methyl-tertiary-butyl ether by EPA Method 8020

NA = Not analyzed or not available

<x = Not detected at detection limit of x

(DUP) = Duplicate sample

Note:

(a) = The MTBE was analyzed by EPA method 8260 one day past hold time. The MTBE value did not confirm therefore, all MTBE results at this site should be considered estimated.

All wells surveyed to Mean Sea Level

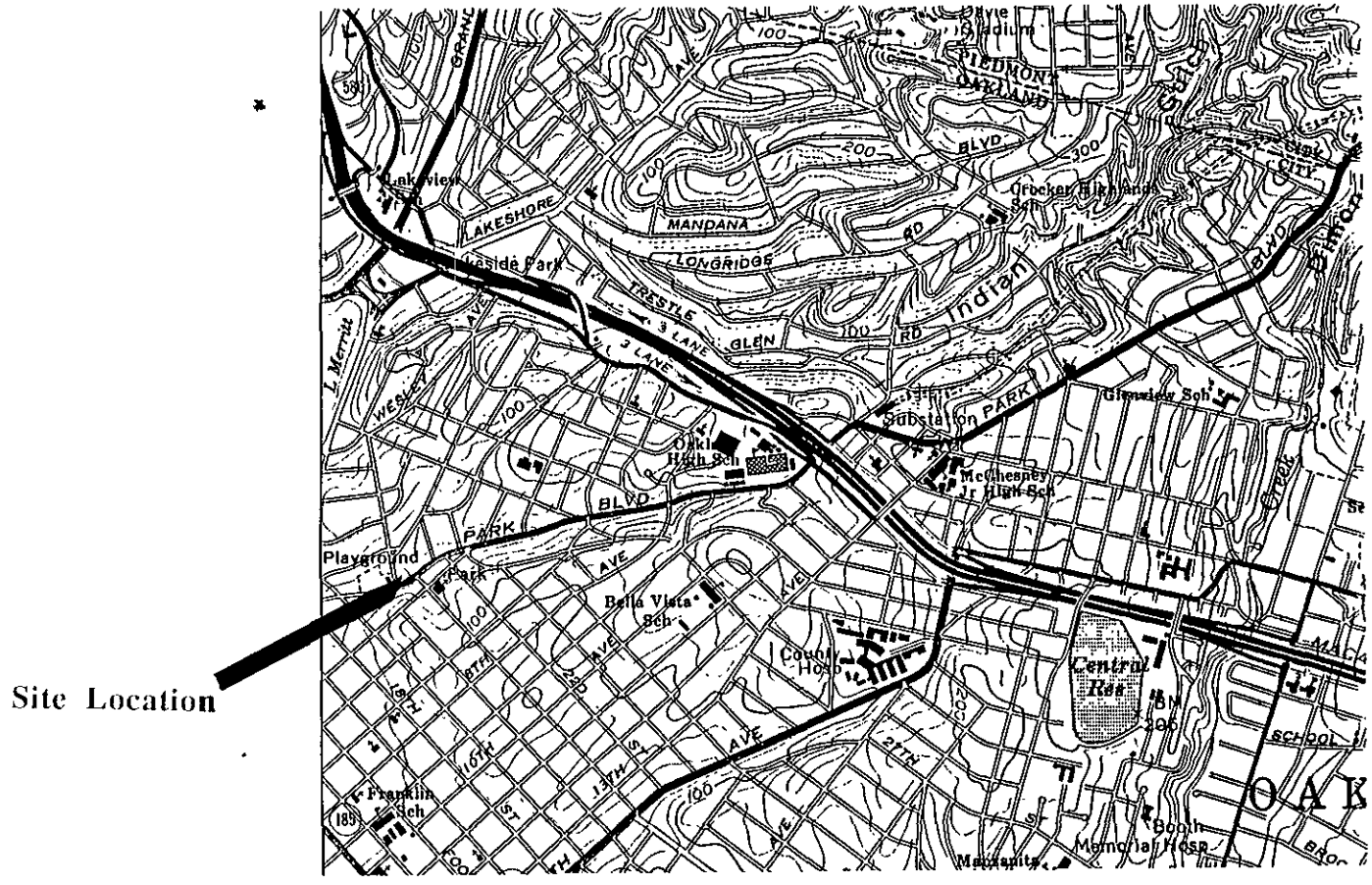



PLATE
**1**

**VICINITY MAP**
Former Shell Service Station
2101 Park Boulevard
Oakland, California

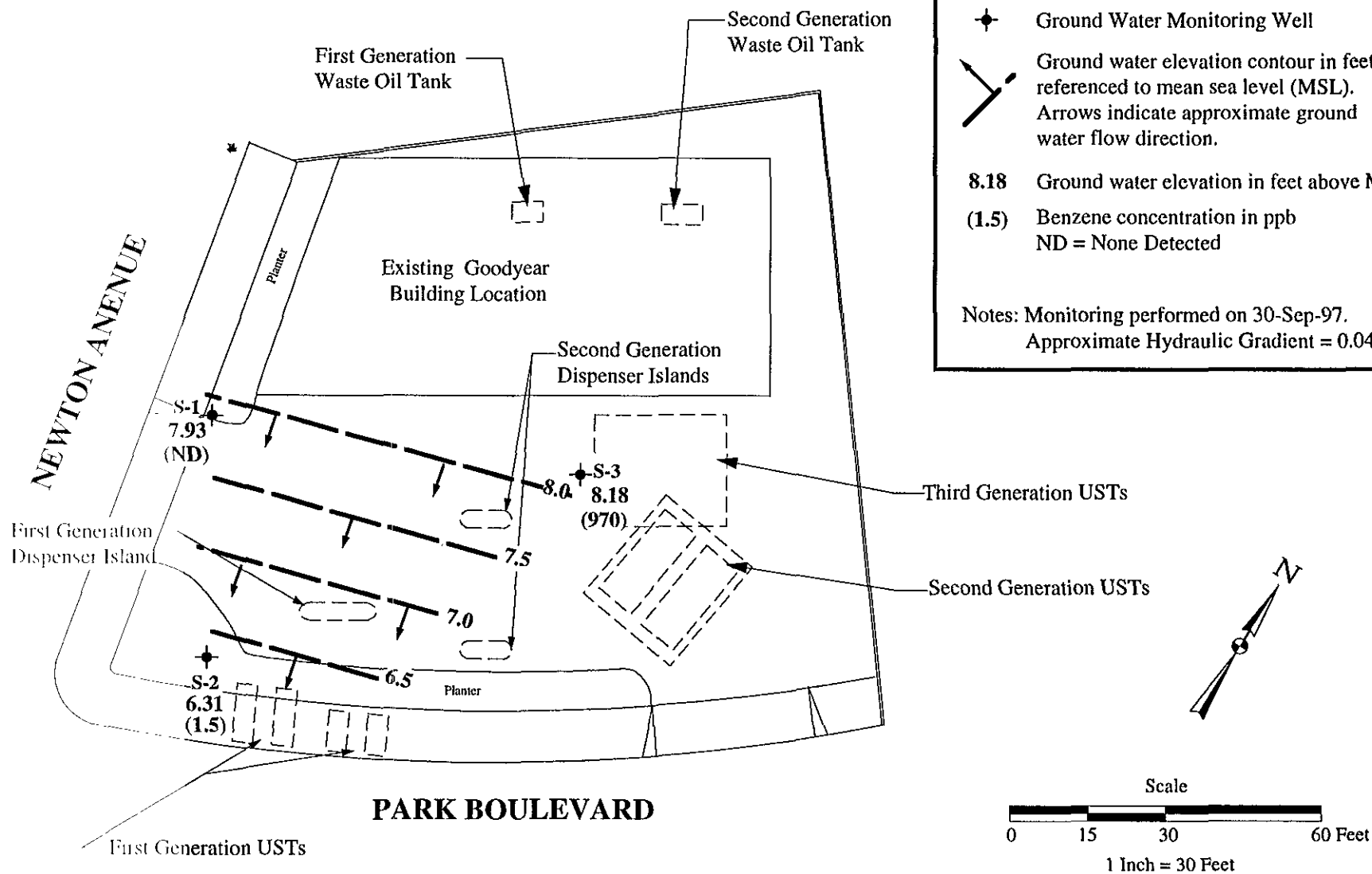
**Cambria**®
97267

Drawn By: GLV

Date: 2-24-95

Approved By: ~eh

Date: 11-14-97




## EXPLANATION

- Ground Water Monitoring Well
- Ground water elevation contour in feet referenced to mean sea level (MSL). Arrows indicate approximate ground water flow direction.
- **8.18** Ground water elevation in feet above MSL
- **(1.5)** Benzene concentration in ppb
  ND = None Detected

Notes: Monitoring performed on 30-Sep-97.
Approximate Hydraulic Gradient = 0.04

PLATE
**2**

**GROUND WATER CONTOUR/BENZENE CONCENTRATION MAP**
Former Shell Service Station
2101 Park Boulevard
Oakland, California

*Cambria*®
97267

Drawn By: TNM

Date: 10-Nov-97

Approved By: neh

Date: 11-14-97

## Appendix A

## Blaine Tech Services Inc.
## Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

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

October 29, 1997

Shell Oil Company
P.O. Box 8080
Martinez, CA 94553

RECEIVED
NOV 1997

Attn: Alex Perez

Shell WIC #204-5508-1206
2101 Park Blvd.
Oakland, California

3rd Quarter 1997

# Groundwater Monitoring Report 970930-T-2

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. Copies of our Sampling Report along with the laboratory's Certified Analytical Report are forwarded to the consultant overseeing work at this site. Submission of the assembled documents to interested regulatory agencies will be made by the designated consultant.

Groundwater monitoring at this site was performed in accordance with Standard Operating Procedures provided to the interested regulatory agencies. If you have any questions about the work performed at this site please call me at (408) 573-0555 ext. 201.

Yours truly,

Christine Little for:

Francis Thie

attachments: Table of Well Gauging Data
Chain of Custody
Field Data Sheets
Certified Analytical Report

cc: Enviros, Inc.
P.O. Box 259
Sonoma, CA 95476-0259
Attn: Joe Neely

(Any professional evaluations or recommendations will be made by the consultant under separate cover.)

# TABLE OF WELL GAUGING DATA

| WELL I.D. | DATA COLLECTION DATE | MEASUREMENT REFERENCED TO | QUALITATIVE OBSERVATIONS (sheen) | DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet) | THICKNESS OF IMMISCIBLES LIQUID ZONE (feet) | VOLUME OF IMMISCIBLES REMOVED (ml) | DEPTH TO WATER (feet) | DEPTH TO WELL BOTTOM (feet) |
|---|---|---|---|---|---|---|---|---|
| S-1 | 09/30/97 | TOC | -- | NONE | -- | -- | 4.00 | 16.92 |
| S-2* | 09/30/97 | TOC | -- | NONE | -- | -- | 5.75 | 17.38 |
| S-3 | 09/30/97 | TOC | ODOR | NONE | -- | -- | 5.36 | 16.90 |

* Sample DUP was a duplicate sample taken from well S-2.

# SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

## CHAIN OF CUSTODY RECORD
Serial No: 70930-T2

Date: 9/30/97
Page 1 of 1

Site Address: 2101 Park Blvd., Oakland, CA

WIC#: 204-5508-1206

Shell Engineer: Alex Perez — Phone No.: (510) 675-6168 Fax #: 675-6172

Consultant Name & Address: Blaine Tech Services, Inc. 1680 Rogers AVe., San Jose, CA 95112

Consultant Contact: Fran Thie — Phone No.: (408) 573-0555 Fax #: 573-7771

Comments:

Sampled by: [signature]

Printed Name: Mike Toll

LAB: SEQ

| CHECK ONE (1) BOX ONLY | | CT/DT |
|---|---|---|
| G.W. Monitoring | XX | 4461 |
| Site Investigation | | 4441 |
| Soil Classify/Disposal | | 4442 |
| Water Classify/Disposal | | 4443 |
| Soil/Air Rem. or Sys. O & M | | 4452 |
| Water Rem. or Sys. O & M | | 4463 |
| Other | | |

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 15 days XX (Normal) Other ☐ ____

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

UST AGENCY: ____

| | Sample ID | Date | Sludge | Soil | Water | Air | No. of conts. | TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8240) | Test for Disposal | Combination TPH 8015 & BTEX 8020, MTBE | | | Asbestos | Container Size | Preparation Used | Composite Y/N | MATERIAL DESCRIPTION | SAMPLE CONDITION/ COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | S-1 | 9/30 | | | X | | 35 | | X | | | | X | | | | | | | | 31 12 40 |
| 2 | S-2 | ↓ | | | X | | 3 | | | | | | X | | | | | | | | |
| 3 | BS-3 | | | | X | | 3 | | | | | | X | | | | | | | | |
| 4 | DUP | | | | X | | 3 | | | | | | X | | | | | | | | |

| | Printed Name | Date | Time | Received (signature) | Printed Name | Date | Time |
|---|---|---|---|---|---|---|---|
| ished By (signature): [signature] | Mike Toll | 9/1/97 | 1005 | [signature] | Fulcher | 10/1/97 | 1005 |
| hed By (signature): [signature] | | 9/1/97 | | | | | |
| d By (signature): | | | | J. Downs | T. DOWNS | 10/1/97 | |

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Project: Shell Oakland/970930-T2

Enclosed are the results from samples received at Sequoia Analytical on October 1, 1997. The requested analyses are listed below:

| SAMPLE # | SAMPLE DESCRIPTION | DATE COLLECTED | TEST METHOD |
|---|---|---|---|
| 9710259 -01 | LIQUID, S-1 | 09/30/97 | TPGM2W Purgeable TPH/BTEX |
| 9710259 -01 | LIQUID, S-1 | 09/30/97 | TPHD_W Extractable TPH |
| 9710259 -02 | LIQUID, S-2 | 09/30/97 | TPGM2W Purgeable TPH/BTEX |
| 9710259 -03 | LIQUID, S-3 | 09/30/97 | TPGM2W Purgeable TPH/BTEX |
| 9710259 -04 | LIQUID, DUP | 09/30/97 | TPGM2W Purgeable TPH/BTEX |

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project

Very truly yours,

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, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: Shell Oakland/970930-T2 | Sampled: 09/30/97 |
| 1680 Rogers Avenue | Sample Descript: S-1 | Received: 10/01/97 |
| San Jose, CA 95112 | Matrix: LIQUID | |
| | Analysis Method: 8015Mod/8020 | Analyzed: 10/13/97 |
| Attention: Fran Thie | Lab Number: 9710259-01 | Reported: 10/15/97 |

QC Batch Number: GC101397BTEX17A
Instrument ID: GCHP17

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| TPPH as Gas | 50 | N.D. |
| Methyl t-Butyl Ether | 2.5 | 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 | 94 |

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

SEQUOIA ANALYTICAL - ELAP #1210

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, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: Shell Oakland/970930-T2 | Sampled: 09/30/97 |
| 1680 Rogers Avenue | Sample Descript: S-1 | Received: 10/01/97 |
| San Jose, CA 95112 | Matrix: LIQUID | Extracted: 10/07/97 |
| | Analysis Method: EPA 8015 Mod | Analyzed: 10/11/97 |
| Attention: Fran Thie | Lab Number: 9710259-01 | Reported: 10/15/97 |

QC Batch Number: GC1006970HBPEXA
Instrument ID: GCHP4A

## Total Extractable Petroleum Hydrocarbons (TEPH)

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| TEPH as Diesel | 50 | N.D. |
| Chromatogram Pattern: | | |

| Surrogates | Control Limits % | | % Recovery |
|---|---|---|---|
| n-Pentacosane (C25) | 50 | 150 | 111 |

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

SEQUOIA ANALYTICAL - ELAP #1210

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, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: Shell Oakland/970930-T2 | Sampled: 09/30/97 |
| 1680 Rogers Avenue | Sample Descript: S-2 | Received: 10/01/97 |
| San Jose, CA 95112 | Matrix: LIQUID | |
| | Analysis Method: 8015Mod/8020 | Analyzed: 10/13/97 |
| Attention: Fran Thie | Lab Number: 9710259-02 | Reported: 10/15/97 |

QC Batch Number: GC101397BTEX17A
Instrument ID: GCHP17

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| TPPH as Gas | 50 | N.D. |
| Methyl t-Butyl Ether | 2.5 | 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 | 89 |

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

SEQUOIA ANALYTICAL - ELAP #1210

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, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: Shell Oakland/970930-T2 | Sampled: 09/30/97 |
| 1680 Rogers Avenue | Sample Descript: S-3 | Received: 10/01/97 |
| San Jose, CA 95112 | Matrix: LIQUID | |
| | Analysis Method: 8015Mod/8020 | Analyzed: 10/13/97 |
| Attention: Fran Thie | Lab Number: 9710259-03 | Reported: 10/15/97 |

QC Batch Number: GC101397BTEX17A
Instrument ID: GCHP17

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| **TPPH as Gas** | **5000** | **25000** |
| Methyl t-Butyl Ether | 50 | N.D. |
| **Benzene** | **50** | **970** |
| **Toluene** | **50** | **170** |
| **Ethyl Benzene** | **50** | **1200** |
| **Xylenes (Total)** | **50** | **4600** |
| **Chromatogram Pattern:** | | **C6-C12** |

| Surrogates | Control Limits % | | % Recovery |
|---|---|---|---|
| Trifluorotoluene | 70 | 130 | 92 |

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

**SEQUOIA ANALYTICAL** - ELAP #1210

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, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: Shell Oakland/970930-T2 | Sampled: 09/30/97 |
| 1680 Rogers Avenue | Sample Descript: DUP | Received: 10/01/97 |
| San Jose, CA 95112 | Matrix: LIQUID | |
| | Analysis Method: 8015Mod/8020 | Analyzed: 10/13/97 |
| Attention: Fran Thie | Lab Number: 9710259-04 | Reported: 10/15/97 |

QC Batch Number: GC101397BTEX17A
Instrument ID: GCHP17

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

| Analyte | Detection Limit ug/L | Sample Results ug/L |
|---|---|---|
| TPPH as Gas | 50 | N.D. |
| Methyl t-Butyl Ether | 2.5 | 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 | 92 |

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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

Client Project ID: Shell Oakland / 970930-T2
Matrix: Liquid
Work Order #: 9710259 -01-04

Reported: Oct 16, 1997

## QUALITY CONTROL DATA REPORT

| Analyte: | Benzene | Toluene | Ethyl Benzene | Xylenes | Gas |
|---|---|---|---|---|---|
| QC Batch#: | GC101397BTEX17A | GC101397BTEX17A | GC101397BTEX17A | GC101397BTEX17A | GC101397BTEX17A |
| Analy. Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8015M |
| Prep. Method: | EPA 5030 | EPA 5030 | EPA 5030 | EPA 5030 | EPA 5030 |
| Analyst: | A. Miraftab | A. Miraftab | A. Miraftab | A. Miraftab | A. Miraftab |
| MS/MSD #: | 971023103 | 971023103 | 971023103 | 971023103 | 971023103 |
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. | N.D. |
| Prepared Date: | 10/13/97 | 10/13/97 | 10/13/97 | 10/13/97 | 10/13/97 |
| Analyzed Date: | 10/13/97 | 10/13/97 | 10/13/97 | 10/13/97 | 10/13/97 |
| Instrument I.D.#: | GCHP17 | GCHP17 | GCHP17 | GCHP17 | GCHP17 |
| Conc. Spiked: | 10 µg/L | 10 µg/L | 10 µg/L | 30 µg/L | 60 µg/L |
| Result: | 9.3 | 9.1 | 9.0 | 27 | 60 |
| MS % Recovery: | 93 | 91 | 90 | 90 | 100 |
| Dup. Result: | 9.0 | 8.9 | 8.8 | 26 | 58 |
| MSD % Recov.: | 90 | 89 | 88 | 87 | 97 |
| RPD: | 3.3 | 2.2 | 2.2 | 3.8 | 3.4 |
| RPD Limit: | 0-25 | 0-25 | 0-25 | 0-25 | 0-25 |
| LCS #: | BLK101397 | BLK101397 | BLK101397 | BLK101397 | BLK101397 |
| Prepared Date: | 10/13/97 | 10/13/97 | 10/13/97 | 10/13/97 | 10/13/97 |
| Analyzed Date: | 10/13/97 | 10/13/97 | 10/13/97 | 10/13/97 | 10/13/97 |
| Instrument I.D.#: | GCHP17 | GCHP17 | GCHP17 | GCHP17 | GCHP17 |
| Conc. Spiked: | 10 µg/L | 10 µg/L | 10 µg/L | 30 µg/L | 60 µg/L |
| LCS Result: | 9.2 | 9.3 | 8.9 | 27 | 60 |
| LCS % Recov.: | ** 92 | 93 | 89 | 90 | 100 |
| MS/MSD Control Limits | 60-140 | 60-140 | 60-140 | 60-140 | 60-140 |
| LCS Control Limits | 70-130 | 70-130 | 70-130 | 70-130 | 70-130 |

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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

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| | | | |
|---|---|---|---|
| Blaine Tech Services, Inc. | Client Project ID: | Shell Oakland / 970930-T2 | |
| 1680 Rogers Ave. | Matrix: | Liquid | |
| San Jose, CA 95112 | | | |
| Attention: Fran Thie | Work Order #: | 9710259-01 | Reported: Oct 16, 1997 |

# QUALITY CONTROL DATA REPORT

| | |
|---|---|
| **Analyte:** | Diesel |
| **QC Batch#:** | GC1006970HBPEXA |
| **Analy. Method:** | EPA 8015M |
| **Prep. Method:** | EPA 3510 |
| **Analyst:** | G. Fish |
| **MS/MSD #:** | 971017401 |
| **Sample Conc.:** | N.D. |
| **Prepared Date:** | 10/6/97 |
| **Analyzed Date:** | 10/7/97 |
| **Instrument I.D.#:** | GCHP5 |
| **Conc. Spiked:** | 1000 µg/L |
| **Result:** | 940 |
| **MS % Recovery:** | 94 |
| **Dup. Result:** | 1000 |
| **MSD % Recov.:** | 100 |
| **RPD:** | 6.2 |
| **RPD Limit:** | 0-50 |

| | |
|---|---|
| **LCS #:** | BLK100797 |
| **Prepared Date:** | 10/7/97 |
| **Analyzed Date:** | 10/9/97 |
| **Instrument I.D.#:** | GCHP4 |
| **Conc. Spiked:** | 1000 µg/L |
| **LCS Result:** | 920 |
| **LCS % Recov.:** | 92 |

| | |
|---|---|
| **MS/MSD** | 50-150 |
| LCS | 60-140 |
| Control Limits | |

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Reggy Penner
Project Manager

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

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| | | |
|---|---|---|
| Blaine Tech Services | Client Proj. ID: Shell Oakland/970930-T2 | Received: 10/01/97 |
| 1680 Rogers Avenue | | |
| San Jose, CA 95112 | Lab Proj. ID: 9710259 | Reported: 10/15/97 |
| Attention: Fran Thie | | |

## LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 9 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