CAMBRIA
Environmental Technology, Inc.



March 29, 1995

Susan Hugo
Alameda County Department of
Environmental Health
UST Local Oversight Program
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Re: First Quarter Monitoring Report
Former Exxon Service Station
3055 35th Avenue
Oakland, California
Cambria Project #20-105-104

Dear Ms. Hugo:

This report summarizes the first quarter 1995 ground water monitoring results for the site referenced above. Described below are the first quarter of 1995 activities, anticipated second quarter 1995 activities and a discussion of the hydrocarbon distribution in ground water.

## FIRST QUARTER 1995 ACTIVITIES

Blaine Tech Services, Inc. of San Jose, California (BTS) collected ground water samples from wells MW-1, MW-2 and MW-3 on February 27, 1995. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene and xylenes (BTEX). BTS also gauged all site wells and checked them for liquid-phase hydrocarbons. No liquid-phase hydrocarbons were detected.

## ANTICIPATED SECOND QUARTER 1995 ACTIVITIES

BTS will gauge all site wells, check the wells for liquid-phase hydrocarbons, and collect water samples from the wells. Cambria will tabulate the data and prepare a quarterly monitoring report.

## HYDROCARBON DISTRIBUTION IN GROUND WATER

TPHg and benzene were detected in all three of the site wells, at up to 250,000 and 22,000 parts per billion (ppb), respectively (Table 1, Attachment A). Hydrocarbon concentrations in ground water are highest downgradient of the former underground gasoline tanks and the southernmost pump island. A hydrocarbon

sheen was observed in wells MW-2 and MW-3. Based on the ground water flow direction (Figure 1) and hydrocarbon concentrations at the downgradient property line, it appears that aqueous-phase hydrocarbons are migrating offsite to the west.

Please call if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.


N. Scott MacLeod, R.G.
Principal Geologist

F:\PROJECT\BTS\OAKL-002\QM-1-95.WPD

Attachments: A - Analytic Reports for Ground Water

cc: Lynn Worthington, Better Homes Realty, 5942 MacArthur Boulevard, Suite B, Oakland, California 94605

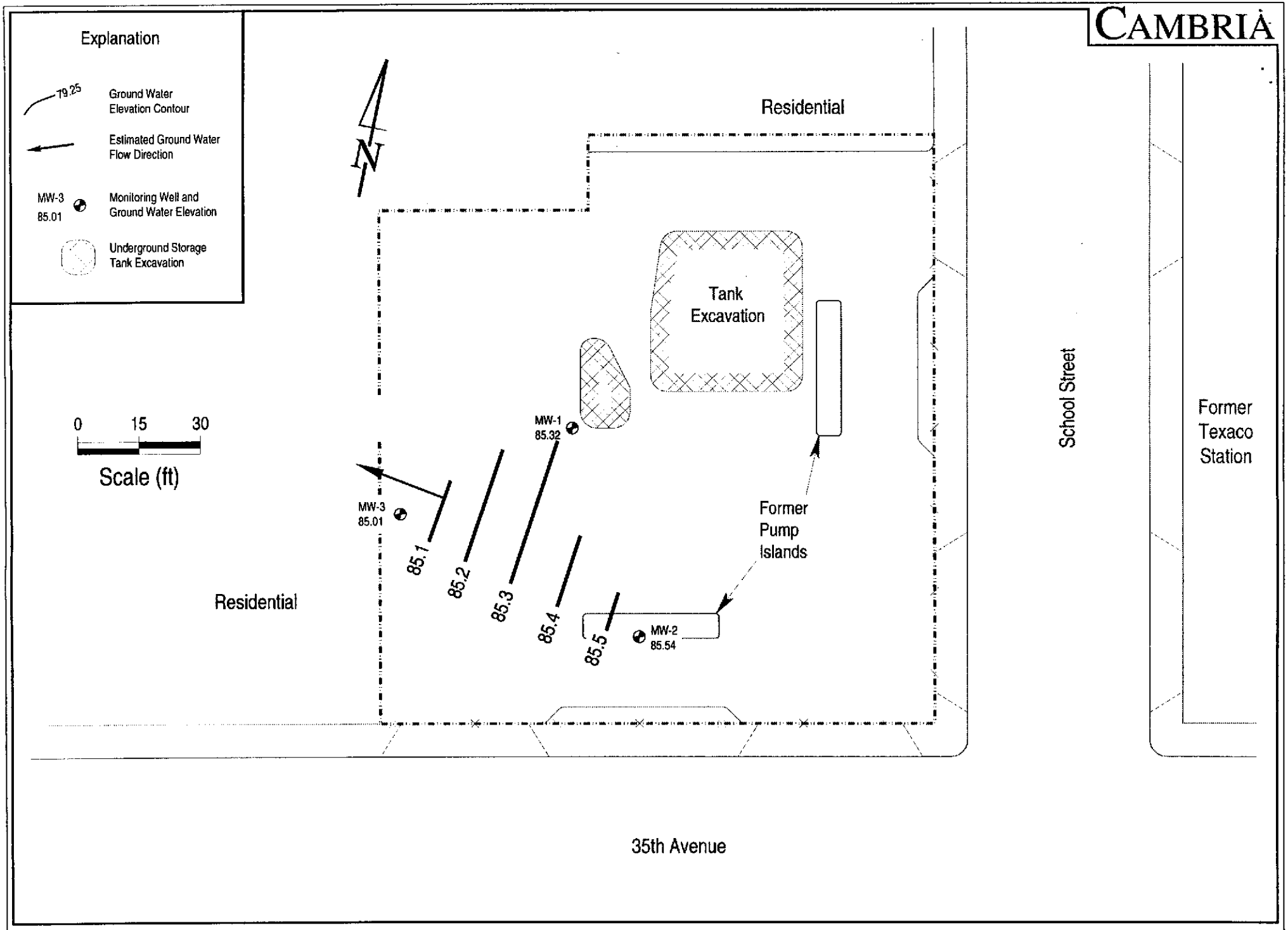


Figure 1. Ground Water Elevations - February 27, 1995 - 3055 35th Avenue, Oakland, California

D(NSM):\PROJECT\ROSE\OAKL-022\GW-11-94.DWG

CAMBRIA

**ATTACHMENT A**

Analytic Reports for Ground Water

Table 1. Ground Water Elevation and Analytic Data - 3055 35th Avenue, Oakland, California

| Well/ Boring ID | Date | Casing Elev. (ft) | GW Depth (ft) | LPH (ft) | GW Elev. (ft) | TPHg | TPHd | TPHmo | B | T | E | X | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | (Concentration in parts per billion) | | | | | | | |
| **Wells** | | | | | | | | | | | | | |
| MW-1 | 5/25/94 | 100.85 | 16.79 | Sheen | 84.06 | 120,000 | 25,000 | <50,000 | 22,000 | 17,000 | 2,800 | 16,000 | a |
| | 7/19/94 | | 20.77 | 0 | 80.08 | --- | --- | --- | --- | --- | --- | --- | |
| | 8/18/94 | | 21.04 | Sheen | 79.81 | 925,000 | --- | --- | 16,500 | 6,200 | 1,000 | 9,400 | |
| | 11/11/94 | | 15.80 | 0 | 85.05 | 57,000 | --- | --- | 14,000 | 4,400 | 1,400 | 6,400 | |
| | 2/27/95 | | 15.53 | 0 | 85.32 | 45,000 | --- | --- | 2,900 | 2,500 | 760 | 4,100 | |
| MW-2 | 5/25/94 | 100.00 | 15.65 | 0 | 84.35 | 61,000 | 6,900 | <5,000 | 9,900 | 7,400 | 960 | 4,600 | a |
| | 7/19/94 | | 19.81 | 0 | 80.19 | --- | --- | --- | --- | --- | --- | --- | |
| | 8/18/94 | | 20.37 | 0 | 79.63 | 88,000 | --- | --- | 10,750 | 10,500 | 1,850 | 9,600 | |
| | 11/11/94 | | 15.52 | 0 | 84.48 | 54,000 | --- | --- | 5,900 | 6,700 | 1,300 | 7,500 | |
| | 2/27/95 | | 14.46 | Sheen | 85.54 | 44,000 | --- | --- | 5,100 | 5,300 | 930 | 6,400 | |
| MW-3 | 5/25/94 | 96.87 | 13.93 | Sheen | 82.94 | 56,000 | 14,000 | <50,000 | 14,000 | 14,000 | 1,300 | 11,000 | a |
| | 7/19/94 | | 17.04 | 0 | 79.83 | --- | --- | --- | --- | --- | --- | --- | |
| | 8/18/94 | | 17.75 | 0 | 79.12 | 116,000 | --- | --- | 28,300 | 26,000 | 2,400 | 15,000 | |
| | 11/11/94 | | 17.80 | 0 | 79.07 | 89,000 | --- | --- | 1,600 | 1,900 | 1,900 | 14,000 | |
| | 2/27/95 | | 11.86 | Sheen | 85.01 | 250,000 | --- | --- | 22,000 | 26,000 | 7,800 | 21,000 | |



Table continues on next page

Table 1. Ground Water Elevation and Analytic Data - 3055 35th Avenue, Oakland, California

| Well/ Boring ID | Date | Casing Elev. (ft) | GW Depth (ft) | LPH (ft) | GW Elev. (ft) | TPHg | TPHd | TPHmo | B | T | E | X | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | (Concentration in parts per billion) | | | | | | | |
| **May 1994 Borings** | | | | | | | | | | | | | |
| SB-A | 5/6/94 | --- | 14.50 | 0 | --- | 7,000 | 9,100 | <25,000 | 450 | 75 | 180 | 330 | |
| SB-B | 5/6/94 | --- | 15.00 | 0 | --- | 130,000 | 3,800 | <5,000 | 10,000 | 11,000 | 2,200 | 11,000 | |
| SB-D | 5/9/94 | --- | 19.30 | 0 | --- | 150 | 210 | <500 | 6.5 | 10 | 2.9 | 12 | |
| DTSC MCLs or State Action Level | | | | | | NE | NE | NE | 1 | 100 | 680 | 1,750 | |

Abbreviations

Casing Elevation = Top of casing elevation with respect to an onsite benchmark
GW = Ground water
LPH = Liquid-phase hydrocarbons
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015
TPHmo = Total petroleum hydrocarbons as motor oil by modified EPA Method 8015
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
DTSC MCLs = Department of Toxic Substances Control maximum contaminant level for drinking water
NE = Not established

Notes

a = The positive TPHd result appears to be a hydrocarbon lighter than diesel.

NATIONAL ENVIRONMENTAL® TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Scott Macleod
Cambria Env. Technology
1144 65th Street
Suite C
Oakland, CA 94608

Date: 03/13/1995
NET Client Acct. No: 98900
NET Pacific Job No: 95.00939
Received: 03/01/1995

Client Reference Information

Farmer Exxon 3055 35th Ave., Oakland, CA/950227-K2

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Thomas F. Cullen, Jr.
Division Manager

Jennifer L. Roseberry
Project Manager

Enclosure(s)

Client Name: Cambria Env. Technology Date: 03/13/1995
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 95.00939 Page: 2

Ref: Farmer Exxon 3055 35th Ave., Oakland, CA/950227-K2

SAMPLE DESCRIPTION: MW-1
Date Taken: 02/27/1995
Time Taken: 14:50
NET Sample No: 237103

| Parameter | Results | Flags | Reporting Limit | Units | Method | Date Extracted | Date Analyzed | Run Batch No. |
|---|---|---|---|---|---|---|---|---|
| TPH (Gas/BTXE,Liquid) | | | | | | | | |
| METHOD 5030/M8015 | -- | | | | | | 03/08/1995 | 2658 |
| DILUTION FACTOR* | 100 | | | | | | 03/08/1995 | 2658 |
| as Gasoline | 45 | | 5 | mg/L | 5030 | | 03/08/1995 | 2658 |
| METHOD 8020 (GC,Liquid) | -- | | | | | | 03/08/1995 | 2658 |
| Benzene | 2,900 | | 50 | ug/L | 8020 | | 03/08/1995 | 2659 |
| Toluene | 2,500 | | 50 | ug/L | 8020 | | 03/08/1995 | 2658 |
| Ethylbenzene | 760 | | 50 | ug/L | 8020 | | 03/08/1995 | 2658 |
| Xylenes (Total) | 4,100 | | 50 | ug/L | 8020 | | 03/08/1995 | 2658 |
| SURROGATE RESULTS | -- | | | | | | 03/08/1995 | 2658 |
| Bromofluorobenzene (SURR) | 104 | | | % Rec. | 5030 | | 03/08/1995 | 2658 |

Ref: Farmer Exxon 3055 35th Ave., Oakland, CA/950227-K2

SAMPLE DESCRIPTION: MW-2
Date Taken: 02/27/1995
Time Taken: 13:55
NET Sample No: 237104

| Parameter | Results | Flags | Reporting Limit | Units | Method | Date Extracted | Date Analyzed | Run Batch No. |
|---|---|---|---|---|---|---|---|---|
| TPH (Gas/BTXE,Liquid) | | | | | | | | |
| METHOD 5030/M8015 | -- | | | | | | 03/08/1995 | 2658 |
| DILUTION FACTOR* | 100 | | | | | | 03/08/1995 | 2658 |
| as Gasoline | 44 | | 5 | mg/L | 5030 | | 03/08/1995 | 2658 |
| METHOD 8020 (GC,Liquid) | -- | | | | | | 03/08/1995 | 2658 |
| Benzene | 5,100 | | 50 | ug/L | 8020 | | 03/08/1995 | 2658 |
| Toluene | 5,300 | | 50 | ug/L | 8020 | | 03/08/1995 | 2658 |
| Ethylbenzene | 930 | | 50 | ug/L | 8020 | | 03/08/1995 | 2658 |
| Xylenes (Total) | 6,400 | | 50 | ug/L | 8020 | | 03/08/1995 | 2658 |
| SURROGATE RESULTS | -- | | | | | | 03/08/1995 | 2658 |
| Bromofluorobenzene (SURR) | 104 | | | % Rec. | 5030 | | 03/08/1995 | 2658 |

Ref: Farmer Exxon 3055 35th Ave., Oakland, CA/950227-K2

SAMPLE DESCRIPTION: MW-3
Date Taken: 02/27/1995
Time Taken: 14:20
NET Sample No: 237105

| Parameter | Results | Flags | Reporting Limit | Units | Method | Date Extracted | Date Analyzed | Run Batch No. |
|---|---|---|---|---|---|---|---|---|
| TPH (Gas/BTXE,Liquid) | | | | | | | | |
| METHOD 5030/M8015 | -- | | | | | | 03/08/1995 | 2658 |
| DILUTION FACTOR* | 200 | | | | | | 03/08/1995 | 2658 |
| as Gasoline | 250 | | 10 | mg/L | 5030 | | 03/08/1995 | 2658 |
| METHOD 8020 (GC,Liquid) | -- | | | | | | 03/08/1995 | 2658 |
| Benzene | 22,000 | | 100 | ug/L | 8020 | | 03/08/1995 | 2659 |
| Toluene | 26,000 | | 100 | ug/L | 8020 | | 03/08/1995 | 2659 |
| Ethylbenzene | 7,800 | | 100 | ug/L | 8020 | | 03/08/1995 | 2658 |
| Xylenes (Total) | 21,000 | | 100 | ug/L | 8020 | | 03/08/1995 | 2659 |
| SURROGATE RESULTS | -- | | | | | | 03/08/1995 | 2658 |
| Bromofluorobenzene (SURR) | 117 | | | % Rec. | 5030 | | 03/08/1995 | 2658 |

Ref: Farmer Exxon 3055 35th Ave., Oakland, CA/950227-K2

# CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

| Parameter | CCV Standard % Recovery | CCV Standard Amount Found | CCV Standard Amount Expected | Units | Date Analyzed | Analyst Initials | Run Batch Number |
|---|---|---|---|---|---|---|---|
| TPH (Gas/BTXE,Liquid) | | | | | | | |
| as Gasoline | 93.0 | 0.93 | 1.00 | mg/L | 03/08/1995 | tts | 2658 |
| Benzene | 105.0 | 5.25 | 5.00 | ug/L | 03/08/1995 | tts | 2658 |
| Toluene | 107.4 | 5.37 | 5.00 | ug/L | 03/08/1995 | tts | 2658 |
| Ethylbenzene | 93.4 | 4.67 | 5.00 | ug/L | 03/08/1995 | tts | 2658 |
| Xylenes (Total) | 111.3 | 16.7 | 15.0 | ug/L | 03/08/1995 | tts | 2658 |
| Bromofluorobenzene (SURR) | 100.0 | 100 | 100 | % Rec. | 03/08/1995 | tts | 2658 |
| TPH (Gas/BTXE,Liquid) | | | | | | | |
| as Gasoline | 93.0 | 0.93 | 1.00 | mg/L | 03/08/1995 | tts | 2659 |
| Benzene | 105.0 | 5.25 | 5.00 | ug/L | 03/08/1995 | tts | 2659 |
| Toluene | 107.4 | 5.37 | 5.00 | ug/L | 03/08/1995 | tts | 2659 |
| Ethylbenzene | 93.4 | 4.67 | 5.00 | ug/L | 03/08/1995 | tts | 2659 |
| Xylenes (Total) | 111.3 | 16.7 | 15.0 | ug/L | 03/08/1995 | tts | 2659 |
| Bromofluorobenzene (SURR) | 100.0 | 100 | 100 | % Rec. | 03/08/1995 | tts | 2659 |

Client Name: Cambria Env. Technology Date: 03/13/1995
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 95.00939 Page: 6

Ref: Farmer Exxon 3055 35th Ave., Oakland, CA/950227-K2

# METHOD BLANK REPORT

| Parameter | Method Blank Amount Found | Reporting Limit | Units | Date Analyzed | Analyst Initials | Run Batch Number |
|---|---|---|---|---|---|---|
| TPH (Gas/BTXE,Liquid) | | | | | | |
| as Gasoline | ND | 0.05 | mg/L | 03/08/1995 | tts | 2658 |
| Benzene | ND | 0.5 | ug/L | 03/08/1995 | tts | 2658 |
| Toluene | ND | 0.5 | ug/L | 03/08/1995 | tts | 2658 |
| Ethylbenzene | ND | 0.5 | ug/L | 03/08/1995 | tts | 2658 |
| Xylenes (Total) | ND | 0.5 | ug/L | 03/08/1995 | tts | 2658 |
| Bromofluorobenzene (SURR) | 96 | | % Rec. | 03/08/1995 | tts | 2658 |
| TPH (Gas/BTXE,Liquid) | | | | | | |
| as Gasoline | ND | 0.05 | mg/L | 03/08/1995 | tts | 2659 |
| Benzene | ND | 0.5 | ug/L | 03/08/1995 | tts | 2659 |
| Toluene | ND | 0.5 | ug/L | 03/08/1995 | tts | 2659 |
| Ethylbenzene | ND | 0.5 | ug/L | 03/08/1995 | tts | 2659 |
| Xylenes (Total) | ND | 0.5 | ug/L | 03/08/1995 | tts | 2659 |
| Bromofluorobenzene (SURR) | 96 | | % Rec. | 03/08/1995 | tts | 2659 |

Ref: Farmer Exxon 3055 35th Ave., Oakland, CA/950227-K2

# MATRIX SPIKE / MATRIX SPIKE DUPLICATE

| Parameter | Matrix Spike % Rec. | Matrix Spike Dup % Rec. | RPD | Spike Amount | Sample Conc. | Matrix Spike Conc. | Matrix Spike Dup. Conc. | Units | Date Analyzed | Run Batch | Sample Spiked |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH (Gas/BTXE,Liquid) | | | | | | | | | | | 237242 |
| as Gasoline | 108.0 | 109.0 | 0.9 | 1.00 | ND | 1.08 | 1.09 | mg/L | 03/08/1995 | 2659 | 237242 |
| Benzene | 113.8 | 114.4 | 0.5 | 18.8 | ND | 21.4 | 21.5 | ug/L | 03/08/1995 | 2659 | 237242 |
| Toluene | 109.0 | 109.2 | 0.2 | 75.8 | ND | 82.6 | 82.8 | ug/L | 03/08/1995 | 2659 | 237242 |

NET®

## KEY TO ABBREVIATIONS and METHOD REFERENCES

| | | |
|---|---|---|
| < | : | Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit. |
| * | : | Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values). |
| ICVS | : | Initial Calibration Verification Standard (External Standard). |
| mean | : | Average; sum of measurements divided by number of measurements. |
| mg/Kg (ppm) | : | Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million). |
| mg/L | : | Concentration in units of milligrams of analyte per liter of sample. |
| mL/L/hr | : | Milliliters per liter per hour. |
| MPN/100 mL | : | Most probable number of bacteria per one hundred milliliters of sample. |
| N/A | : | Not applicable. |
| NA | : | Not analyzed. |
| ND | : | Not detected; the analyte concentration is less than applicable listed reporting limit. |
| NTU | : | Nephelometric turbidity units. |
| RPD | : | Relative percent difference, 100 [Value 1 - Value 2]/mean value. |
| SNA | : | Standard not available. |
| ug/Kg (ppb) | : | Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion). |
| ug/L | : | Concentration in units of micrograms of analyte per liter of sample. |
| umhos/cm | : | Micromhos per centimeter. |

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

5775

# BLAINE TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

CHAIN OF CUSTODY 950227-K2

CLIENT Cambria Environmental

SITE former EXXON Stn.
3255 35th Ave
Oakland, CA

LAB NET

DHS #

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

☐ EPA ☐ RWQCB REGION ____
☐ LIA
☐ OTHER

SPECIAL INSTRUCTIONS
Invoice & Report to Cambria
Attn. Scott MacLeod
Seal intact JL
2/28/95 BK

| SAMPLE I.D. | | MATRIX S = SOIL W = H2O | CONTAINERS TOTAL | C = COMPOSITE ALL CONTAINERS | CONDUCT ANALYSIS TO DETECT: TPH 8015 | ADD'L INFORMATION | STATUS | CONDITION | LAB SAMPLE # |
|---|---|---|---|---|---|---|---|---|---|
| MW1 | 1450 | W | 3 | | X | | | | |
| MW2 | 1355 | | 3 | | X | | | | |
| MW3 | 1420 | | 3 | | X | | | | |

| SAMPLING COMPLETED | DATE | TIME | SAMPLING PERFORMED BY | RESULTS NEEDED NO LATER THAN |
|---|---|---|---|---|
| | 2/27/95 | 1500 | Keith Brown | Standard TAT |

| | | | | | | |
|---|---|---|---|---|---|---|
| RELEASED BY | DATE | TIME | RECEIVED BY | DATE | TIME | |
| [signature] | 2/28/95 | 13:00 | [signature] | 2/28/95 | 13:00 | |
| RELEASED BY | DATE | TIME | RECEIVED BY | DATE | TIME | |
| [signature] | 2/28/95 | 17:00 | [signature] | 3/1/95 | 07:00 | |
| RELEASED BY | DATE | TIME | RECEIVED BY | DATE | TIME | |

| SHIPPED VIA | DATE SENT | TIME SENT | COOLER # Temp | |
|---|---|---|---|---|
| NCS | | | -0.3°C & -0.3°C | |