

C A M B R I A

September 20, 1999

Ms. Juliet Shin
Alameda County Department of
Environmental Health
UST Local Oversight Program
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Re: Third Quarter 1999 Monitoring Report

Hooshi's Auto Service
1499 MacArthur Blvd.
Oakland, California 94602



Dear Ms. Shin:

On behalf of Ms. Naomi English, Cambria Environmental Technology, Inc. (Cambria) has prepared this report presenting the third quarter 1999 groundwater monitoring results for the site referenced above. Presented below are the third quarter 1999 activities, the current groundwater flow direction, the current hydrocarbon distribution in groundwater, and the anticipated fourth quarter 1999 activities.

THIRD QUARTER 1999 ACTIVITIES

Quarterly Groundwater Sampling: On August 19, 1999 Cambria gauged and sampled all onsite groundwater monitoring wells. The thickness of separate-phase hydrocarbons (SPH), when detected, was measured. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert-butyl ether (MTBE).

Remediation System: Cambria finalized permitting with the City of Oakland and has begun system installation.

Oakland, CA

Sonoma, CA

Portland, OR

Seattle, WA

**Cambria
Environmental
Technology, Inc.**

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

11 SEP 22 PM 2:17
ENVIRONMENTAL
PROTECTION
AGENCY

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*negative probably due to
negative salinity*
Ms. Juliet Shin
September 20, 1999

GROUNDWATER FLOW DIRECTION

Based on the August 19, 1999 depth-to-water measurements, groundwater mounded near the vicinity of the former underground storage tanks, similar to mounding that occurred during the second quarter of 1999 (Figure 1). Table 1 summarizes the groundwater elevation data.

HYDROCARBON DISTRIBUTION IN GROUNDWATER



Up to 0.10 feet of SPHs were measured in wells MW-2 and MW-5. A maximum TPHg concentration of 830 micrograms per liter ($\mu\text{g}/\text{L}$) was detected in well MW-1. Benzene and MTBE were detected only in well MW-1, at concentrations of 19 $\mu\text{g}/\text{L}$ and 28 $\mu\text{g}/\text{L}$, respectively. Table 1 summarizes the groundwater analytical results. The analytical laboratory reports are included as Attachment A. The water sampling field notes are included as Attachment B.

ANTICIPATED FOURTH QUARTER 1999 ACTIVITIES

Quarterly Groundwater Sampling: As requested by the Alameda County Department of Environmental Health, Cambria will gauge and collect groundwater samples from each monitoring well, and measure the thickness of any detected SPH. Samples will be analyzed for TPHg, BTEX, and MTBE. Cambria will tabulate the data, contour groundwater elevations, and prepare a quarterly monitoring report.

Remediation System: Cambria should complete SVE system installation during the fourth quarter of 1999. A SVE start up report and periodic remedial update reports will be presented under separate cover.

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Ms. Juliet Shin
September 20, 1999

CLOSING

Cambria appreciates the opportunity to provide environmental services to Ms. Naomi English. Please call myself or David Elias at (510) 420-0700 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.



Jacquelyn Jones
Jacquelyn Jones
Staff Geologist

David Elias
David C. Elias, R.G.
Senior Geologist

H:\SB-2004\Oakl - Hooshi's\QM\3Q99.wpd

Attachments: A - Analytical Results for Groundwater Sampling
B - Water Sampling Field Notes

cc: Ms. Naomi English, 1545 Scenic View Dr., San Leandro, CA 94577



Hooshi's Auto Service

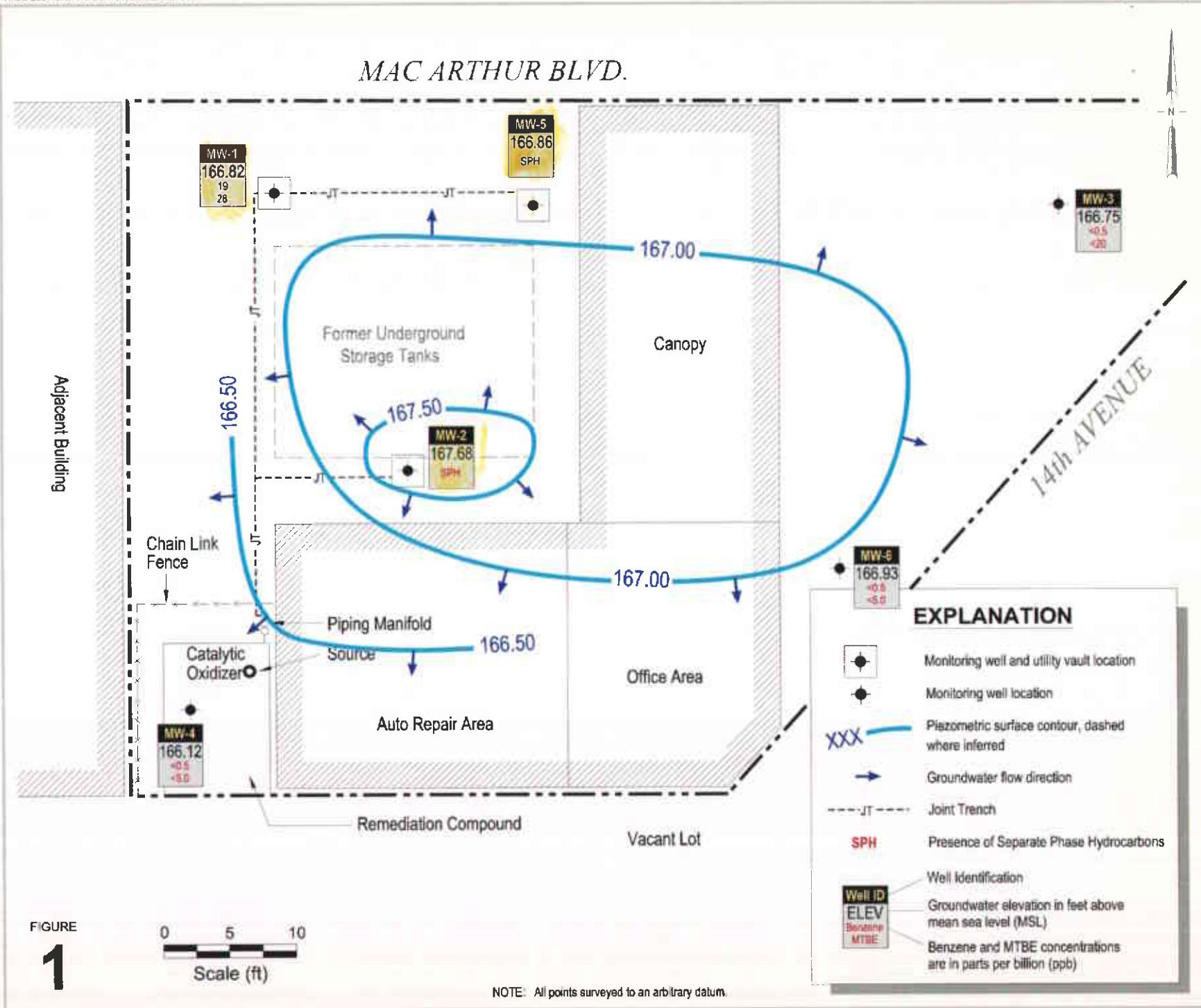
1499 MacArthur Boulevard
Oakland, California



Groundwater Elevation Contour Map

August 19, 1999

FIGURE 1



CAMBRIA

Table 1. Groundwater Elevations and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

| Well ID TOC (ft*) | Date | Depth to Groundwater (ft) | Groundwater Elevation (ft**) | Separate Phase Hydrocarbons (ft) | TPHg | Benzene | Toluene | Ethylbenzene (µg/L) | Xylenes | MTBE | Notes |
|-----------------------|----------|---------------------------------|------------------------------------|--|---------|---------|---------|------------------------|---------|------|-------|
| MW-1 <i>181.00</i> | 1/4/93 | -- | -- | -- | 539 | 130 | 12 | 22 | 13 | -- | |
| | 4/22/93 | -- | -- | -- | 1,130 | 75 | 8.0 | 38 | 11 | -- | |
| | 12/27/94 | -- | -- | -- | 770 | 22 | 6.6 | 14 | 21 | -- | |
| | 6/27/96 | 14.11 | 166.89 | -- | 3,300 | 260 | 34 | 59 | 170 | 80 | |
| | 12/10/96 | 13.71 | 167.29 | -- | 1,500 | 84 | 11 | 22 | 32 | 34 | |
| | 5/8/98 | 13.85 | 167.15 | -- | 3,200 | 300 | 12 | 62 | 36 | <120 | a |
| | 8/17/98 | 14.11 | 166.89 | -- | 1,700 | 160 | 18 | 32 | 27 | 39 | a |
| | 11/4/98 | 14.28 | 166.72 | -- | 1,100 | 11 | 4.3 | 3.6 | 6.5 | <50 | a |
| | 2/17/99 | 13.41 | 167.59 | -- | 320 | 200 | 47 | 72 | 75 | 57 | a |
| | 5/27/99 | 14.16 | 166.84 | -- | 2,500 | 81 | 12 | 29 | 41 | <80 | a |
| MW-2 <i>180.45</i> | 8/19/99 | 14.18 | 166.82 | -- | 780 | 19 | <0.5 | 5.7 | 4.5 | 28 | a |
| | 1/4/93 | -- | -- | -- | 149,000 | 21,700 | 25,000 | ND | 7,760 | -- | |
| | 4/22/93 | -- | -- | -- | 136,300 | 9,900 | 15,870 | 15,300 | 2,190 | -- | |
| | 12/27/94 | -- | -- | -- | 94,000 | 11,000 | 18,000 | 2,700 | 16,000 | -- | |
| | 6/27/96 | 12.61 | 168.64 | 1.00 | -- | -- | -- | -- | -- | -- | |
| | 12/10/99 | 11.10 | 169.55 | 0.25 | -- | -- | -- | -- | -- | -- | |
| | 5/8/98 | 10.81 | 169.66 | 0.03 | -- | -- | -- | -- | -- | -- | |
| | 8/17/98 | 12.16 | 168.31 | 0.02 | -- | -- | -- | -- | -- | -- | |
| | 11/4/98 | 12.61 | 167.86 | 0.02 | -- | -- | -- | -- | -- | -- | |
| | 2/17/99 | 9.82 | 170.66 | 0.04 | -- | -- | -- | -- | -- | -- | |
| MW-3 <i>179.94</i> | 5/27/99 | 11.07 | 169.48 | 0.13 | -- | -- | -- | -- | -- | -- | |
| | 8/19/99 | 12.79 | 167.68 | 0.02 | -- | -- | -- | -- | -- | -- | |
| | 1/4/93 | -- | -- | -- | 1,610 | 772 | 14 | 11 | ND | -- | |
| | 4/22/93 | -- | -- | -- | 3,040 | 980 | 34 | 19 | 16 | | |
| | 12/27/94 | -- | -- | -- | 2,600 | 180 | 9.0 | 7.2 | 13 | | |
| MW-4 <i>178.80</i> | 6/27/96 | 13.20 | 166.74 | -- | 2,000 | 22 | 2.9 | 11 | 7.4 | 56 | |
| | 12/10/96 | 13.13 | 166.81 | -- | 970 | <0.5 | <0.5 | <0.5 | <0.5 | 24 | |
| | 5/8/98 | 13.03 | 166.91 | -- | 780 | 3.7 | 2.1 | 1.1 | 2.4 | <32 | a |

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Table 1. Groundwater Elevations and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

| Well ID TOC (ft*) | Date | Depth to Groundwater (ft) | Groundwater Elevation (ft)** | Separate Phase Hydrocarbons (ft) | TPHg | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Notes |
|-----------------------|----------|---------------------------------|------------------------------------|--|------|---------|---------|--------------|---------|------|-------|
| | | | | | | ↔ | (µg/L) | ↔ | ↔ | ↔ | |
| | 8/17/98 | 13.22 | 166.72 | -- | 870 | 2.8 | <0.5 | <0.5 | 3.7 | <5.0 | b,c |
| | 11/4/98 | 13.31 | 166.63 | -- | 770 | 1.6 | 4.4 | 2.0 | 6.9 | <30 | c |
| | 2/17/99 | 12.89 | 167.05 | -- | 650 | 6.2 | 3.4 | 1.5 | 2.6 | <5.0 | b,c |
| | 5/27/99 | 12.32 | 167.62 | -- | 570 | 1.5 | 1.2 | 0.72 | 1.1 | <20 | a |
| | 8/19/99 | 13.19 | 166.75 | -- | 830 | <0.5 | 1.9 | <0.5 | 1.3 | <20 | c,d |
| MW-4 <i>180.54</i> | 6/27/96 | 17.03 | 163.51 | -- | 720 | 2 | 0.5 | 2.5 | 23 | 3.2 | |
| | 12/10/96 | 8.50 | 172.04 | -- | 80 | 2.4 | <0.5 | <0.5 | 6.6 | <2.0 | |
| | 5/8/98 | 11.46 | 169.08 | -- | <50 | 0.60 | <0.5 | <0.5 | <0.5 | <5.0 | |
| | 8/17/98 | 13.98 | 166.56 | -- | <50 | <0.5 | <0.5 | <0.5 | 0.5 | <5.0 | |
| | 11/4/98 | 14.36 | 166.18 | -- | 96 | 9.7 | 8.1 | 4.8 | 18 | <5.0 | a |
| | 2/17/99 | 8.39 | 172.15 | -- | <50 | <0.5 | <0.5 | <0.5 | 0.5 | <5.0 | |
| | 5/27/99 | 12.80 | 167.74 | -- | <50 | <0.5 | 1.0 | <0.5 | 2.9 | <5.0 | |
| | 8/19/99 | 14.42 | 166.12 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | |
| MW-5 <i>180.23</i> | 6/27/96 | 13.62 | 166.74 | 0.16 | -- | -- | -- | -- | -- | -- | |
| | 12/10/96 | 13.26 | 167.77 | 1.00 | -- | -- | -- | -- | -- | -- | |
| | 5/8/98 | 13.15 | 167.11 | 0.04 | -- | -- | -- | -- | -- | -- | |
| | 8/17/98 | 13.36 | 166.89 | 0.02 | -- | -- | -- | -- | -- | -- | |
| | 11/4/98 | 13.52 | 166.73 | 0.02 | -- | -- | -- | -- | -- | -- | |
| | 2/17/99 | 13.02 | 167.23 | 0.02 | -- | -- | -- | -- | -- | -- | |
| | 5/27/99 | 13.80 | 166.71 | 0.35 | -- | -- | -- | -- | -- | -- | |
| | 8/19/99 | 13.45 | 166.86 | 0.10 | -- | -- | -- | -- | -- | -- | |
| MW-6 <i>180.03</i> | 6/27/96 | 18.55 | 161.48 | -- | ND | ND | ND | ND | ND | -- | |
| | 12/10/99 | 11.79 | 168.24 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | |
| | 5/8/98 | 11.62 | 168.41 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | |
| | 8/17/98 | 12.66 | 167.37 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | |
| | 11/4/98 | 13.56 | 166.47 | -- | 68 | 3.8 | 3.7 | 2.8 | 11 | <5.0 | a |
| | 2/17/99 | 12.91 | 167.12 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | |

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Table 1. Groundwater Elevations and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

| Well ID TOC (ft*) | Date | Depth to Groundwater (ft) | Groundwater Elevation (ft**) | Separate Phase Hydrocarbons (ft) | TPHg | (µg/L) | | | | | MTBE | Notes |
|----------------------|---------|---------------------------------|------------------------------------|--|------|---------|---------|--------------|---------|------|------|-------|
| | | | | | | Benzene | Toluene | Ethylbenzene | Xylenes | | | |
| | 5/27/99 | 13.03 | 167.00 | -- | <50 | 1.0 | 1.7 | 0.82 | 4.9 | <5.0 | | |
| | 8/19/99 | 13.10 | 166.93 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | | |
| Trip Blank | 5/8/98 | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | | |
| | 11/4/98 | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | | |
| | 5/27/99 | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <5.0 | | |
| MCLs | -- | -- | -- | -- | NE | 1 | 150 | 700 | 1,750 | NE | | |

Abbreviations and Methods:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020

MTBE = Methyl tert-butyl ether by EPA Method 8020

µg/L = Micrograms per liter

TOC = Top of casing elevation

SPH = Separate Phase Hydrocarbons

* = elevations surveyed to an arbitrary datum

** = Calculated groundwater elevation corrected for SPH by the relation:

$$\text{Groundwater Elevation} = \text{Well Elevation} - \text{Depth to Water} + (0.8 \times \text{SPH thickness (ft)})$$

Abbreviations and Methods (Cont'd):

MCLs = California primary maximum contaminant levels for drinking water (22 CCR 64444)

NE = MCLs not established

ND = Compound not detected, detection limit unknown

Notes:

a - The analytical laboratory noted that unmodified or weakly modified gasoline is significant.

b - The analytical laboratory noted that lighter than water immiscible sheen is present.

c - The analytical laboratory noted no recognizable pattern.

d - The analytical laboratory noted heavier gasoline range compounds are significant (aged gasoline?).

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ATTACHMENT A

Analytical Results for Groundwater Sampling



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

| | | |
|--|---|--------------------------------|
| Cambria Environmental Technology 1144 65 th Street, Suite C Oakland, CA 94608 | Client Project ID: #129-0741; Hoosilis | Date Sampled: 08/19/99 |
| | | Date Received: 08/20/99 |
| | Client Contact: Jacquelyn Jones | Date Extracted: 08/21-08/24/99 |

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L.

* cluttered chromatogram; sample peak coelutes with surrogate peak

^aThe following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 925-798-1620 Fax: 925-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 08/20/99-08/21/99 Matrix: WATER

| Analyte | Concentration (ug/L) | | | Amount Spiked | % Recovery | | RPD |
|------------------------|----------------------|-------|-------|---------------|------------|-------|-----|
| | Sample (#17000) | MS | MSD | | MS | MSD | |
| TPH (gas) | 0.0 | 105.5 | 105.4 | 100.0 | 105.5 | 105.4 | 0.1 |
| Benzene | 0.0 | 9.4 | 9.9 | 10.0 | 94.0 | 99.0 | 5.2 |
| Toluene | 0.0 | 9.6 | 10.1 | 10.0 | 96.0 | 101.0 | 5.1 |
| Ethyl Benzene | 0.0 | 9.9 | 10.4 | 10.0 | 99.0 | 104.0 | 4.9 |
| Xylenes | 0.0 | 30.0 | 31.3 | 30.0 | 100.0 | 104.3 | 4.2 |
| TPH(diesel) | 0.0 | 8104 | 8063 | 7500 | 108 | 108 | 0.5 |
| TRPH (oil & grease) | 0 | 24700 | 26800 | 23700 | 104 | 113 | 8.2 |

* Rec. = (MS - Sample) / amount spiked x 100

RPD = ((MS - MSD) / (MS + MSD))x 2 x 100

164172047.doc

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553

Telephone: (925) 798-1620

Fax: (925) 798-1622

Report To: Jacquelyn Jones

Bill To: Cambria

Company: Cambria Environmental Technology

1144 65th Street, Suite C

Oakland, CA 94608

Tele: (510) 420-0700

Fax: (510) 420-9170

Project #: 129-0741

Project Name: Hooshit's

Project Location: 1499 Mae Arthur Blvd Oakland

Sampler Signature:

| SAMPLE ID | LOCATION | SAMPLING | | # Containers | MATRIX | | | | METHOD PRESERVED | Analysis Request | Other | Comments |
|------------|----------|----------|------|--------------|--------|------|-----|--------|------------------|--|-------|----------|
| | | Date | Time | | Water | Soil | Air | Sludge | | | | |
| (+) MW1 | | 8/19/99 | 1110 | 4 | VDA | X | | | X | BTEX & TPH as Gas (602/8020 + 8015V/MTBE) | | |
| + MW2 | | | 1120 | 1 | | X | | | X | TPH as Diesel (8015) | | |
| (+) MW4 | | | 1005 | 1 | | | | | | Total Petroleum Oil & Grease (5520 E&FB&F) | | |
| (+) MW6 | | | 1100 | 1 | | | | | | Total Petroleum Hydrocarbons (418.1) | | |
| | | | | | | | | | | EPA 601 / 8010 | | |
| | | | | | | | | | | BTEX ONLY (EPA 602 / 8020) | | |
| | | | | | | | | | | EPA 608 / 8080 | | |
| | | | | | | | | | | EPA 608 / 8080 PCB's ONLY | | |
| | | | | | | | | | | EPA 624 / 8240 / 8260 | | |
| | | | | | | | | | | EPA 625 / 8270 | | |
| | | | | | | | | | | PAH's / PNA's by EPA 625 / 8270 / 8310 | | |
| | | | | | | | | | | CAM-17 Metals | | |
| | | | | | | | | | | LUFT 5 Metals | | |
| | | | | | | | | | | Lead (7240/7421/7239.2/6010) | | |
| | | | | | | | | | | RCI | | |

17725

17726

17727

17728

Relinquished By:

Date:

11/19/99 11248

Time:

Received By:

S. Rashe

Remarks:

Relinquished By:

Date:

8/20

Time:

1400

Received By:

Pan Haifille

Relinquished By:

Date:

2/20

Time:

1620

Received By:

N. J. Garcia

TB.MV

C A M B R I A



ATTACHMENT B

Water Sampling Field Notes

Hoochi's

CAMBRIA.

WELL DEPTH MEASUREMENTS

Measured By: SS / tG

Date: 8/17/99

CAMBRIA

WELL SAMPLING FORM

| | | |
|--|---------------------------|-----------------------------|
| Project Name: Hooshi's | Cambria Mgr: DCE | Well ID: WH |
| Project Number: 129-0741 | Date: 8/19/99 | Well Yield: — |
| Site Address: 1499 MacArthur Boulevard Oakland, California | Sampling Method: | Well Diameter: 2 " pvc |
| | Disposable bailer | Technician(s): AS/EG |
| Initial Depth to Water: 14.18' | Total Well Depth: 20.05' | Water Column Height: 5.87' |
| Volume/ft: 0.16 | 1 Casing Volume: 0.94 gal | 3 Casing Volumes: 2.82 gal |
| Purging Device: disposable bailer | Did Well Dewater?: No | Total Gallons Purged: 3 gal |
| Start Purge Time: 1026 | Stop Purge Time: 1031 | Total Time: 5 min |

1 Casing Volume = Water column height x Volume/ ft.

| Well Diam. | Volume/ft (gallons) |
|------------|---------------------|
| 2" | 0.16 |
| 4" | 0.65 |
| 6" | 1.47 |

| Time | Casing Volume | Temp. °C | pH | Cond. us | Comments |
|------|---------------|-------------|-----|-------------|----------|
| 1026 | 1 | 19.0 | 7.1 | 966 | |
| 1028 | 2 | 18.7 | 6.9 | 971 | |
| 1031 | 3 | 18.6 | 6.7 | 1008 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| Sample ID | Date | Time | Container Type | Preservative | Analytes | Analytic Method |
|-----------|---------|------|----------------|--------------|---------------------|-----------------|
| MW1 | 8/19/99 | 110 | 4 voa's | HCL | TPHg, BTEX, MTBE | 8020 8015 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

CAMBRIA

WELL SAMPLING FORM

| | | |
|--|---------------------------------------|---|
| Project Name: Hooshi's | Cambria Mgr: DCE | Well ID: MW3 |
| Project Number: 129-0741 | Date: 8/12/99 | Well Yield: — |
| Site Address: 1499 MacArthur Boulevard Oakland, California | Sampling Method: Disposable bailer | Well Diameter: 2 "pvc Technician(s): SS / EG |
| Initial Depth to Water: 13.19' | Total Well Depth: 21.00' | Water Column Height: -7.81' |
| Volume/ft: 0.16 | 1 Casing Volume: 1.25 gal | 3 Casing Volumes: 3.75 gal |
| Purging Device: disposable bailer | Did Well Dewater?: No | Total Gallons Purged: 4 gallons |
| Start Purge Time: 10:45 | Stop Purge Time: 10:51 | Total Time: 7 min |

1 Casing Volume = Water column height x Volume/ ft.

| <u>Well Diam.</u> | <u>Volume/ft (gallons)</u> |
|-------------------|----------------------------|
| 2" | 0.16 |
| 4" | 0.65 |
| 6" | 1.47 |

| Sample ID | Date | Time | Container Type | Preservative | Analytes | Analytic Method |
|-----------|---------|-------|----------------|--------------|---------------------|-----------------|
| MW-3 | 8/14/94 | 11:20 | 4 voa's | HCL | TPHg, BTEX, MTBE | 8020 8015 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

WELL SAMPLING FORM

| | | |
|--|---------------------------|-----------------------------|
| Project Name: Hooshi's | Cambria Mgr: DCE | Well ID: MW4 |
| Project Number: 129-0741 | Date: 8/19/99 | Well Yield: — |
| Site Address: 1499 MacArthur Boulevard Oakland, California | Sampling Method: | Well Diameter: 2 " pvc |
| | Disposable bailer | Technician(s): Q/E9 |
| Initial Depth to Water: 14.42' | Total Well Depth: 19.98' | Water Column Height: 5.56' |
| Volume/ft: 0.16 | 1 Casing Volume: 0.89 gal | 3 Casing Volumes: 2.67 gal |
| Purging Device: disposable bailer | Did Well Dewater?: no | Total Gallons Purged: 3 gal |
| Start Purge Time: 948 | Stop Purge Time: 953 | Total Time: 5 min |

1 Casing Volume = Water column height x Volume/ ft.

| Well Diam. | Volume/ft (gallons) |
|------------|---------------------|
| 2" | 0.16 |
| 4" | 0.65 |
| 6" | 1.47 |

| Time | Casing Volume | Temp. °C | pH | Cond. us | Comments |
|------|---------------|-------------|-----|-------------|----------|
| 948 | 1 | 17.7 | 7.0 | 822 | |
| 950 | 2 | 17.3 | 6.8 | 775 | |
| 953 | 3 | 17.1 | 6.9 | 845 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| Sample ID | Date | Time | Container Type | Preservative | Analytes | Analytic Method |
|-----------|---------|------|----------------|--------------|---------------------|-----------------|
| Mw4 | 8/19/99 | 1005 | 4 voa's | HCL | TPHg, BTEX, MTBE | 8020 8015 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

WELL SAMPLING FORM

| | | |
|--|---------------------------|-----------------------------|
| Project Name: Hooshi's | Cambria Mgr: DCE | Well ID: MW 6 |
| Project Number: 129-0741 | Date: 8/19/99 | Well Yield: — |
| Site Address: 1499 MacArthur Boulevard Oakland, California | Sampling Method: | Well Diameter: 2 " pvc |
| | Disposable bailer | Technician(s): SS/EH |
| Initial Depth to Water: 3.10' | Total Well Depth: 22.20' | Water Column Height: 9.10' |
| Volume/ft: 0.16 | 1 Casing Volume: 1.46 gal | 3 Casing Volumes: 4.37 gal |
| Purging Device: disposable bailer | Did Well Dewater?: no | Total Gallons Purged: 5 gal |
| Start Purge Time: 10:26 | Stop Purge Time: 10:35 | Total Time: 9 min |

1 Casing Volume = Water column height x Volume/ ft.

| Well Diam. | Volume/ft (gallons) |
|------------|---------------------|
| 2" | 0.16 |
| 4" | 0.65 |
| 6" | 1.47 |

| Time | Casing Volume | Temp. | pH | Cond. | Comments |
|-------|---------------|-------|------|-------|------------------------|
| 10:26 | 1 | 20.3 | 6.7 | 125 | |
| 10:31 | 2 | 19.8 | 15.5 | 123 | verified G.S./crackles |
| 10:35 | 3 | 19.4 | 6.8 | 128 | |
| | | | | | |
| | | | | | |
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| Sample ID | Date | Time | Container Type | Preservative | Analytes | Analytic Method |
|-----------|---------|-------|----------------|--------------|---------------------|-----------------|
| MW-6 | 8/19/99 | 11:00 | 4 voa's | HCL | TPHg, BTEX, MTBE | 8020 8015 |
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