Certified mail
# Z 003 167 656

VIP Sevice Station
C/O Patel L. B.
385 Century Circle
Danville, CA 94526
December 12,1994

Alameda County
Health Care Services
Deprt. of Envir. Health
80 Swan Way, Room 200
Oakland, CA 94621

Attn: Mr. Scott Seery

Site: VIP Service Station
3889 Castro Valley Blvd.
Castro Valley, CA 94546

Subject: Quarterly Ground water Monitoring And Sampling Report
P & D Environmental Reports # 0047.R4 and 0047.R5

Gentlemen:

We are submitting subject reports documenting quarterly ground water monitoring report for your information as required for continued monitoring at above site.

Above reports are prepared by our consultant P & D Environmental with very close direction of Alameda County Health Department.

Should you have any questions regarding above subject, please contact us.

Sincerely,

L. B. Patel

Attachment: Above reports.

# P & D ENVIRONMENTAL

4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916


August 23, 1994
Report 0047.R4

Mr. L.B. Patel
Mr. P. Gupta
VIP Service
385 Century Circle
Danville, CA 94526

SUBJECT: Quarterly Groundwater Monitoring and Sampling Report
VIP Service
3889 Castro Valley Blvd.
Castro Valley, CA

Gentlemen:

P&D Environmental (P&D) is pleased to present this report documenting the results of the initial quarterly monitoring and sampling of the wells at the subject site. This work was performed in accordance with P&D's proposal 053194.P1 dated May 31, 1994. The work was performed in accordance with requirements set forth in a letter from Mr. Scott Seery of the Alameda County Department of Environmental Health (ACDEH) dated March 18, 1994 addressed to VIP Service and concerning the subject site. A Site Location Map (Figure 1) and Site Plan (Figure 2) are attached with this report.

## BACKGROUND

It is P&D's understanding that the site was purchased by VIP Service in December, 1984. Prior to purchase of the property by VIP Service, the site was operated as a retail gasoline station for an undetermined period of time. The site was operated as a retail gasoline station from the time of purchase by VIP Service until the tanks were removed by Accutite on April 26, 1993. The underground tank system consisted of three 10,000 gallon capacity gasoline tanks, two dispenser islands, and one 550 gallon waste oil tank. It is P&D's understanding that the fuel tanks contained leaded and unleaded gasoline while in use by VIP Service. In addition, VIP Service reported that diesel fuel was not stored at the site at any time.

It is P&D's understanding that at the time of tank removal, eight soil samples were collected from the sidewalls of the fuel tank pit, and one soil sample was collected from the waste oil tank pit. Groundwater was reported to have been encountered in the fuel tank pit at a depth of approximately 11 feet. One water sample was collected from the water in the fuel tank pit. On April 28, 1993 Accutite returned to the site and collected seven soil samples from beneath the dispenser islands.

All of the samples were analyzed at Sequoia Analytical in Redwood City, California for Total Petroleum Hydrocarbons as Gasoline (TPH-G); Benzene, Toluene, Ethylbenzene and Xylenes (BTEX); and for Total Lead. In addition, the samples from the waste oil tank were analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D); Total Oil and Grease (TOG); Halogenated Volatile Organic Compounds using EPA Method 8010; Semi-Volatile Organic Compounds using EPA Method 8270; and for the metals Cadmium, Chromium, Lead, Nickel and Zinc.

The results of the soil samples collected from the fuel tank pit showed TPH-G concentrations ranging from 120 to 6,200 parts per million (ppm), and total lead results ranging from not detected to 13 ppm. The results of the water sample from the fuel tank pit showed 140 ppm TPH-G, and 0.095 ppm total lead.

The results of the soil samples collected from beneath the fuel dispensers showed TPH-G values ranging from not detected to 4.7 ppm, and total lead values ranging from not detected to 7.6 ppm.

The results of the sample collected from the waste oil tank pit showed 670 ppm TPH-G; 410 ppm TPH-D; 1,300 ppm TOG; 0.023 ppm 1,2-Dichloroethane and 0.0094 ppm Tetrachloroethene in the EPA Method 8010 analysis; 2.7 ppm 2-Methylnapthalene and 3.8 ppm Naphthalene in the EPA Method 8270 analysis; and various metals concentrations, none of which exceeded ten times their respective STLC values. The laboratory identified the TPH-D results as being a "non-diesel mix," and indicated that the compounds reported as diesel were diesel-range gasoline and diesel-range oil compounds.

Between August 27 and November 1, 1993 P&D personnel collected stockpiled soil samples for stockpiled soil disposal characterization and oversaw the excavation of approximately 680 cubic yards of soil from the vicinity of the fuel tank pit in an effort to remove petroleum hydrocarbon-impacted soil. In addition, during this time the soil which was stockpiled by Accutite during the tank removal activities and during the subsequent soil excavation activities was disposed of at an appropriate disposal facility, and the tank pit backfilled and compacted. A total of eight confirmation soil samples were collected from the sidewalls of the tank pit on November 19, 1993 at a depth of 10 feet after over-excavation and prior to backfilling. The analytical results of the samples ranged from 33 to 3,200 ppm TPH-G. The sample collection locations are shown on the attached Site Plan, Figure 3. Documentation of excavation, stockpiled soil characterization and disposal, and backfilling of the pit are provided in P&D's report 0047.R1 dated January 24, 1994. The samples results associated with the removal of the tanks by Accutite are also summarized in P&D's report 0047.R1.

On November 10, 1993 P&D personnel oversaw the installation of three groundwater monitoring wells, designated as MW1 through MW3, and one exploratory soil boring, designated as B1, at the subject site. The wells were developed on November 12 and sampled on November 16, 1993. The results of the water samples showed that TPH-G was not detected in wells MW1 and MW2, and that BTEX was not detected in MW2. In well MW1, 0.0022 ppm of benzene was detected. In well MW3, TPH-G was detected at 12 ppm; BTEX was detected with benzene detected at 3.3 ppm; TRPH was not detected; EPA Method 8010 compounds were not detected except for 0.027 ppm 1,2-Dichloroethane; and EPA Method 8270 compounds were not detected except for 0.009 ppm Phenol, 0.006 ppm Benzyl Alcohol, 0.006 2-Methylphenol, 0.007 ppm 2,4-Dimethylphenol, 0.088 ppm Benzoic Acid, 0.042 ppm Naphthalene, and 0.015 2-Methylnapthalene.

Documentation of the monitoring well and soil boring installation and associated sample results are presented in P&D's report 0047.R2 dated January 24, 1994. The locations of the monitoring wells are shown in Figure 2.

In response to a letter dated March 18, 1994 from Mr. Scott Seery of the Alameda County Department of Environmental Health (ACDEH) addressed to VIP Service which commented upon the results of the initial groundwater sampling associated with the installation of the monitoring wells at the subject site, a quarterly groundwater monitoring and sampling program was initiated.

## FIELD ACTIVITIES

On July 29, 1994 all of the monitoring wells at the site were monitored and sampled by P&D personnel. The wells were monitored for depth to water and the presence of free product or sheen. Depth to water was measured to the nearest 0.01 foot using an electric water level indicator. The presence of free product or sheen was evaluated using a transparent bailer. No free product or sheen was observed in any of the wells. Depth to water level measurements are presented in Table 1.

Prior to sampling, the monitoring wells were purged of a minimum of three casing volumes of water, or until the wells had been purged dry. During purging operations, the field parameters of electrical conductivity, temperature and pH were monitored. Once the field parameters were observed to stabilize, and a minimum of three casing volumes had been purged or the wells had been purged dry and partially recovered, water samples were collected using a clean Teflon bailer.

The water samples were transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials and 1-liter amber glass bottles which were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to assure that no air bubbles were present.

The VOA vials and bottles were then transferred to a cooler with ice, until they were transported to McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a State-certified hazardous waste testing laboratory. Chain of custody documentation accompanied the samples to the laboratory. Records of the field parameters measured during well purging are attached with this report.

## HYDROGEOLOGY

Water levels were measured in the monitoring wells once during the quarter. The measured depth to water at the site on July 29, 1994 ranged from 10.03 to 10.86 feet. Groundwater levels have decreased in wells MW1, MW2 and MW3 by 0.16, 0.30 and 0.39 feet, respectively, since the previous monitoring on April 25, 1994. The calculated groundwater flow direction at the site on July 29, 1994 was to the west with a gradient of 0.0085. The groundwater gradient has increased from 0.0066 during the previous quarter and the groundwater flow direction has remained relatively unchanged since the previous quarterly monitoring on April 25, 1994.

Groundwater level data collected during the quarter are presented in Table 1. The groundwater flow direction at the site on July 29, 1994 is shown on Figure 2.

## LABORATORY RESULTS

All of the groundwater samples from the monitoring wells were analyzed for TPH-G using EPA Method 5030 in conjunction with Modified EPA Method 8015 (GCFID), and for BTEX using EPA Method 8020. In addition, the groundwater sample from monitoring well MW3, located downgradient from the former fuel and waste oil tank pits, was analyzed for TPH-D using EPA Method 3510 in conjunction with Modified EPA Method 8015; Halogenated Volatile Organic Compounds using EPA Method 8010; and for Semi-volatile Organic Compounds using EPA Method 8270. The additional analysis performed on the sample from well MW3 was performed in accordance with a letter from Mr. Scott Seery of the ACDEH addressed to VIP Service dated March 18, 1994.

The laboratory analytical results of the groundwater samples collected from the monitoring wells show that TPH-G and BTEX were not detected in wells MW1 and MW2, except for 0.0012 ppm benzene which was detected in well MW1. In well MW3, TPH-G was detected at 6.3 ppm; benzene was detected at 2.0 ppm; TPH-D was detected at 0.67 ppm; EPA Method 8010 compounds were not detected except for 0.0077 ppm 1,2-Dichloroethane; and EPA Method 8270 compounds were not detected except for 0.044 ppm 2-Methylnapthalene and 0.0080 ppm Naphthalene. Review of the laboratory report and discussions with the laboratory indicate that the results reported as TPH-D are gasoline-range compounds.

DISCUSSION AND RECOMMENDATIONS

Based on the laboratory analytical results of the water samples collected from the monitoring wells, P&D recommends that the quarterly groundwater monitoring and sampling program be continued to evaluate groundwater flow direction and quality during one entire hydrologic cycle.

DISTRIBUTION

Copies of this report should be distributed to Mr. Scott Seery at the Alameda County Department of Environmental Health, and to Mr. Richard Hiett at the San Francisco Bay Regional Water Quality Control Board. Copies of the report should be accompanied by a transmittal letter signed by the principal executive officer of VIP Service.

LIMITATIONS

This report was prepared solely for the use of VIP Service. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgement based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly-revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

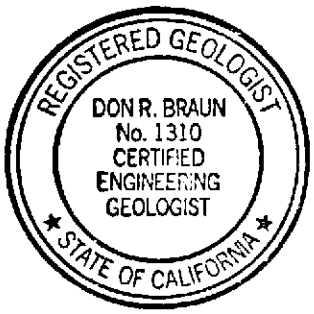
This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgement based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental

Paul H. King
Hydrogeologist




Don R. Braun
Certified Engineering Geologist
Registration No.: 1310
Expiration Date: 6/30/96

dlk/PHK
0047.R4

Attachments: Tables 1 & 2
Site Location Map (Figure 1)
Site Plan (Figure 2)
Field Parameter Forms
Laboratory Analytical Results
Chain of Custody Documentation

TABLE 1
WELL MONITORING DATA

| Well No. | Date Monitored | Top of Casing Elev. (ft.) | Depth to Water (ft.) | Water Table Elev. (ft.) |
|---|---|---|---|---|
| MW1 | 07/29/94 | 180.83 | 10.86 | 169.97 |
| | 04/25/94 | | 10.70 | 170.13 |
| | 11/16/93 | | 11.63 | 169.20 |
| | 11/12/93* | | 11.53 | 169.30 |
| MW2 | 07/29/94 | 179.70 | 10.34 | 169.36 |
| | 04/25/94 | | 10.04 | 169.66 |
| | 11/16/93 | | 11.10 | 168.60 |
| | 11/12/93* | | 10.95 | 168.75 |
| MW3 | 07/29/94 | 178.98 | 10.03 | 168.95 |
| | 04/25/94 | | 9.64 | 169.34 |
| | 11/16/93 | | 10.63 | 168.35 |
| | 11/12/93* | | 10.66 | 168.32 |

NOTES:

Elevations are in feet Mean Sea Level.
ft. = Feet.
* = Depth to water measurements prior to groundwater monitoring well development.

TABLE 2
GROUNDWATER
LABORATORY ANALYTICAL RESULTS

| Sample Location | TPH-D | TPH-G | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|
| | | | Samples Collected on July 29, 1994 | | | |
| MW1 | NA | ND | 0.0012 | ND | ND | ND |
| MW2 | NA | ND | ND | ND | ND | ND |
| MW3+ | 0.67 | 6.3 | 2.0 | 0.13 | 0.22 | 0.52 |
| | | | Samples Collected on April 25, 1994 | | | |
| MW1 | ND | ND | ND | ND | ND | ND |
| MW2 | ND | ND | ND | ND | ND | ND |
| MW3++ | 2.1 | 17 | 4.8 | 0.47 | 0.29 | 1.6 |
| | | | Samples Collected on November 16, 1993 | | | |
| MW1 | NA | ND | 0.0022 | ND | ND | ND |
| MW2 | NA | ND | ND | ND | ND | ND |
| MW3+++ | NA | 12 | 3.3 | 0.66 | 0.24 | 1.6 |

NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
ND = Not Detected.
NA = Not Analyzed.
+ = Review of the laboratory report and discussions with the laboratory indicate that the results reported as TPH-D are gasoline-range compounds. EPA 8010 compounds not detected except for 0.0077 ppm 1,2-Dichloroethane; EPA 8270 compounds not detected except for 0.008 ppm 2-Methylnaphthalene and 0.044 ppm Naphthalene.
++ = Review of the laboratory report and discussions with the laboratory indicate that the results reported as TPH-D are gasoline-range compounds. EPA 8010 compounds not detected except for 0.28 ppm 1,2-Dichloroethane; EPA 8270 compounds not detected except for 0.013 ppm 2-Methylnapthalene and 0.084 ppm Naphthalene.
+++ = TRPH not detected; EPA 8010 compounds not detected except for 0.027 ppm 1,2-Dichloroethane; EPA 8270 compounds not detected except for 0.009 ppm Phenol, 0.006 ppm Benzyl Alcohol, 0.006 2-Methylphenol, 0.007 ppm 2,4-Dimethylphenol, 0.088 ppm Benzoic Acid, 0.042 ppm Naphthalene, and 0.015 2-Methylnapthalene.
Results are in parts per million (ppm), unless otherwise specified.

# P & D Environmental

4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916



Base Map From
U.S. Geological Survey
Hayward, Calif.
7.5 Minute Quadrangle
Photorevised 1980

N

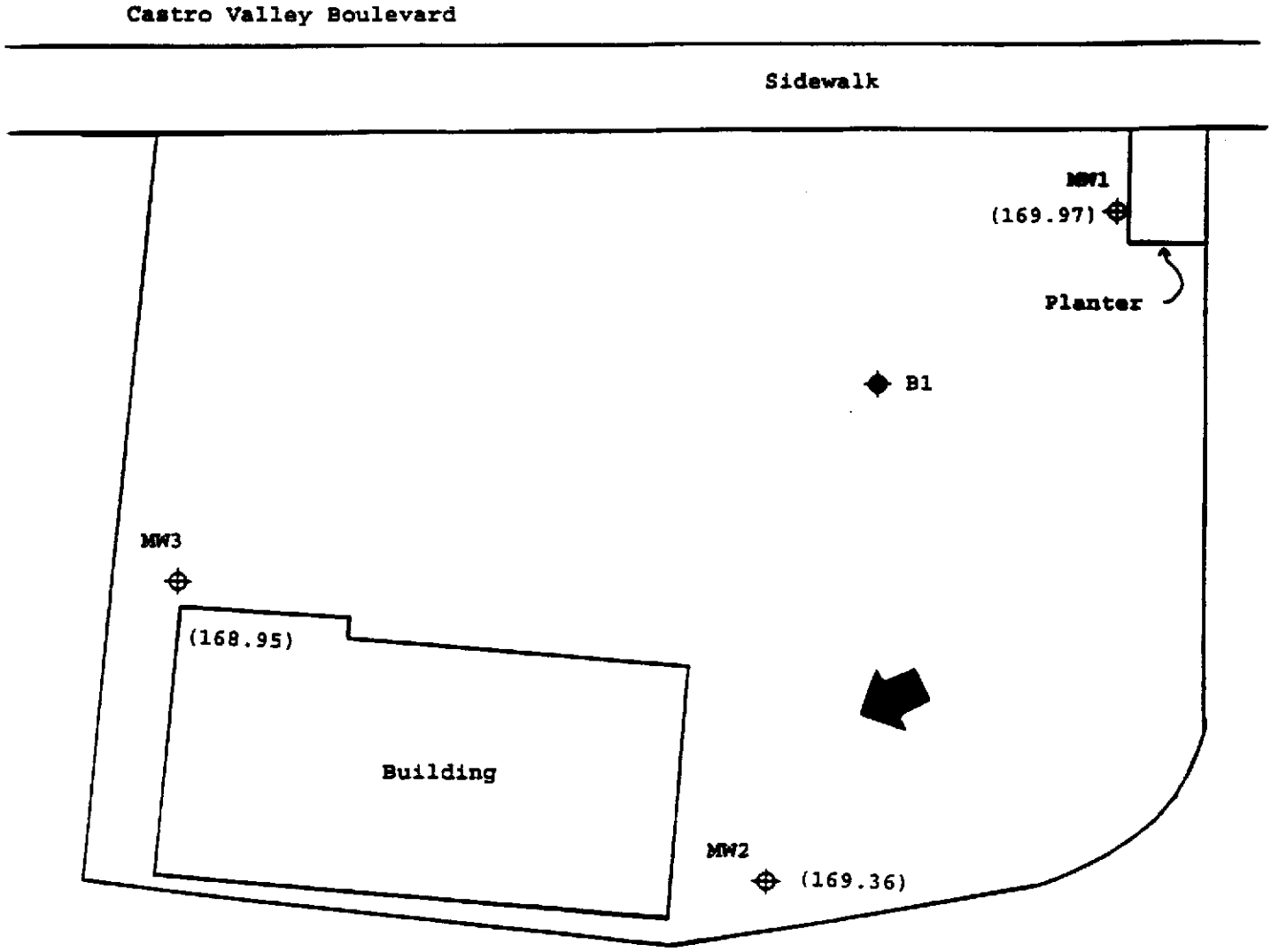
Scale in Feet

0 1000 2000 3000

Figure 1
SITE LOCATION MAP
VIP Service
3889 Castro Valley Blvd.
Castro Valley, California

# P & D ENVIRONMENTAL

4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916


Base Map From
P&D Environmental
October, 1993

Figure 2
SITE PLAN
VIP Service
3889 Castro Valley Blvd.
Castro Valley, California

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name VIP - Castro Valley
Job No. 0047
TOC to Water (ft.) 10.86
Well Depth (ft.) 19.8
Well Diameter 2"
Gal./Casing Vol. 1.5

Well No. MW1
Date 7/29/94
Sheen None
Free Product Thickness Ø
Sample Collection Method Teflon bailer

| TIME | GAL. PURGED | pH | TEMPERATURE (°F) | ELECTRICAL CONDUCTIVITY (µS/cm) |
|---|---|---|---|---|
| 1425 | 1.0 | 6.56 | 74.4 | 18.65 X 100 |
| 1428 | 2.0 | 6.56 | 71.2 | 18.05 |
| 1431 | 3.0 | 6.57 | 70.8 | 17.56 |
| 1434 | 4.0 | 6.59 | 70.5 | 17.22 |
| 1436 | 5.0 | 6.56 | 69.6 | 18.55 |
| 1438 | 6.0 | 6.58 | 69.6 | 17.30 |
| 1440 | Collect Samples | | | |

NOTES: Purged w. Teflon Bailer PHK

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name VIP- Castro Valley
Well No. MW2
Job No. 0047
Date 7/29/94
TOC to Water (ft.) 10.34
Sheen None
Well Depth (ft.) 19.4
Free Product Thickness Ø
Well Diameter 2"
Sample Collection Method Teflon Bailer
Gal./Casing Vol. 1.5

| TIME | GAL. PURGED | pH | TEMPERATURE (°F) | ELECTRICAL CONDUCTIVITY (µS/cm) |
|---|---|---|---|---|
| 1512 | 1.0 | 6.72 | 71.2 | 2.36 X 1000 |
| 1514 | 2.0 | 6.73 | 69.5 | 2.34 |
| 1516 | 3.0 | 6.71 | 69.0 | 2.14 |
| 1518 | 4.0 | 6.73 | 68.7 | 2.24 |
| 1520 | 5.0 | 6.72 | 68.7 | 2.30 |
| 1522 | Sample well | | | |

NOTES: Purged w. Teflon bailer PHK
Bolts bent on Christy box cover.

PURGE10.92

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name VIP-Castro Valley
Well No. MW3
Job No. 0047
Date 7/29/94
TOC to Water (ft.) 10.03
Sheen None
Well Depth (ft.) 18.9
Free Product Thickness ϕ
Well Diameter 2"
Sample Collection Method Teflon Bailer
Gal./Casing Vol. 1.5

| TIME | GAL. PURGED | pH | TEMPERATURE (°F) | ELECTRICAL CONDUCTIVITY (uS/cm) |
|---|---|---|---|---|
| 1541 | 1.0 | 6.30 | 67.8 | 17.45 x100 |
| 1543 | 2.0 | 6.20 | 66.4 | 16.42 |
| 1545 | 3.0 | 6.02 | 66.1 | 15.82 |
| 1547 | 4.0 | 5.96 | 65.6 | 15.88 |
| 1549 | 5.0 | 6.04 | 65.7 | 15.68 |
| 1552 | Collect Samples | | | |

NOTES: Purged w. Teflon Bailer PMK
Old gasoline odor in purged water

PURGE10.92

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

| | | |
|---|---|---|
| P & D Environmental<br>4020 Panama Ct.<br>Oakland, CA 94611 | Client Project ID: # 0047; VIP-Castro Valley | Date Sampled: 07/29/94 |
| | | Date Received: 07/29/94 |
| | Client Contact: Paul King | Date Extracted: 07/30-07/31/94 |
| | Client P.O: | Date Analyzed: 07/30-07/31/94 |

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX***

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

| 1Lab ID | Client ID | Matrix | TPH(g)+ | Benzene | Toluene | Ethylben-zene | Xylenes | % Rec. Surrogate |
|---|---|---|---|---|---|---|---|---|
| 40098 | MW1 | W | ND | 1.2 | ND | ND | ND | 94 |
| 40099 | MW2 | W | ND | ND | ND | ND | ND | 93 |
| 40100 | MW3 | W | 6300,a | 2000 | 130 | 220 | 520 | 90 |
| | | | | | | | | |
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| | | | | | | | | |
| Detection Limit unless other-wise stated; ND means Not Detected | | W | 50 ug/L | 0.5 | 0.5 | 0.5 | 0.5 | |
| | | S | 1.0 mg/kg | 0.005 | 0.005 | 0.005 | 0.005 | |

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

# cluttered chromatogram; sample peak co-elutes with surrogate peak

+ The 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 are significant; no recognizable pattern; 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 phase is present.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

| | | |
|---|---|---|
| P & D Environmental<br>4020 Panama Ct.<br>Oakland, CA 94611 | Client Project ID: # 0047; VIP-Castro Valley | Date Sampled: 07/29/94 |
| | | Date Received: 07/29/94 |
| | Client Contact: Paul King | Date Extracted: 08/01/94 |
| | Client P.O: | Date Analyzed: 08/02/94 |

**Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel ***

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

| Lab ID | Client ID | Matrix | TPH(d)+ | % Recovery Surrogate |
|---|---|---|---|---|
| 40100 | MW3 | W | 670,d | 98 |
| | | | | |
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| | | | | |
| Detection Limit unless otherwise stated; ND means Not Detected | | W | 50 ug/L | |
| | | S | 10 mg/kg | |

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

# cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) modified diesel?; light($C_L$) or heavy($C_H$) diesel compounds are significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel(?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible phase is present.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
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Tele: 510-798-1620 Fax: 510-798-1622

| | | |
|---|---|---|
| P & D Environmental<br>4020 Panama Ct.<br>Oakland, CA 94611 | Client Project ID: # 0047; VIP-Castro Valley | Date Sampled: 07/29/94 |
| | | Date Received: 07/29/94 |
| | Client Contact: Paul King | Date Extracted: 07/31/94 |
| | Client P.O: | Date Analyzed: 07/31/94 |

**Volatile Halocarbons**

EPA method 601 or 8010

| Lab ID | 40100 | | | |
|---|---|---|---|---|
| Client ID | MW3 | | | |
| Matrix | W | | | |
| Compound[1] | Concentration* | Concentration* | Concentration* | Concentration* |
| Bromodichloromethane | ND | | | |
| Bromoform[2] | ND | | | |
| Bromomethane | ND | | | |
| Carbon Tetrachloride[3] | ND | | | |
| Chlorobenzene | ND | | | |
| Chloroethane | ND | | | |
| 2-Chloroethyl Vinyl Ether[4] | ND | | | |
| Chloroform[5] | ND | | | |
| Chloromethane | ND | | | |
| Dibromochloromethane | ND | | | |
| 1,2-Dichlorobenzene | ND | | | |
| 1,3-Dichlorobenzene | ND | | | |
| 1,4-Dichlorobenzene | ND | | | |
| 1,1-Dichloroethane | ND | | | |
| 1,2-Dichloroethane | 7.7 | | | |
| 1,1-Dichloroethene | ND | | | |
| cis 1,2-Dichloroethene | ND | | | |
| trans 1,2-Dichloroethene | ND | | | |
| 1,2-Dichloropropane | ND | | | |
| cis 1,3-Dichloropropene | ND | | | |
| trans 1,3-Dichloropropene | ND | | | |
| Methylene Chloride[6] | ND | | | |
| 1,1,2,2-Tetrachloroethane | ND | | | |
| Tetrachloroethene[7] | ND | | | |
| 1,1,1-Trichloroethane | ND | | | |
| 1,1,2-Trichloroethane | ND | | | |
| Trichloroethene | ND | | | |
| Trichlorofluoromethane | ND | | | |
| Vinyl Chloride[8] | ND | | | |
| % Recovery Surrogate | 90 | | | |
| Comments | | | | |

Detection limit unless otherwise stated: water, ND< 0.5ug/L; soil, ND< 10ug/kg.

* water samples are reported in ug/L, soil samples in ug/kg and all TCLP extracts in ug/L

(1) IUPAC allows "ylene" or "ene"; ex. ethylene or ethene; (2) tribromomethane; (3) tetrachloromethane; (4) (2-chloroethoxy) ethene; (5) trichlormethane; (6) dichloromethane; (7) perchlorethylene, PCE or perclor; (8) chloroethene; (9) unidentified peak(s) present.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

# QC REPORT FOR HYDROCARBON ANALYSES

Date: 07/30-07/31/94 Matrix: Water

| Analyte | Concentration (ug/L) | | | Amount Spiked | % Recovery | | RPD |
|---|---|---|---|---|---|---|---|
| | Sample | MS | MSD | | MS | MSD | |
| TPH (gas) | 0.0 | 88.6 | 95.0 | 100 | 88.6 | 95.0 | 7.0 |
| Benzene | 0 | 10.2 | 10.3 | 10 | 102.0 | 103.0 | 1.0 |
| Toluene | 0 | 10 | 10.1 | 10 | 100.0 | 101.0 | 1.0 |
| Ethyl Benzene | 0 | 9.8 | 9.9 | 10 | 98.0 | 99.0 | 1.0 |
| Xylenes | 0 | 30.8 | 31.2 | 30 | 102.7 | 104.0 | 1.3 |
| TPH (diesel) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| TRPH (oil & grease) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

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

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

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

# QC REPORT FOR HYDROCARBON ANALYSES

Date: 08/01-08/02/94 Matrix: Water

| Analyte | Concentration (ug/L) | | | Amount Spiked | % Recovery | | RPD |
|---|---|---|---|---|---|---|---|
| | Sample | MS | MSD | | MS | MSD | |
| TPH (gas) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Benzene | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Toluene | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Ethyl Benzene | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Xylenes | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| TPH (diesel) | 0 | 164 | 152 | 150 | 110 | 101 | 7.8 |
| TRPH (oil & grease) | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

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

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

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

# QC REPORT FOR EPA 8010/8020/EDB

Date: 07/31/94 Matrix: Water

| Analyte | Concentration (ug/L) | | | | % Recovery | | |
|---|---|---|---|---|---|---|---|
| | Sample | MS | MSD | Amount Spiked | MS | MSD | RPD |
| 1,1-DCE | 0.0 | 5.0 | 4.9 | 5.0 | 100 | 98 | 2.0 |
| Trichloroethene | 0.0 | 5.0 | 4.8 | 5.0 | 100 | 96 | 4.1 |
| EDB | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Chlorobenzene | 0.0 | 5.1 | 5.3 | 5.0 | 102 | 106 | 3.8 |
| Benzene | 0.0 | 4.9 | 5.3 | 5.0 | 98 | 106 | 7.8 |
| Toluene | 0.0 | 5.6 | 5.1 | 5.0 | 112 | 102 | 9.3 |
| Chlorobz (PID) | 0.0 | 5.1 | 5.3 | 5.0 | 102 | 106 | 3.8 |

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

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

# CHROMALAB, INC.

Environmental Services (SDB)

August 4, 1994 — *Submission #:* 9408027

MCCAMPBELL ANALYTICAL, INC. — *Atten:* Ed Hamilton

*Project:* PD/UIP — *Project#:* 0047
*Sampled:* July 29, 1994 — *Received:* August 1, 1994
*Extracted:* August 3, 1994 — *Analyzed:* August 3, 1994
*Method:* EPA 3510/625 — *Matrix:* WATER
*Reporting Limit:* See Below — *Dilution Factor:* None
*Client Sample ID:* MW-3

| COMPOUND NAME | Sample mg/l | Reporting Limit mg/l | Spike Recovery |
|---|---|---|---|
| PHENOL | N.D. | 0.002 | ----- |
| BIS(2-CHLOROETHYL) ETHER | N.D. | 0.002 | ----- |
| 2-CHLOROPHENOL | N.D. | 0.002 | 49% 57% |
| 1,3-DICHLOROBENZENE | N.D. | 0.002 | ----- |
| 1,4-DICHLOROBENZENE | N.D. | 0.002 | 43% 53% |
| BENZYL ALCOHOL | N.D. | 0.004 | ----- |
| 1,2-DICHLOROBENZENE | N.D. | 0.002 | ----- |
| 2-METHYLPHENOL | N.D. | 0.002 | ----- |
| BIS(2-CHLOROISOPROPYL)ETHER | N.D. | 0.002 | ----- |
| 4-METHYLPHENOL | N.D. | 0.002 | ----- |
| N-NITROSO-DI-N-PROPYLAMINE | N.D. | 0.002 | ----- |
| HEXACHLOROETHANE | N.D. | 0.002 | ----- |
| NITROBENZENE | N.D. | 0.002 | ----- |
| ISOPHORONE | N.D. | 0.002 | ----- |
| 2-NITROPHENOL | N.D. | 0.002 | ----- |
| 2,4-DIMETHYLPHENOL | N.D. | 0.002 | ----- |
| BENZOIC ACID | N.D. | 0.010 | ----- |
| BIS(2-CHLOROETHOXY)METHANE | N.D. | 0.002 | ----- |
| 2,4-DICHLOROPHENOL | N.D. | 0.002 | ----- |
| 1,2,4-TRICHLOROBENZENE | N.D. | 0.002 | ----- |
| NAPHTHALENE | 0.044 | 0.002 | ----- |
| 4-CHLOROANILINE | N.D. | 0.004 | ----- |
| HEXACHLOROBUTADIENE | N.D. | 0.002 | ----- |
| 4-CHLORO-3-METHYLPHENOL | N.D. | 0.004 | 54% 57% |
| 2-METHYLNAPHTHALENE | 0.008 | 0.002 | ----- |
| HEXACHLOROCYCLOPENTADIENE | N.D. | 0.002 | ----- |
| 2,4,6-TRICHLOROPHENOL | N.D. | 0.002 | ----- |
| 2,4,5-TRICHLOROPHENOL | N.D. | 0.002 | ----- |
| 2-CHLORONAPHTHALENE | N.D. | 0.002 | ----- |
| 2-NITROANILINE | N.D. | 0.010 | ----- |
| DIMETHYL PHTHALATE | N.D. | 0.002 | ----- |
| ACENAPHTHYLENE | N.D. | 0.002 | ----- |
| 3-NITROANILINE | N.D. | 0.010 | ----- |
| ACENAPHTHENE | N.D. | 0.002 | 75% 81% |
| 2,4-DINITROPHENOL | N.D. | 0.010 | ----- |
| 4-NITROPHENOL | N.D. | 0.010 | ----- |
| DIBENZOFURAN | N.D. | 0.002 | ----- |

(continued on next page)

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

**CHROMALAB, INC.**

Environmental Services (SDB)



*Submission #:* 9408027

*Project:* PD/UIP
*Project#:* 0047
*Client Sample ID:* MW-3
*Method:* EPA 3510/625 *Matrix:* WATER

| COMPOUND NAME | Sample mg/l | Reporting Limit mg/l | Spike Recovery |
|---|---|---|---|
| 2,4-DINITROTOLUENE | N.D. | 0.002 | ----- |
| 2,6-DINITROTOLUENE | N.D. | 0.002 | 46% 50% |
| DIETHYL PHTHALATE | N.D. | 0.002 | ----- |
| 4-CHLORO-PHENYL PHENYL ETHER | N.D. | 0.002 | ----- |
| FLUORENE | N.D. | 0.002 | ----- |
| 4-NITROANILINE | N.D. | 0.010 | ----- |
| 4,6-DINITRO-2-METHYL PHENOL | N.D. | 0.010 | ----- |
| N-NITROSODIPHENYLAMINE | N.D. | 0.002 | ----- |
| 4-BROMOPHENYL PHENYL ETHER | N.D. | 0.002 | ----- |
| HEXACHLOROBENZENE | N.D. | 0.002 | ----- |
| PENTACHLOROPHENOL | N.D. | 0.010 | ----- |
| PHENANTHRENE | N.D. | 0.002 | ----- |
| ANTHRACENE | N.D. | 0.002 | ----- |
| DI-N-BUTYL PHTHALATE | N.D. | 0.002 | ----- |
| FLUORANTHENE | N.D. | 0.002 | ----- |
| PYRENE | N.D. | 0.002 | 81% 98% |
| BUTYLBENZYLPHTHALATE | N.D. | 0.002 | ----- |
| 3,3'-DICHLOROBENZIDINE | N.D. | 0.004 | ----- |
| BENZO(A)ANTHRACENE | N.D. | 0.002 | ----- |
| BIS(2-ETHYLHEXYL)PHTHALATE | N.D. | 0.002 | ----- |
| CHRYSENE | N.D. | 0.002 | ----- |
| DI-N-OCTYLPHTHALATE | N.D. | 0.002 | ----- |
| BENZO(B)FLUORANTHENE | N.D. | 0.002 | ----- |
| BENZO(K)FLUORANTHENE | N.D. | 0.002 | ----- |
| BENZO(A)PYRENE | N.D. | 0.002 | ----- |
| INDENO(1,2,3 C,D)PYRENE | N.D. | 0.002 | ----- |
| DIBENZO(A,H)ANTHRACENE | N.D. | 0.002 | ----- |
| BENZO(G,H,I)PERYLENE | N.D. | 0.002 | ----- |

ChromaLab, Inc.

Alex Tam
Analytical Chemist

Ali Kharrazi
Organic Manager

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

SUBM #: 9408027
CLIENT: MCCAM
DUE: 08/08/94
REF #: ~~14783~~ 17483

17483

# CHAIN OF CUSTODY RECORD

☐ 48 HOUR ☒ 5 DAY


**McCAMPBELL ANALYTICAL**
110 2nd AVENUE, # D7
PACHECO, CA 94553
(510) 798-1620 FAX (510) 798-1622


REPORT TO: S. Hawkins
BILL TO: MAI

PROJECT NUMBER: 0047
PROJECT NAME: PD/VP

PROJECT LOCATION:
SAMPLER SIGNATURE:

| SAMPLE ID | LOCATION | SAMPLING DATE | SAMPLING TIME | # CONTAINERS | TYPE CONTAINERS | MATRIX: WATER | SOIL | AIR | SLUDGE | OTHER | METHOD PRESERVED: HCL | $HNO_3$ | OTHER (ICE) | BTEX & TPH as Gasoline (602\8020 & 8015) | TPH as Diesel (8015) | Total Petroleum Oil & Grease (5520 E&F/5520 B&F) | Total Petroleum Hydrocarbons (418.1) | EPA 601/8010 | EPA 602/8020 | EPA 608/8080 | EPA 608/8080 - PCBs Only | EPA 624/8240/8260 | EPA 625/8270 | CAM - 17 Metals | EPA - Priority Pollutant Metals | LEAD (7240/7421/239.2/6010) | ORGANIC LEAD | RCI | OTHER | OTHER | OTHER | OTHER | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-3 | | 7-29-94 | | 1 | L | X | | | | | | | X | | | | | | | | | | X | | | | | | | | | | 40100 |

RELINQUISHED BY: Ed Hamm — DATE: 8-1-94 — TIME: 1015 — RECEIVED BY: D. Barnes — 8-1-94

RELINQUISHED BY: — DATE: — TIME: — RECEIVED BY:

RELINQUISHED BY: — DATE: — TIME: — RECEIVED BY LABORATORY:

REMARKS:

**P & D ENVIRONMENTAL**
4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916

# CHAIN OF CUSTODY RECORD

2712APD66 PAGE 1 OF 1

| PROJECT NUMBER: | PROJECT NAME: |
|---|---|
| 0047 | VIP - Castro Valley |

SAMPLED BY: (PRINTED AND SIGNATURE) Paul H. King Paul H. King

| SAMPLE NUMBER | DATE | TIME | TYPE | SAMPLE LOCATION | NUMBER OF CONTAINERS | ANALYSIS(ES): TPH-Gas (BTEX) | TPH-Diesel EPA 8010 | EPA 8270 | | | PRESERVATIVE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW1 | 7/29/94 | | Water | | 2 | X | | | | | HCL | Normal Turn Around |
| MW2 | " | | " | | 2 | X | | | | | " | " " " |
| MW3 | " | | " | | 6 | X | X | X | X | | " | " " " |

40098
40099
40100

ICE/T ✓
GOOD CONDITION ✓
HEADSPACE ABSENT ✓
APPROPRIATE CONTAINERS ✓

| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RECEIVED BY: (SIGNATURE) | TOTAL NO. OF SAMPLES (THIS SHIPMENT) | 3 | LABORATORY: |
|---|---|---|---|---|---|---|
| Paul H. King | 7/29/94 | 6:18PM | Jo Ginder 793 | TOTAL NO. OF CONTAINERS (THIS SHIPMENT) | 10 | McCampbell Analytical |
| RELINQUISHED BY: (SIGNATURE) Jo Ginder | DATE 729. | TIME 8:00 | RECEIVED BY: (SIGNATURE) | LABORATORY CONTACT: Fred Hamilton | | LABORATORY PHONE NUMBER: (510) 798-1620 |
| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RECEIVED FOR LABORATORY BY: (SIGNATURE) | SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO | | |

REMARKS: VOAs preserved with HCl