# P & D ENVIRONMENTAL

A Division of Paul H. King, Inc. **4020 Panama Court** Oakland, CA 94611 Report 0047.R32 (510) 658-6916

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April 19, 2004

Alamaria County

Environmental medition

SUBJECT: SEMI-ANNUAL GROUNDWATER MONITORING AND SAMPLING REPORT

VIP Service

3889 Castro Valley Blvd.

Castro Valley, CA

Gentlemen:

P&D Environmental, a division of Paul H. King, Inc. (P&D) is pleased to present this report documenting the results of the semi-annual monitoring and sampling of groundwater monitoring wells MW1, MW2, and MW3 at the subject site. This work was performed in accordance with P&D's proposal 033099.P1 dated March 30, 1999 and requirements set forth in a letter from Mr. Scott Seery of the Alameda County Department of Environmental Health (ACDEH) dated March 18, 1994 for the subject site. Based upon a telephone conversation with Mr. Seery on July 31, 1995, the sampling of monitoring wells MW1 and MW2 was reduced to semi-annually. Based upon subsequent conversations, the sampling and monitoring of well MW3 has also been reduced to semi-annually. In addition, it was agreed that no further analysis for TPH-D will be performed for well MW3.

The monitoring and sampling was performed on December 18, 2003. The reporting period is for June 2003 through December 2003. 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 (HVOCs) using EPA Method 8010; Semi-Volatile Organic Compounds (SVOCs) 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 Tetrachloroethylene 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. 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-Methylphapthalene.

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 ACDEH 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. Based upon subsequent conversations with Mr. Seery, the monitoring and sampling frequency was reduced to semi-annually.

### **EIELD ACTIVITIES**

On December 18, 2003, all three 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. However, slight petroleum hydrocarbon odors were noted in the purge water from well MW3. 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. 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, a water sample was 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, as appropriate, 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 labeled and 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. Water purged from the wells during purging operations was stored in a DOT-approved 55-gallon drum at the site pending appropriate disposal.

### HYDROGEOLOGY

Water levels were measured in the monitoring wells once during the report period. The measured depth to water at the site on December 18, 2003 ranged from 8.55 to 9.26 feet. The groundwater

level decreased in all wells MW1, MW2, and MW3 by 0.26, 0.08, and 0.07 feet, respectively, since the previous monitoring on June 19, 2003. The calculated groundwater flow direction at the site on December 18, 2003 was to the west with a gradient of 0.0096. The groundwater flow direction has remained relatively unchanged, and the gradient has decreased since the previous semi-annual monitoring on June 19, 2003.

Groundwater level data collected during the monitoring period are presented in Table 1. The groundwater flow direction at the site on December 18, 2003 is shown on Figure 2.

### LABORATORY RESULTS

The groundwater samples from monitoring wells MW1, MW2, and MW3 were analyzed for TPH-G using Modified EPA Method 8015; and for BTEX and methyl tert-butyl ether (MTBE) using EPA Method 8021B. In addition, the groundwater sample from MW3, near the former waste oil tank, was analyzed for HVOCs using EPA Method 8021B and for SVOCs using EPA Method 8270D.

The laboratory analytical results of the groundwater samples collected from wells MW1 and MW2 show that TPH-G, MTBE, and BTEX were not detected. The laboratory analytical results of the groundwater sample collected from monitoring well MW3 show that TPH-G was detected at a concentration of 9.7 mg/L, and MTBE was not detected. Benzene was detected at a concentration of 2.3 mg/L. Toluene, ethylbenzene, and xylenes were also detected in well MW3. HVOCs and SVOCs were not detected in well MW3, with the exception of 0.063 mg/L naphthalene and 0.021 mg/L 2-methylnaphthalene. The laboratory analytical results are summarized in Table 2. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

### DISCUSSION AND RECOMMENDATIONS

Based on the sample results, P&D recommends that the semi-annual monitoring and sampling be continued. Continuation of the monitoring and sampling program should be re-evaluated upon regulatory agency review of corrective action plan implementation results.

### **DISTRIBUTION**

Copies of this report should be distributed to Mr. Scott Seery at the Alameda County Department of Environmental Health. 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 judgment 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 judgment 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

President

California Registered Geologist # 5901

Expires: 12/31/05

Attachments: Tables 1 & 2

Site Location Map (Figure 1)

Site Plan (Figure 2) Field Parameter Forms

Laboratory Analytical Reports
Chain of Custody Documentation

PHK/wrw/zep 0047.R32

TABLE 1
WELL MONITORING DATA

Well	Date	Top of Casing	Depth to	Water Table
No.	Monitored	Elev. (ft.)	Water (ft.)	Elev. (ft.)
) EXT. 1	10/10/00			
MW1	12/18/03	180.83	9.26	171.57
	06/19/03		9,00	171.83
	12/21/02		9.09	171.74
	04/30/02		9.03	171.80
	10/16/01		9.33	171.50
	11/08/00		9.04	171.79
	05/24/00		7.97	172.86
	09/10/99		8.79	172.04
	02/10/99		7.72	173.11
	02/24/98		6.61	174.22
	11/18/97		9.71	171.12
	08/12/97		9.39	171,44
	04/25/97		8.37	172.46
	01/31/97		7.62	173.21
	07/19/96		8.81	172.02
	04/23/96		8.17	172.66
	01/17/96		9.66	171.17
	10/26/95		10.00	170.83
	08/15/95		9.23	171.60
	05/02/95		8.56	172.27
	01/30/95		9.50	171.33
	10/31/94		11.55	169.28
	07/29/94		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

Elevations are in feet Mean Sea Level.

ft. = Feet.

<sup>\* =</sup> Depth to water measurements prior to groundwater monitoring well development.

TABLE 1 WELL MONITORING DATA (Continued)

Well	Date	Top of Casing	Depth to	Water Table
No.	Monitored	Elev. (ft.)	Water (ft.)	Elev. (ft.)
				150.04
MW2	12/18/03	179.70	8.76	170.94
	06/19/03		8.68	171.02
	12/21/02		7.95	171.75
	04/30/02		8.76	170.94
	10/16/01		9.76	169.94
	11/08/00		8.63	171.07
	05/24/00		7.65	172.05
	09/10/99		8.48	171.22
	02/10/99		7.05	172.65
	02/24/98		6.20	173.50
	11/18/97		9.26	170.44
	08/12/97		9.06	170.64
	04/25/97		8.10	171.60
	01/31/97		7.22	172.48
	07/19/96		8.57	171.13
	04/23/96		7.85	171.85
	01/17/96		8.94	170.76
	10/26/95		9.68	170.02
	08/15/95		8.91	170.79
	05/02/95		8.17	171.53
	01/30/95		8.68	171.02
	10/31/94		10.99	168.71
	07/29/94		10.34	169.36
	04/25/94		10.04	169.66
	11/16/93		11.10	168.60
	11/12/93*			
	11/12/93*		10.95	168.75

Elevations are in feet Mean Sea Level.

ft. = Feet.

<sup>\* =</sup> Depth to water measurements prior to groundwater monitoring well development.

TABLE 1
WELL MONITORING DATA
(Continued)

Well	Date	Top of Casing	Depth to	Water Table
No.	Monitored	Elev. (ft.)	Water (ft.)	Elev. (ft.)
MW3	12/18/03	178.98	8.55	170,43
IMIMA	06/19/03	176.98	8,48	170.43
	12/21/02			170.30
	04/30/02		7.88	171.10
	10/16/01		8.56	168.84
			10.14	
	11/08/00		8.45	170.53
	05/24/00		7.62	171.36
	09/10/99		8.34	170.64
	02/10/99		7.12	171.86
	02/24/98		6.55	172.43
	11/18/97		8.97	170.01
	08/12/97		8.85	170.13
	04/25/97		7.99	170.99
	01/31/97		7.30	171.68
	07/19/96		8.42	170.56
	04/23/96		7.76	171.22
	01/17/96		8.61	170.37
	10/26/95		9.39	169.59
	08/15/95		8.62	170.36
	05/02/95		8.04	170.94
	01/30/95		8.46	170.52
	10/31/94		10.58	168.40
	07/29/94		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

Elevations are in feet Mean Sea Level.

ft. = Feet.

<sup>\* =</sup> Depth to water measurements prior to groundwater monitoring well development.

# TABLE 2 GROUNDWATER LABORATORY ANALYTICAL RESULTS

Sample Location	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Xylenes
			Samples Colle December 18			
MW1	ND<0.05	ND<0.005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005
MW2	ND<0.05	ND<0.005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005
MW3 <sup>a</sup>	9.7	ND<0.1	2.3	0.093	0.28	0.35
			Samples Colle June 19, 2			
MW1	ND<0.05	ND<0,005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005
MW2	ND<0.05	ND<0.005	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005
MW3 <sup>b</sup>	16,c	ND<0.25	3.5	0.11	0.43	0.64

### NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

NA = Not Analyzed.

Results are in milligrams per liter (mg/L), unless otherwise specified.

a = EPA Method 8021B compounds were not detected; and EPA Method 8270D compounds were not detected except for 0.063 mg/L naphthalene, and 0.021 mg/L 2-methyl naphthalene.

b = EPA Method 8010 compounds were not detected; and EPA Method 8270D compounds were not detected except for 0.024 mg/L phenol, 0.056 mg/L naphthalene, and 0.027 mg/L 2-methyl naphthalene.

c = Laboratory Analytical Report Note: lighter than water immiscible sheen on sample.

# TABLE 2 (CONT.) GROUNDWATER LABORATORY ANALYTICAL RESULTS

Sample Location	трн-G	MTBE	Benzene	Toluene	Ethyl- benzene	Xylenes
			ples Collected on ember 21, 2002			
MW1	ND	ND	ND	ND	ND	ND
MW2	ND	ND	ND	ND	ND	ND
MW3 <sup>d</sup>	15	ND<0.45	3.3	0.18	0.48	1.0
			ples Collected on april 30, 2002			
MWI	ND	ND	ND	ND	ND	ND
MW2	ND	ND	ND	ND	ND	ND
MW3 <sup>e</sup>	11	ND<200	2.2	0.12	0.37	0.59
			ples Collected on tober 16, 2001			
MW1	ND	ND	ND	ND	ND	ND
MW2	ND	ND	ND	ND	ND	ND
MW3 <sup>f</sup>	2.1	ND	0.52	0.030	0.077	0.130

#### NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

NA = Not Analyzed.

d = In MW3 EPA Method 8021B compounds were not detected except for 0.011 mg/L 1,2-dichloroethane; and EPA Method 8270D compounds were not detected except for 0.035 mg/L naphthalene and 0.014 mg/L 2-methyl naphthalene.

 $e = In\ MW3$ , EPA Method 8010 compounds were not detected; and EPA Method 8270 compounds were not detected except for 0.053 mg/L naphthalene.

f = In MW3 EPA Method 8010 compounds were not detected except for 0.0013 mg/L 1,2-dichloroethane; and EPA Method 8270 compounds were not detected.

# TABLE 2 GROUNDWATER LABORATORY ANALYTICAL RESULTS (Continued)

Sample Location	TPH-G	MTBE	Benzene	Toluene	Ethyl- benzene	Xylenes
			ples Collected on vember 8, 2000			
MW1	ND	ND	ND	ND	ND	ND
MW2	ND	ND	ND	ND	ND	ND
MW3**	0.54		0.15 ples Collected on May 24, 2000	0.0069 0.018	0.029	
MW1	ND	ND	ND	ND	ND	ND
MW2	ND	ND	ND	ND	ND	ND
MW3***	2.1	0.032	0.47	0.027	0.062	0.13
			ples Collected on tember 10, 1999			
MW1	ND	0.049	ND	ND	ND	ND
MW2	ND	ND	ND	ND	ND	ND
MW3****	0.39	ND	0.098	0.0073 0.012	0.028	

## NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

MTBE = Methyl tert-Butyl Ether.

ND = Not Detected.

NA = Not Analyzed.

- \*\* = In MW3 EPA Method 8010 compounds were not detected except for 0.0013 mg/L 1,2-dichloroethane; and EPA Method 8270 compounds were not detected.
- \*\*\* = In MW3 EPA Method 8010 compounds were not detected except for 0.0017 mg/L 1,2-Dichloroethane; and EPA Method 8270 compounds were not detected.
- \*\*\*\* = In MW3 EPA Method 8010 compounds were not detected except for 0.002 mg/L 1,2-Dichloroethane; and EPA Method 8270 compounds were not detected.

TABLE 2
GROUNDWATER
LABORATORY ANALYTICAL RESULTS
(Continued)

Sample Location	TPH-D	ТРН-G	Benzene	Toluene	Ethyl- benzene	Xylenes
			ples Collected on bruary 10, 1999			
MW1	NA	ND	ND	ND	ND	ND
MW2	NA	ND	ND	ND	ND	ND
MW3****	NA	4.1	1.7	0.96	0.27	0.42
			ples Collected on bruary 24, 1998			
MW1	ND	ND	ND	ND	ND	ND
MW2	ND	ND	ND	ND	ND	ND
MW3+	NA	19	4.6	0.33	0.65	1.8
			aples Collected on vember 18, 1997			
MW1	NA	NA	NA	NA	NA	NA
MW2	NA	NA	NA	NA	NA	NA
MW3++	NA	2.1	0.48	0.052	0.071	0.19

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

ND = Not Detected.

NA = Not Analyzed.

- \*\*\*\*\* = In MW3, MTBE was not detected; EPA Method 8010 compounds were not detected except for 0.0028 mg/L 1,2-Dichloroethane; and EPA Method 8270 compounds were not detected except for 0.021 mg/L Naphthalene.
- + = In MW3, MTBE was not detected; EPA Method 8010 compounds were not detected except for 0.011 mg/L 1,2-Dichloroethane; and EPA Method 8270 compounds were not detected except for Naphthalene, 2-Methylnaphthalene and Phenol which were detected at concentrations of 0.083, 0.019, and 0.023 mg/L, respectively.
- ++ = In MW3, MTBE was not detected; EPA Method 8010 compounds were not detected except for 0.0021 mg/L 1,2 Dichloroethane; and EPA Method 8270 compounds were not detected except for Naphthalene and 2-Methylnaphthalene which were detected at concentrations of 0.058 and 0.026 mg/L, respectively.

# TABLE 2 GROUNDWATER LABORATORY ANALYTICAL RESULTS (Continued)

Sample Location	TPH-D	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes
			ples Collected on ugust 12, 1997			
MW1	ND	ND	ND	ND	ND	ND
MW2	ND	ND	ND	ND	ND	ND
MW3+++	NA	16	4.2	0.45	0.54	1.9
			ples Collected on April 25, 1997			
MW1	NA	NA	NA	NA	NA	NA
MW2	NA	NA	NA	NA	NA	NA
MW3++++	NA	30	5.3	0.52	0.95	3.0
			ples Collected on nuary 31, 1997			
MW1	NA	ND	ND	ND	ND	ND
MW2	NA	ND	ND	ND	ND	ND
MW3+++++	NA	5.5	1.6	0.10	0.19	0.41

### NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

ND = Not Detected.

NA = Not Analyzed.

- ++++ = In MW3, MTBE was not detected; EPA Method 8010 compounds were not detected except for 0.0091 mg/L 1,2-Dichloroethane; and EPA Method 8270 compounds were not detected except for Bis(2-ethylhexyl) Phthalate, Naphthalene, and 2-Methylnaphthalene which were detected at concentrations of 0.021, 0.087, and 0.024 mg/L, respectively.
- ++++ = In MW3, MTBE was not detected; EPA Method 8010 compounds were not detected except for 0.012 mg/L 1,2 Dichloroethane; and EPA Method 8270 compounds were not detected except for Phenol, 4-Methylphenol, 2,4-Dimethylphenol, Naphthalene, and 2-Methylnaphthalene which were detected at concentrations of 0.0028, 0.0024, 0.0028, 0.066 mg/L, and 0.015 mg/L, respectively.
- +++++ = In MW3, MTBE was detected at a concentration of 0.063 mg/L; EPA Method 8010 compounds were not detected except for 0.014 mg/L 1,2 Dichloroethane; and EPA Method 8270 compounds were not detected except for Phenol, 2,4-Dimethylphenol, Naphthalene, and 2-Methylnaphthalene which were detected at concentrations of 0.0094, 0.0028, 0.031, and 0.0048 mg/L, respectively.

# TABLE 2 GROUNDWATER LABORATORY ANALYTICAL RESULTS (Continued)

Sample Location	TPH-D	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes
			ples Collected on July 19, 1996			
MW1	NA	NA	NA	NA	NA	NA
MW2	NA	NA	NA	NA	NA	NA
MW3@	NA		4.8 aples Collected on April 23, 1996	0.61	0.76	2.8
MW1	NA	ND	ND	ND	ND	ND
MW2	NA	ND	ND	ND	ND	ND
MW3@@	NA	9.7	2.9	0.17	0.38	0.68
			ples Collected on muary 17, 1996			
MWI	NA	NA	NA	NA	NA	NA
MW2	NA	NA	NA	NA	NA	NA
MW3@@@	NA	21	4.1	0.37	0.52	1.5

### NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

ND = Not Detected.

NA = Not Analyzed.

- @ = In MW3, EPA Method 8010 compounds were not detected; EPA Method 8270 compounds were not detected except for 0.0022 mg/L 2,4-Dimethylphenol, 0.1 mg/L Naphthalene, and 0.022 mg/L 2-Methylnaphthalene. The EPA Method 8020 showed that MTBE was detected in MW3 at a concentration of 0.21 mg/L.
- @@ = In MW3, EPA 8010 compounds were not detected except for 0.0051 mg/L 1,2-Dichloroethane; EPA 8270 compounds were not detected except for Naphthalene and Phenol which were detected at concentrations of 0.056 and 0.025 mg/L, respectively. The EPA Method 8020 results showed that MTBE was not detected in MW1 or MW2, and was detected in MW3 at a concentration of 0.15 mg/L.
- @@@ = In MW3, EPA 8010 compounds were not detected except for 0.011 mg/L 1,2-Dichloroethane; EPA 8270 compounds were not detected except for 0.0022 mg/L Phenol, 0.0051 mg/L 4-Methylphenol, 0.0029 mg/L 2,4-Dimethylphenol, 0.032 mg/L Naphthalene, and 0.010 mg/L 2-Methylphenol.

TABLE 2
GROUNDWATER
LABORATORY ANALYTICAL RESULTS
(Continued)

Sample Location	TPH-D	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes
			ples Collected on ctober 26, 1995			
MW1	NA	ND	ND	ND	ND	ND
MW2	NA	ND	ND	ND	ND	ND
MW3@@@@	NA	19	4.0	0.48	0.64	1.8
			ples Collected on ugust 15, 1995			
MW1	NA	NA	NA	NA	NA	NA
MW2	NA	NA	NA	NA	NA	NA
MW3@@@@	@ NA	7.0	2.4	0.23	0.26	0.73
			ples Collected on May 2, 1995			
MWI	NA	ND	ND	ND	ND	ND
MW2	NA	ND	ND	ND	ND	ND
MW3#	0.84	18	5.4	0.39	0.65	1.7

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

ND = Not Detected.

NA = Not Analyzed.

@@@@ = In MW3, EPA 8010 compounds were not detected except for 0.011 mg/L 1,2-Dichloroethane; EPA 8270 compounds were not detected except for 0.043 mg/L Naphthalene. The EPA Method 8020 results showed that MTBE was not detected in MW1 or MW2, and was detected in MW3 at a concentration of 0.24 mg/L.

@@@@@ = EPA 8010 compounds were not detected except for 0.0091 mg/L 1,2-Dichloroethane; EPA 8270 compounds were not detected except for 0.003 mg/L 4-Methylphenol, 0.005 mg/L 2,4-Dimethyl Phenol, 0.019 mg/L Naphthalene, and 0.003 mg/L 2-Methylnaphthalene.

#= 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 0.014 mg/L 1,2-Dichloroethane; EPA 8270 compounds were not detected except for 0.010 mg/L 2-Methyl naphthalene and 0.062 mg/L Naphthalene.

# TABLE 2 GROUNDWATER LABORATORY ANALYTICAL RESULTS (Continued)

Sample Location	TPH-D	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes
			ples Collected on nuary 30, 1995			
MW1	NA	ND	ND	ND	ND	ND
MW2	NA	ND	ND	ND	ND	ND
MW3##	0.70	24	7.6	0.35	0.90	2.2
			ples Collected on ctober 31, 1994			
MW1	NA	ND	ND	ND	ND	ND
MW2	NA	ND	ND	ND	ND	ND
MW3###	0.60	8.7	2.6	0.26	0.32	0.92
			ples Collected on July 29, 1994			
MWI	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

#### 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 0.018 mg/L 1,2-Dichloroethane; EPA 8270 compounds were not detected except for 0.014 mg/L 2-Methyl naphthalene and 0.11 mg/L 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 0.019 mg/L 1,2-Dichloroethane; EPA 8270 compounds were not detected except for 0.008 mg/L 2-Methyl naphthalene, 0.047 mg/L Naphthalene, and 0.002 mg/L Bis(2-Ethylhexyl) Phthalate.

#### = 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 mg/L 1,2-Dichloroethane; EPA 8270 compounds not detected except for 0.008 mg/L 2-Methylnaphthalene and mg/L Naphthalene.

# TABLE 2 GROUNDWATER LABORATORY ANALYTICAL RESULTS (Continued)

Sample Location	TPH-D	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes
			ples 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
			ples Collected on vember 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.

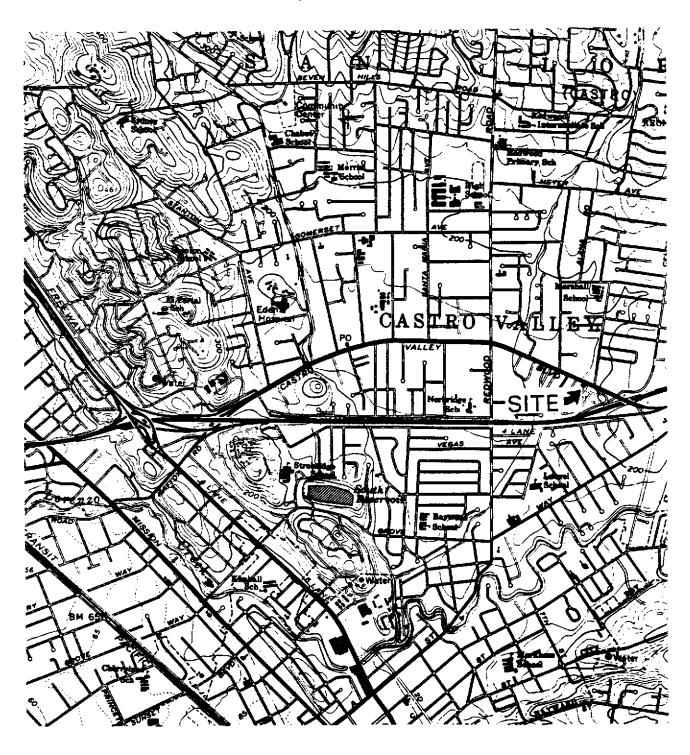
NA = Not Analyzed.

##### = 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 0.28 mg/L 1,2-Dichloroethane; EPA 8270 compounds not detected except for 0.013 mg/L 2-Methylnapthalene and 0.084 mg/L Naphthalene.

<sup>^ =</sup> TRPH not detected; EPA 8010 compounds not detected except for 0.027 mg/L 1,2-Dichloroethane; EPA 8270 compounds not detected except for 0.009 mg/L Phenol, 0.006 mg/L Benzyl Alcohol, 0.006 2-Methylphenol, 0.007 mg/L 2,4-Dimethylphenol, 0.088 mg/L Benzoic Acid, 0.042 mg/L Naphthalene, and 0.015 mg/L 2-Methylnapthalene.

# 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

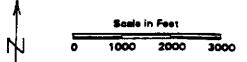
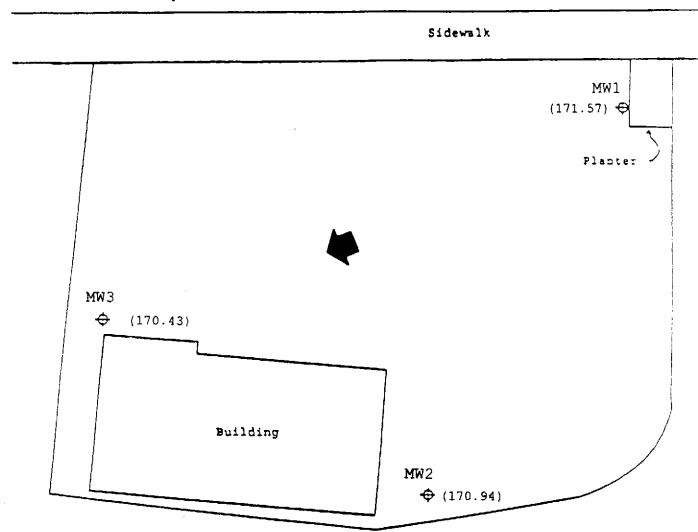


Figure 1
SITE LOCATION MAP
VIP Service
3889 Castro Valley Blvd.
Castro Valley, California

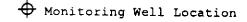
# P & D ENVIRONMENTAL

A Division of Paul H. King, Inc. 4020 Panama Court Oakland, CA 94611 (510) 658-6916

Castro Valley Boulevard



# LEGEND

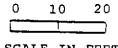


💠 Exploratory Boring Location

() Groundwater Surface Elevation In feet on December 18, 2003

Groundwater Flow Direction

BASE MAP FROM: P&D Environmental: October, 1993



SCALE IN FEET



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	_	Well No	Muj
JOB NO. 0047	_	Date 12	118/03
TOC to Water (ft.) 9,26	_	Sheen 😥	
Well Depth (ft.) 20		Free Produc	t Thickness
Well Diameter Zin.		Sample Coll	ection Method
Gal./Casing Vol. 1,9		Teflon !	Bailer
$\xi = 5.7$ TIME GAL. PURGED	<u>pH</u>	TEMPERATURE (F)	ELECTRICAL CONDUCTIVITY
10:10	8.45	59.5	1.13
7	<del></del>	<del></del>	·····
1c:11 3	8.31	63.8	1,39
10:12 4	8.27	66.4	1.48
10:12 5	8.26	67.4	1.51
10:13 <u>k</u>	8.24	67.9	0.54 1.54
10-14 6.5	8,24	68,2	<del>-0,</del> 1.52
10:18 _ sampling_	time		•
_ <del></del>			
	<del></del>		
	<del></del>	<del></del>	
<del></del>			<del></del>
	<del></del>		
	<del></del>		
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<u> </u>			<del> </del>
	<del></del>	<del></del>	<u> </u>
OTES: 10 BIC 1	· <del></del>	1 . ^	
OTES: NO PHC odor	or 5	heen on Pi	ryl noter.
	1		

# P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

Site Name VIP	_	Well No.	MWZ
JOB NO. 0047	- <del>-</del>	Date 17	2/18/03
TOC to Water (ft.) 8.76	_	Sheen	
Well Depth (ft.) Zo	 -		t Thickness 💯
Well Diameter 21n.	_	Sample Coll	lection Method
Gal./Casing Vol. 1.5	_	Teflon	Baller
€ = 5.41		(0=)	ELECTRICAL (
TIME GAL, PURGED	pH cyl/	TEMPERATURE (F)	CONDUCTIVITY (AUS/cm)
10:41	8.16	64.3	1,32
10 - 5 2	7.86	<u>k6,2</u>	1,36
10:42 3	7.82	67.3	1.42
10.43 4	7.80	67.8	1.4(
10:44 5	7.78	68.C	1.42
10:45 6	7.74	68,1	1,42
10:50 Sampling 1			
		<del></del>	·
	<del></del>		
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<u> </u>	<u> </u>	<del></del>	
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	. <del></del> _		
			<del></del>
	<del></del>		
OTES: NO PHC odor	~~~·	Shoon on	Direce Lab
1110 000	. Or !	Sucre Cyl	hade notes.

# P&D ENVIRONMENTAL GROUNDWATER MONITORING/WELL PURGING DATA SHEET

Sice Name	Well No. Mw3
JOB NO. 0047	Date 12/18/03
TOC to Water (ft.) 5.55	Sheen UCNF
Well Depth (ft.) 26	Free Product Thickness
Well Diameter 2in	Sample Collection Method
Gal./Casing Vol	Teflon Bailer
TIME GAL PURGED DH	TEMPERATURE ( CONDUCTIVITY ( Sky
11:18 7.86	62,2 1,32
<u> </u>	<u>64.7</u> <u>1.47</u>
7,03	65.7 1.48
11:20 4 7.57	66.2 1.48
7.58	66.7 1.49
11:22 6 7.62	67.1 1.50
11:28 Sampling time	
	·
<u> </u>	<del></del>
	<del> </del>
<u> </u>	
NOTES: Slight ptc odar, but	no sheen
_ on purgl war	[
PURGE10.92	



# McCampbell Analytical Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
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http://www.mccampbell.com/E-mail/main/@mccampbell.com/

			<del></del>			http://www.mct	campbell.com E-mail: n	nain@mccampbe	II.com	
P&DE	Environmenta	ıl	Client 1	Project ID: #	0047; VIP Se	rvice	Date Sampled:	12/18/03		
4020 Pa	nama Court					Date Received: 12/19/03				
Oakland	l, CA 94611	4931	Client Contact: Paul King Date Extracted: 12/25/03-12/3						2/30/0	0/03
<u>.</u>			Client I	P.O.:			Date Analyzed:	12/25/03-1	2/30/0	3
Extraction i	Gaso method: SW5030	line Rang	e (C6-C12)		rocarbons as		ith BTEX and		Order: 03	312411
Lab ID	Client ID	Matrix	TPH(g)	МТВЕ	Велгеле	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MWI	w	ND	ND	ND	ND	ND	ND	ı	106
002A	MW2	w -	ND	ND ND	ND	ND	ND	ND	1	103
003A	MW3	; <b>W</b>	9700,a	ND<100	2300	93	280	350	20	118
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	=					 						
Reporting Limit for ND means not detec		W	50		5.0	0.5		0.5	0.5	0.5	. 1	μg/L
above the reportir	g limit	<u> </u>	NA	:	NA ——	NA	;	NA	NA	NA	1	mg/Kg

<sup>\*</sup> water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

<sup>#</sup> cluttered chromatogram; sample peak coelutes with surrogate peak.

<sup>+</sup>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 having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

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

P & D Environmental	Client Project ID: #0047; VIP Service	Date Sampled: 12/18/03		
4020 Panama Court		Date Received: 12/19/03		
Oakland, CA 94611-4931	Client Contact: Paul King	Date Extracted: 12/22/03		
	Client P.O.:	Date Analyzed: 12/22/03		

# Halogenated Volatile Organics by P&T and GC-ELCD (8010 Basic Target List)\*

Work Order: 0312411 Analytical Method: SW8021B Extraction Method: SW5030B

Lab ID	0312411-003B			T to the Post
Client ID	MW3		Reporting DF	
Matrix	w			
DF	100		S	W
Compound		Concentration	μg/kg	μg/L
Bromodichloromethane	ND<50		NA	0.5
Bromoform	ND<50		NA	0.5
Bromomethane	ND<50		NA	0.5
Carbon Tetrachloride	ND<50	!	NA	0.5
Chlorobenzene	ND<50		NA NA	0.5
Chloroethane	ND<50		NA	0.5
2-Chloroethyl vinyl ether	ND<50		NA	0.5
Chloroform	ND<50		NA	0.5
Chloromethane	ND<50		NA	0.5
Dibromochloromethane	ND<50		NA NA	0.5
1,2-Dichlorobenzene	ND<50		NA	0.5
1,3-Dichlorobenzene	ND<50		NA	0.5
1.4-Dichlorobenzene	ND<50		NA	0.5
Dichlorodifluoromethane	ND<50		. NA	0.5
1,1-Dichloroethane	ND<50		NA	0.5
1,2-Dichloroethane	ND<50		NA	0.5
1,1-Dichloroethene	ND<50		NA	0.5
cis-1,2-Dichloroethene	ND<50		. NA	0.5
trans-1,2-Dichloroethene	ND<50		NA	0.5
1.2-Dichloropropane	ND<50	!	. NA	0.5
cis-1,3-Dichloropropene	ND<50		NA	0.5
trans-1,3-Dichloropropene	ND<50		NA NA	0.5
Methylene chloride	ND<50		. NA	0.5
1,1,2,2-Tetrachloroethane	ND<50		, NA	0.5
Tetrachloroethene	ND<50		NA	0.5
1,1,1-Trichloroethane	ND<50	\$	NA	0.5
1,1,2-Trichloroethane	ND<50		NA	0.5
Trichloroethene	ND<50		NA	0.5
Trichlorofluoromethane	ND<50		NA	0.5
Vinyl Chloride	ND<50		NA NA	0.5
	Surrogate	e Recoveries (%)		
%SS:	114		-	
Comments	j			

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe. product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than -2 vol. % sediment; j) sample diluted due to high organic content: k) reporting limit rasied due to insufficient sample amount.



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

P & D Environmental	Client Project ID: #0047; VIP Service	Date Sampled: 12/18/03
4020 Panama Court		Date Received: 12/19/03
Oakland, CA 94611-4931	Client Contact: Paul King	Date Extracted: 12/19/03
	Client P.O.:	Date Analyzed: 12/24/03

### Semi-Volatile Organics by GC/MS (Basic Target List)\*

Extraction Method: SW3510C Analytical Method: SW8270D

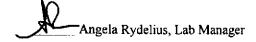
		Work Order: 0312411
Lab ID	0312411-003C	
Client ID	MW3	
Matrix	Water	

<u>Matrix</u>				Water			
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reportin Limit
Acenaphthene	ND	1.0	10	Acenaphthylene	ND	1.0	10
Anthracene	ND	1.0	10	Benzidine	, ND	1.0	- 50
Benzoic Acid	ND	1.0	50	Benzo(a)anthracene	ND	1.0	10
Benzo(b)fluoranthene	ND	1.0	10	Benzo(k)fluoranthene	: ND	1.0	10
Benzo(g,h,i)perylene	ND ND	1.0	10	Benzo(a)pyrene	ND	1.0	10
Benzyl Alcohol	ND_	1.0	20	Bis (2-chloroethoxy) Methane	ND	1.0	10
Bis (2-chloroethyl) Ether	ND	1.0	10	Bis (2-chloroisopropyl) Ether	ND	1.0	10
Bis (2-ethylhexyl) Phthalate	. ND	1.0	10	4-Bromophenyl Phenyl Ether	: ND	1.0	10
Butylbenzyl Phthalate	ND	1.0	. 10	4-Chloroaniline	ND	1.0	20
4-Chloro-3-methylphenol	ND	1.0	10	2-Chloronaphthalene	ND	1.0	10
2-Chlorophenol	ND	1.0	10	4-Chlorophenyl Phenyl Ether	ND	1.0	10
Chrysene	ND	1.0	10	Dibenzo(a,h)anthracene	ND	1.0	10
Dibenzofuran	ND	1.0	10	Di-n-butyl Phthalate	ND	1.0	10
1,2-Dichlorobenzene	ND	1.0	10	1,3-Dichlorobenzene	ND	1.0	10
1,4-Dichlorobenzene	ND	1.0	10	3,3-Dichlorobenzidine	ND	1.0	20
2,4-Dichlorophenol	ND	1.0	10	Diethyl Phthalate	ND	1.0	10
2,4-Dimethylphenol	ND	1.0	10	Dimethyl Phthalate	ND	1.0	10
4.6-Dinitro-2-methylphenol	ND	1.0	50	2,4-Dinitrophenol	ND	1.0	50
2.4-Dinitrotoluene	ND	1.0	10	2,6-Dinitrotoluene	ND	1.0	10
Di-n-octyl Phthalate	ND	1.0	10	1,2-Diphenylhydrazine	ND	1.0	10
Fluoranthene	ND	1.0	10	Fluorene	ND	1.0	10
Hexachlorobenzene	ND	1.0	10	Hexachlorobutadiene	ND	1.0	10
Hexachlorocyclopentadiene	ND	1.0	50	Hexachloroethane	ND	1.0	10
Indeno (1,2,3-cd) pyrene	ND	1.0	10	Isophorone	ND ND	1.0	10
2-Methylnaphthalene	21	1.0	10	2-Methylphenol (o-Cresol)	ND	1.0	10
3 &/or 4-Methylphenol (m,p-Cresol)	ND	1.0	10	Naphthalene	63	1.0	10
2-Nitroaniline	ND	1.0	50	3-Nitroaniline	ND ND	$-\frac{1.0}{1.0}$	50
4-Nitroaniline	ND	1.0	50	2-Nitrophenol	ND	1.0	50
4-Nitrophenol	ND	1.0	10	Nitrobenzene	ND	1.0	50 50
N-Nitrosodiphenylamine	ND	1.0	<del></del>	N-Nitrosodi-n-propylamine	ND	1.0	10
Pentachlorophenol	ND	1.0	50	Phenanthrene	ND	1.0	10
Phenol	ND	1.0	10	Pyrene	ND	1.0	
1,2,4-Trichlorobenzene	ND	1.0	10	2,4,5-Trichlorophenol	ND ND	1.0	10
2,4,6-Trichlorophenol	ND ND	1.0	10	-, ., -, -, -, -, -, -, -, -, -, -, -, -, -,	IAD	1.0	10
		Surr	ogate Re	coveries (%)			
%SS1:	78.2	_	-	%SS2:	81.3		
%SS3:	89.8			%SS4:	83.3		
%SS5:	<b>87</b> .1		·i	%SS6:	81.3		

	Surrogate	Recoveries (%)	
%SS1:	78.2	%SS2:	81.3
%SS3:	89.8	%SS4:	83.3
%SS5:	87.1	%SS6:	81.3
Commonte			

<sup>\*</sup> water samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/nonaqueous liquid samples in mg/L.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content; k) reporting limit raised; benzoic acid found in LCS/LCSD samples. Benzoic acid found in the method blank at a detectable concentration but under the RL for this compound.



ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

<sup>#)</sup> surrogate diluted out of range; &) low or no surrogate due to matrix interference.

# QC SUMMARY REPORT FOR SW8270D

Matrix: W

WorkOrder: 0312411

EPA Method: SW8270D	E	Extraction: SW3510C			BatchID:	9744	Spiked Sample ID: N/A				
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	Criteria (%)	
	µg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High	
Acenaphthene	N/A	50	N/A	N/A	N/A	65.2	65.3	0.138	30	130	
4-Chloro-3-methylphenol	N/A	100	N/A	N/A	N/A	76.3	76.3	0	30	130	
2-Chlorophenol	N/A	100	N/A	N/A	N/A	76.2	78.2	2.63	30	130	
1,4-Dichlorobenzene	N/A	50	N/A	N/A	N/A	75.9	76.5	0.761	30	130	
2,4-Dinitrotoluene	N/A	50	N/A	N/A	N/A	69.3	67.4	2.74	30	130	
4-Nitrophenol	N/A	100	N/A	N/A	N/A	63.6	61.1	4.05	30	130	
N-Nitrosodi-n-propylamine	N/A	50	N/A	N/A	N/A	74.5	77.1	3.51	30	130	
Pentachlorophenoi	N/A	100	N/A	N/A	N/A	65.2	61.8	5.36	30	130	
Phenol	N/A	100	N/A	N/A	N/A	73.9	75.2	1.70	30	130	
Pyrene	N/A	50	N/A	N/A	N/A	69	71	2.87	30	130	
1,2,4-Trichlorobenzene	N/A	50	N/A	N/A	N/A	86.2	86.4	0.220	30	130	
%SS1:	N/A	100	N/A	N/A	N/A	99.5	102	2.78	30	130	
%SS2:	N/A	100	N/A	N/A	N/A	103	108	4.50	30	130	
%SS3:	N/A	100	N/A	N/A	N/A	102	98.9	2.70	30	130	
%SS4:	N/A	100	N/A	N/A	N/A	98.8	98.8	0	30	130	
%SS5:	N/A	100	N/A	N/A	N/A	90.4	87.3	3.45	30	130	
%SS6:	N/A	100	N/A	N/A	N/A	87.7	89.9	2.52	30	130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

<sup>%</sup> Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

<sup>\*</sup> MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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

# QC SUMMARY REPORT FOR SW8021B

Matrix: W

WorkOrder: 0312411

EPA Method: SW8021B	Extraction: SW5030B				BatchtD:	9783	Spiked Sample ID: 0312509-004A				
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS % Rec.	LCSD	LCS-LCSD	Acceptance Criteria (%		
	µg/L	µg/L	% Rec.	% Rec.	% RPD		% Rec.	% RPD	Low	High	
Chiorobenzene	ND	10	103	103	0	96.6	100	3.59	70	130	
1,1-Dichloroethene	סא	10	113	113	0	111	114	2.60	70	130	
Trichloroethene	ND	10	101	100	0.917	92.8	95.5	2.87	70	130	
%SS:	119	100	115	112	2.26	119	111	6.81	70	130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

<sup>%</sup> Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

<sup>\*</sup> MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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# QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W

WorkOrder: 0312411

EPA Method: SW80	)21B/8015Cm E	Extraction: SW50308			BatchID:	9793	Spiked Sample ID: 0312411-002A					
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance	e Criteria (%)		
	μg/L	μg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High		
TPH(btex) <sup>£</sup>	ND	60	95.8	93.1	2.77	96.1	95.7	0.345	70	130		
МТВЕ	ND	10	89.6	88.9	0.692	87.9	89.8	2.04	70	130		
Benzene	ND	10	110	106	3.75	107	109	1.78	70	130		
Toluene	ND	10	115	111	3.23	113	114	1.41	70	130		
Ethylbenzene	ND	10	117	113	3.45	115	116	0.977	70	130		
Xylenes	ND	30	120	113	5.71	117	117	0	70	, 130		
%SS:	103	100	114	113	0.988	112	113	0.917	70	130		

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

<sup>\*</sup> MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

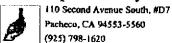
<sup>£</sup> TPH(btex) = sum of BTEX areas from the FID.

# 2003 30 Dec

LASERJET

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McCampbell Analytical Inc.



# **CHAIN-OF-CUSTODY RECORD**

Page 1 of L

WorkOrder: 0312411

Report to:

Paul King

P & D Environmental 4020 Panama Court

Oakland, CA 94611-4931

TEL:

(510) 658-6916 (510) 834-0772

FAX: ProjectNo: #0047; UIP Service

PO:

Bill to:

Accounts Payable

P & D Environmental

4020 Panama Court

Oakland, CA 94611-4931

Requested TAT:

Date Printed:

5 days

Date Received: 12/19/03

12/19/03

Sample ID ClientSampID									Reque	ated Tes	is (See i	egend b	elaw)						
	ClientSampID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1
312411-001	\$8W/1	Mister	12/10/02	77		T		T			-	'n			·				
0312411-001 0312411-002	MW1 MW2	Water	12/18/03 12/18/03			T	A	<u> </u>	<del></del>		<del></del>	<u> </u>		Ī —	<del> </del>				Ŧ

### Test Legend:

1	5010B_W
В	
11	

2 (	8270D_W
7	
12	

3	G-MBTEX_W
[8[	
13]	

4	
9	
14	

5	
10	-
15	

Prepared by: Melissa Valles

#### Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expanse.

pleo

4020 Panama Court Oakland, CA 94611 (510) 658-6916 CHAIN OF CUSTODY RECORD

PAGE PROJECT NUMBER: PROJECT NAME: 0047 DIP Service SAMPLED BY: (PRINTED AND SIGNATURE) Wilhelm Welzenbach SAMPLE NUMBER SAMPLE LOCATION DATE TIME TYPE 12/18/03 valev MWI TCE Normallymavand MWZ MWZ GOOD CONDITION APPROPRIATE HEAD SPACE ABSENT DECHLORINATED IN LAB PRESERVED IN LAB OAG | METALS | OTHER PRESERVATION RELINQUISHED BY: (SIGNATURE) TOTAL NO. OF SAMPLES RECEIVED BY: (SIGNATURE) TIME LABORATORY: (THIS SHIPWENT) 1015 TOTAL NO. OF CONTAINERS Mc Campbell Analytica (THIS SHIPMENT) RELINQUISHED BY: (SIGNATURE) DATE LABORATORY CONTACT: LABORATORY PHONE NUMBER: RECEIVED BY: (SIGNATURE) Angela Rydelius (925) 798-1620 RELINQUISHED BY: (SIGNATURE) DATE SAMPLE ANALYSIS REQUEST SHEET RECEIVED FOR LABORATORY BY: (SIGNATURE) ATTACHED: ( )YES (>)NO REMARKS: VOAs presented to HCR.