P & D ENVIRONMENTAL

300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916

January 24, 1994
Report 0047.R1

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

SUBJECT: SOIL EXCAVATION REPORT
VIP Service
3889 Castro Valley Blvd.
Castro Valley, CA

Gentlemen:

P&D Environmental (P&D) is pleased to present this report documenting remediation activities at the subject site. These activities included the excavation, characterization and disposal of petroleum hydrocarbon-impacted soil; the removal of remaining underground piping associated with the former underground storage tank system; the removal of approximately 3,100 gallons of water from the tank pit using a vacuum truck; the collection of soil samples to evaluate the effectiveness of the excavation activities in removing the petroleum hydrocarbon-impacted soil; and the backfilling and compaction of the fuel tank pit at the subject site. [redacted] in accordance with P&D Proposal 081993.P1 dated August 19, 1993, P&D's Workplan Addenda 0047.L2 dated [redacted], 1993, and 100503.P1 dated October 5, 1993; and P&D's Workplan 0047.W1 dated September 10, 1993. The workplan was approved by Mr. Scott Seery of the Alameda County Department of Environmental Health (ACDEH) in a letter dated September 24, 1993. A Site Location Map (Figure 1) is attached with this report.

Prior to performing field work, a workplan was submitted to the ACDEH for review and approval; notification was provided to the ACDEH of the beginning excavation date; Underground Safety Alert was notified for buried utility location; notification was provided to CalOSHA and the Bay Area Air Quality Management District; and a site health and safety plan was prepared.

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 during the time that VIP Service occupied the site.

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. A copy of the Site Plan provided by Accutite showing the sample collection locations is attached with this report as Figure 2.

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 soil sample results from the fuel tank pit are summarized in Table 1 and the groundwater sample results are summarized in Table 2.

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 soil sample results from beneath the dispenser islands are summarized in Table 3.

The results of the sample collected from the waste oil tank pit showed 870 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. The soil sample results for the sample from the waste oil tank pit are summarized in Table 4.

FIELD ACTIVITIES

Between August 27 and November 1, 1993 P&D personnel collected stockpiled soil samples for soil stockpile 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, the soil which was stockpiled by Accutite during the tank removal activities and soil removed from the tank pit during the subsequent soil excavation activities was disposed of at an appropriate disposal facility, water in the tank pit was removed from the pit using a vacuum truck, and the tank pit was backfilled and compacted. [redacted] The sample collection locations are shown on the attached Site Plan, Figure 3. Each of these activities are discussed in greater detail below.

Soil Excavation

On October 7, 1993 the canopy located over the former dispenser islands was demolished in preparation for excavation of the fuel tank pit.

Between October 8 and October 18, 1993 P&D oversaw the excavation of approximately 680 cubic yards of soil from the fuel tank pit. The final extent of excavation is shown in the attached Site Plan, Figure 3. Prior to the October 1993 excavation activities, the original side walls of the fuel tank pit had collapsed. For this reason, the original limits of the tank pit walls following tank removal are unknown to P&D. Soil excavated from the vicinity of the waste oil tank was stockpiled separately from soil excavated from the fuel tank pit.

Groundwater was encountered in the tank pit at a depth of approximately 11 feet below grade. The bottom of the excavation was extended to approximately one

foot below the water level in the pit. Further excavation of the pit bottom was not possible because the material at the bottom of the pit became mixed with the water in the pit, resulting in a low viscosity mud which could not be excavated by standard techniques.

Water Removal From the Tank Pit

On October 19, 1993 approximately 3,100 gallons of water was pumped from the fuel tank pit by H&H Environmental Services (H&H) of San Francisco, California using a vacuum truck. H&H is a State-certified hazardous waste hauler. The water was hauled to PRC Patterson in Patterson, California for disposal. PRC Patterson is a State-certified disposal facility for oily water. The water was hauled under uniform hazardous waste manifest number 92221026. P&D personnel observed that the pit was entirely dewatered by the vacuum truck.

Abandoned Piping Removal

On October 18, 1993 abandoned piping which was encountered during tank removal activities was removed from the site. The piping was located in a trench parallel to the concrete pad beneath the canopy. The piping was constructed of fiberglass and did not contain any liquids or petroleum hydrocarbon odors. The location of the abandoned piping is shown on Figure 3.

Confirmation Soil Sample Collection

On October 19, 1993 eight confirmation soil samples were collected from the fuel tank pit at a depth of approximately 10 feet. The samples were collected by excavating into the sidewall of the tank pit approximately two feet and pushing a two-inch diameter, six-inch long brass tube into the freshly exposed tank pit sidewall surface. The brass tube was then retrieved, and the ends of the tube sequentially covered with aluminum foil and plastic endcaps. The tube was then labeled, placed into a ziplock baggie, and stored in a cooler with ice pending delivery to McCampbell Analytical, Inc. in Pacheco. McCampbell Analytical, Inc. is a State-certified hazardous waste testing laboratory. Chain of custody documentation procedures were observed for sample handling. The sample collection locations are shown on Figure 3.

In addition, one soil sample, designated as P8, was collected at a depth of approximately 2.5 feet in the pipe trench beneath the abandoned piping. The soil sample was collected into a brass tube using procedures described for the pit samples. The sample was stored in a cooler with ice until it was delivered to McCampbell Analytical, Inc. Chain of custody procedures were observed for sample handling.

Stockpiled Soil Characterization and Disposal

On August 27, 1993 P&D personnel collected three four-point composite samples, designated as COMP A, COMP B and COMP C from the stockpiled soil associated with the Accutite tank removal activities. On September 3, 1993 P&D personnel returned to the site to collect an additional [redacted] samples from the COMP B and COMP C portions of the stockpile. The composite samples collected on September 3 (designated as COMP B and COMP C) were analyzed with COMP B and COMP C samples collected on August 27, 1993 to comprise two eight-point composite samples. Following approval of the laboratory analytical results by the disposal facility, the soil was hauled from the site on October 6, 7 and 8, 1993 to the BFI Sanitary Landfill in Vacaville, California.

After the stockpiled soil associated with the tank removal activities had been removed, P&D returned to the site on October 8, 1993 to collect four four-point composite samples designated as COMP D, COMP E, COMP F and COMP G from soil excavated from the tank pit. Following approval of the laboratory analytical

results by the disposal facility, soil from the portions of the stockpile characterized by COMP D, COMP E and COMP F was hauled from the site on October 15 and 18, 1993 to the B&J Sanitary Landfill in Vacaville, California.

On October 19, 1993 P&D personnel returned to the site to collect four four-point composite samples designated as COMP-G1, COMP H, COMP I and COMP J. The COMP G1 composite samples were collected from the portion of the stockpile formerly characterized by the COMP G samples. The COMP J composite samples were collected from the stockpiled soil removed from the vicinity of the waste oil tank pit. Following approval of the laboratory analytical results by the disposal facility, all of the soil was hauled from the site on October 27, 28, 29 and November 1, 1993 to the B&J Sanitary Landfill in Vacaville, California.

w.o. tank pit

Tank Pit Backfilling and Compaction

Prior to backfilling of the fuel tank pit, approximately 100 cubic yards of pea gravel was placed in the bottom of the pit to a depth of approximately 10 feet below grade. At the request of VIP Service, [redacted] The pea gravel was then covered with a geotextile membrane to prevent imported soil from infiltrating the pea gravel.

Between October 21 and October 27, 1993 approximately 1,260 cubic yards of clean soil was brought to the site. The soil was visually inspected prior to being brought to the site, and two four-point composite samples were collected from the soil stockpile for laboratory analysis. The composite samples, designated as COMP XX and COMP YY were collected using methodologies described above for the collection of composite samples.

Compaction of the fill material was performed using a vibratory plate beginning at a depth of approximately 10 feet. Compaction testing was performed by Construction Materials Testing, Inc. of Concord, California. A compaction curve for the imported material and documentation of the compaction testing results as set forth in a letter dated December 2, 1993 from Construction Materials Testing, Inc. are attached with this report.

GEOLOGY AND HYDROGEOLOGY

Based on review of regional geologic maps from U.S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning," by E.J. Helley and K.R. Lajoie, 1979 the subject site is underlain by Late Pleistocene alluvium (Qpa). The alluvium is described as typically consisting of weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand and gravel. Based on review of the regional geologic maps provided in U.S. Geological Survey Open File Report 80-540, "Preliminary Geologic Map of the Hayward Quadrangle, Alameda and Contra Costa Counties, California " by Thomas Dibblee, Jr., 1980 the alluvial materials are inferred to be underlain at depth by bedrock materials of the Upper Cretaceous Panoche Formation. Additionally, the site is situated approximately 0.8 miles northeast of the inferred trace of the East Chabot Fault and 1.7 miles northeast of the mapped trace of the active Hayward Fault.

As encountered in the sidewalls of the tank pit, the soil at the site consists of a brown to black silty clay to a depth of approximately 6 to 7 feet. Below this depth, the soil consists of a gray silty clay exhibiting a petroleum hydrocarbon odor to the total depth explored of approximately 12 feet.

LABORATORY ANALYTICAL RESULTS

The soil samples from the tank pit sidewalls (TP1 through TP8) and from the pipe trench (P8) were analyzed for TPH-G using EPA Method 5030 in conjunction with Modified EPA Method 8015, and BTEX using EPA Method 8020. In addition, the pit sidewall soil sample collected from the former waste oil tank pit location (TP1) was analyzed for Total Recoverable Petroleum Hydrocarbons (TRPH) using EPA Method 418.1; halogenated volatile organic compounds using EPA Method 8010; and for semi-volatile organic compounds using EPA Method 8270.

All of the composite samples were analyzed for TPH-G using EPA Method 5030 in conjunction with Modified EPA Method 8015, and BTEX using EPA Method 8020. In addition, COMP A was analyzed for STLC Lead using EPA Method 7420, and for Reactivity, Corrosivity and Ignitability (RCI) using California Department of Health Services-approved methods. The composite samples COMP B and COMP C were also analyzed for halogenated volatile organic compounds using EPA Method 8010, and for the CAM 17 metals using EPA-approved methods. The composite sample COMP J was also analyzed for halogenated volatile organic compounds using EPA Method 8010, and for TRPH using EPA Method 418.1.

confirmatory samples

The laboratory analytical results of the soil samples collected from the tank pit sidewalls showed TPH-G concentrations ranging from 33 to 1,800 ppm and benzene concentrations ranging from 0.064 to 23 ppm, with the exception of sample TP7, which showed 3,200 ppm TPH-G and 24 ppm benzene. The laboratory analytical results are summarized in Table 5. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

The laboratory analytical results of the soil sample collected from the pipe trench showed a TPH-G concentration of 1.2 ppm and a benzene concentration of 0.008 ppm. The laboratory analytical results are summarized in Table 6. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

The laboratory analytical results of the composite samples COMP A through COMP G, COMP G1 and COMP H through COMP J showed concentrations of petroleum hydrocarbons which were in accordance with the Waste Discharge Requirements for disposal at the B&J Sanitary Landfill in Vacaville, California. No EPA Method 8010 compounds were detected in any of the composite soil samples. The laboratory analytical results of the composite soil samples are summarized in Table 7. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

The laboratory analytical results of the composite soil samples COMP XX and COMP YY did not show any detectable concentrations of TPH-G or BTEX. The laboratory analytical results of the composite soil samples are summarized in Table 8. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

DISCUSSION AND RECOMMENDATIONS

Based on the results of the laboratory analytical results, TPH-G concentrations ranging from 33 to 1,800 ppm were detected in soil samples collected from the sidewalls of the tank pit excavation, with the exception of sample TP7 which showed 3,200 ppm. Further excavation to the north, west and south was not possible because of the presence of the sidewalk to the north, the property line to the west and the site building to the south. Based upon the soil sample results and the limitations of further excavation, P&D recommends that three groundwater monitoring wells be installed to evaluate the presence of petroleum hydrocarbons in groundwater and to determine the groundwater flow

direction at the site. In addition, P&D recommends soil borings to further define the extent of petroleum hydrocarbons in soil in the vicinity of the tank pit.

Documentation of groundwater monitoring well installation and exploratory soil boring to define the extent of soil contamination in the vicinity of the tank pit is presented in P&D's Monitoring Well Installation Report (report 0047.R2) dated January 24, 1994.

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.

It is recommended that a California licensed Geotechnical Engineer should be consulted prior to placement of any structure or facility over the area of the former tank pit.

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

Sincerely,

P&D Environmental

Paul H. King

Paul H. King
Hydrogeologist

Don R. Braun

Don R. Braun
Certified Engineering Geologist
Registration No. : 1310
Expires: 6/30/94

REGISTERED GEOLOGIST
DON R. BRAUN
No. 1310
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

PHK
0047.R1

Attachments: Tables 1, 2, 3, 4, 5, 6, 7 & 8
Site Location Map (Figure 1)
Site Plan Showing Accutite Sample Locations (Figure 2)
Site Plan Showing Post-Excavation Sample Collection Locations (Figure 3)
Hazardous Waste Manifest 29991026
Construction Materials Testing, Inc. letter dated 12/2/93
Laboratory Analytical Results
Chain of Custody Documentation

TABLE 1
SUMMARY OF LABORATORY ANALYTICAL RESULTS
FUEL TANK PIT SOIL SAMPLES
(Samples Collected on April 26, 1993)

Sample No.	Total Lead	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
NE	5.8	4,000	47	300	85	490
NW	6.0	1,100	8.1	41	20	120
SE	13	6,200	92	360	110	610
SW	ND	120	4.1	5.4	1.7	8.5
EN	5.6	3,300	11	170	70	420
ES	ND	2,700	10	95	38	220
WN	8.0	290	3.4	16	4.7	26
WS	ND	330	4.5	12	5.7	30

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
ND = Not Detected.
Results are in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF LABORATORY ANALYTICAL RESULTS
FUEL TANK PIT GROUNDWATER SAMPLE
(Sample Collected on April 26, 1993)

Sample No.	Total Lead	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
Water-VIP	0.095	140	13	22	3.2	19

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
Results are in parts per million (ppm), unless otherwise indicated.

TABLE 3
SUMMARY OF LABORATORY ANALYTICAL RESULTS
DISPENSER ISLAND SOIL SAMPLES
(Samples Collected on April 28, 1993)

Sample No.	Total Lead	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
I-1	ND	ND	0.0080	ND	ND	ND
I-2	ND	1.7	0.097	ND	0.052	0.020
I-3	ND	4.7	0.21	0.038	0.10	0.37
I-4	ND	3.4	0.27	0.031	0.14	0.45
I-5	ND	2.7	0.075	ND	0.058	0.12
I-6	7.6	ND	ND	ND	ND	ND
I-7	5.8	ND	0.020	ND	0.017	0.015

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
ND = Not Detected.
Results are in parts per million (ppm), unless otherwise indicated.

TABLE 4
SUMMARY OF LABORATORY ANALYTICAL RESULTS
WASTE OIL TANK PIT SOIL SAMPLE
(Sample Collected on April 26, 1993)

Sample No.	Total Lead	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
WO*	21	670	7.3	21	8.7	44

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
* = Total Petroleum Hydrocarbons as Diesel was reported at a concentration of 410 ppm, however 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; Total Oil and Grease was reported at a concentration of 1,300 ppm; 0.023 ppm 1,2-Dichloroethane and 0.0094 ppm Tetrachloroethene were detected in the EPA Method 8010 analysis; 2.7 ppm 2-Methylnapthalene and 3.8 ppm Naphthalene were detected in the EPA Method 8270 analysis; and Cadmium, Chromium, Nickel and Zinc were reported at not detected, 41, 63, and 50 ppm, respectively.
Results are in parts per million (ppm), unless otherwise indicated.

TABLE 5
SUMMARY OF LABORATORY ANALYTICAL RESULTS
FUEL TANK PIT SOIL SAMPLES FOLLOWING OVER-EXCAVATION
(Samples Collected on October 19, 1993)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
TP1-10.0	120	4.6	9.0	1.6	8.9
TP2-10.0	210	1.8	1.7	27	15
TP3-10.0	[redacted]	23	68	27	160
TP4-10.0	[redacted]	13	46	15	87
TP5-10.0	[redacted]	13	63	17	110
TP6-10.0	[redacted]	6.7	22	18	109
TP7-10.0	[redacted]	24	220	80	430
TP8-10.0	33	0.064	0.090	0.43	0.24

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
[redacted] = TRPH was 120 ppm; EPA Method 8240 compounds were not detected except for 2.2 ppm benzene, 2.6 ppm ethylbenzene, 2.7 ppm toluene and 14 ppm total xylenes; EPA Method 8270 compounds were not detected except for 0.34 ppm Phenol.
Results are in parts per million (ppm), unless otherwise indicated.

TABLE 6
SUMMARY OF LABORATORY ANALYTICAL RESULTS
PIPE TRENCH SOIL SAMPLE
(Sample Collected on October 19, 1993)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
P8	1.2	0.008	0.008	0.014	0.034

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
Results are in parts per million (ppm), unless otherwise indicated.

TABLE 7
SUMMARY OF LABORATORY ANALYTICAL RESULTS
[redacted]
(Samples Collected on August 27 through October 19, 1993)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
COMP A***	39	ND	0.031	0.035	0.22
COMP B****	320	1.2	12	3.5	38
COMP C****	600	0.44	12	7.1	55
COMP D	200	0.67	3.7	2.5	15
COMP E	210	0.55	3.8	2.5	17
COMP F	110	0.28	1.4	1.2	8.6
COMP G	1,900	2.2	28	16	110
COMP G1	110	0.67	0.81	0.37	3.8
COMP H	310	0.57	5.3	2.5	18
COMP I	720	1.6	17	6.9	46
COMP J+	28	ND	0.10	ND	ND

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
ND = Not Detected.
*** = The STLC Lead result was 0.60 ppm; the test results for reactivity and ignitability were negative, and the corrosivity test result showed the soil to have a pH of 7.99.
**** = EPA Method 8010 compounds were not detected and CAM 17 results did not exceed 10 times any of their respective STLC values.
+ = Total Recoverable Petroleum Hydrocarbons (analyzed using EPA Method 418.1) were detected at 670 ppm and EPA Method 8010 compounds were not detected.
Results are in parts per million (ppm), unless otherwise indicated.

TABLE 8
SUMMARY OF LABORATORY ANALYTICAL RESULTS
IMPORT FILL COMPOSITE SOIL SAMPLES
(Sample Collected on October 19, 1993)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
COMP XX	ND	ND	ND	ND	ND
COMP YY	ND	ND	ND	ND	ND

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
ND = Not Detected.
Results are in parts per million (ppm), unless otherwise indicated.

P & D ENVIRONMENTAL

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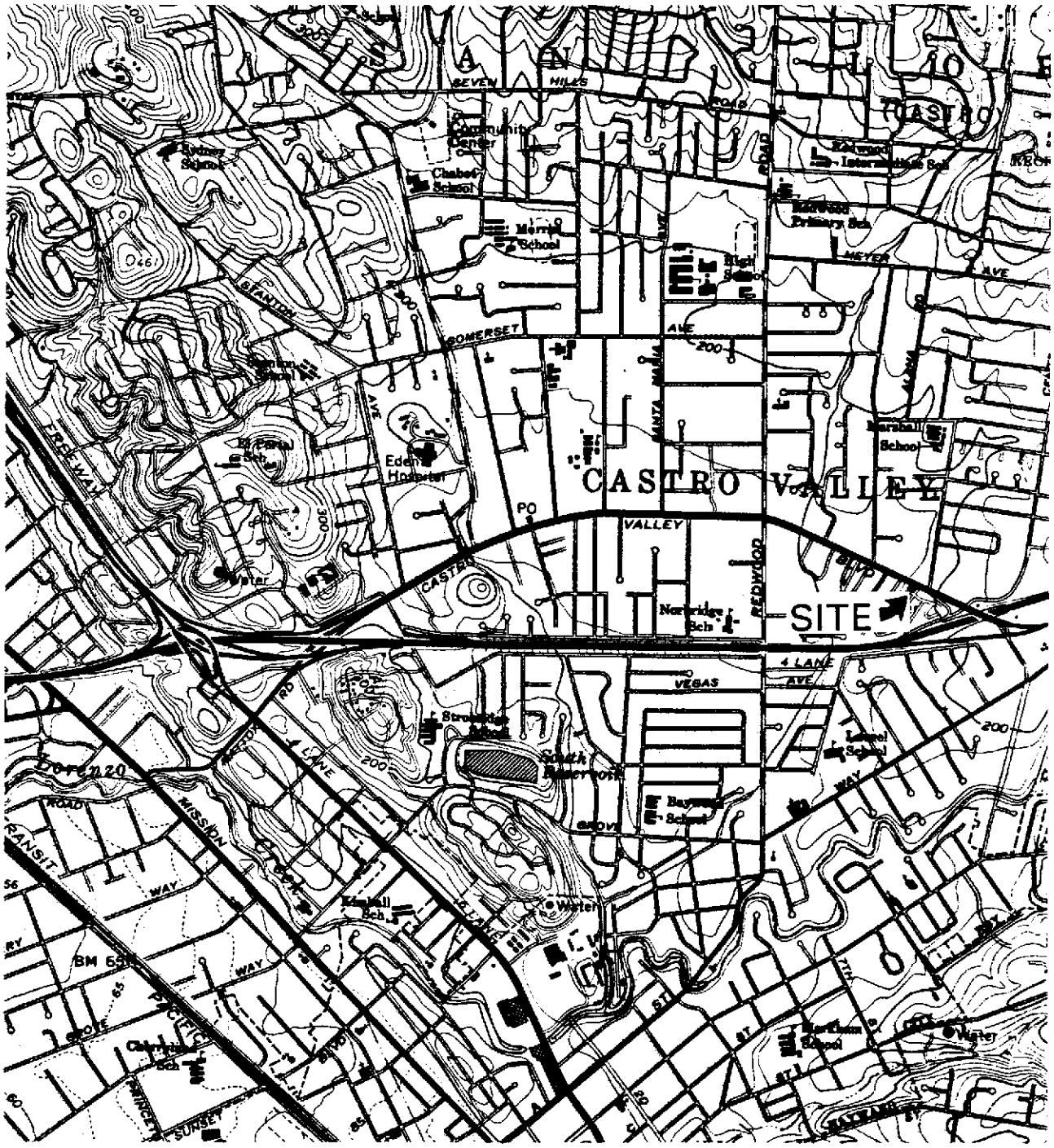


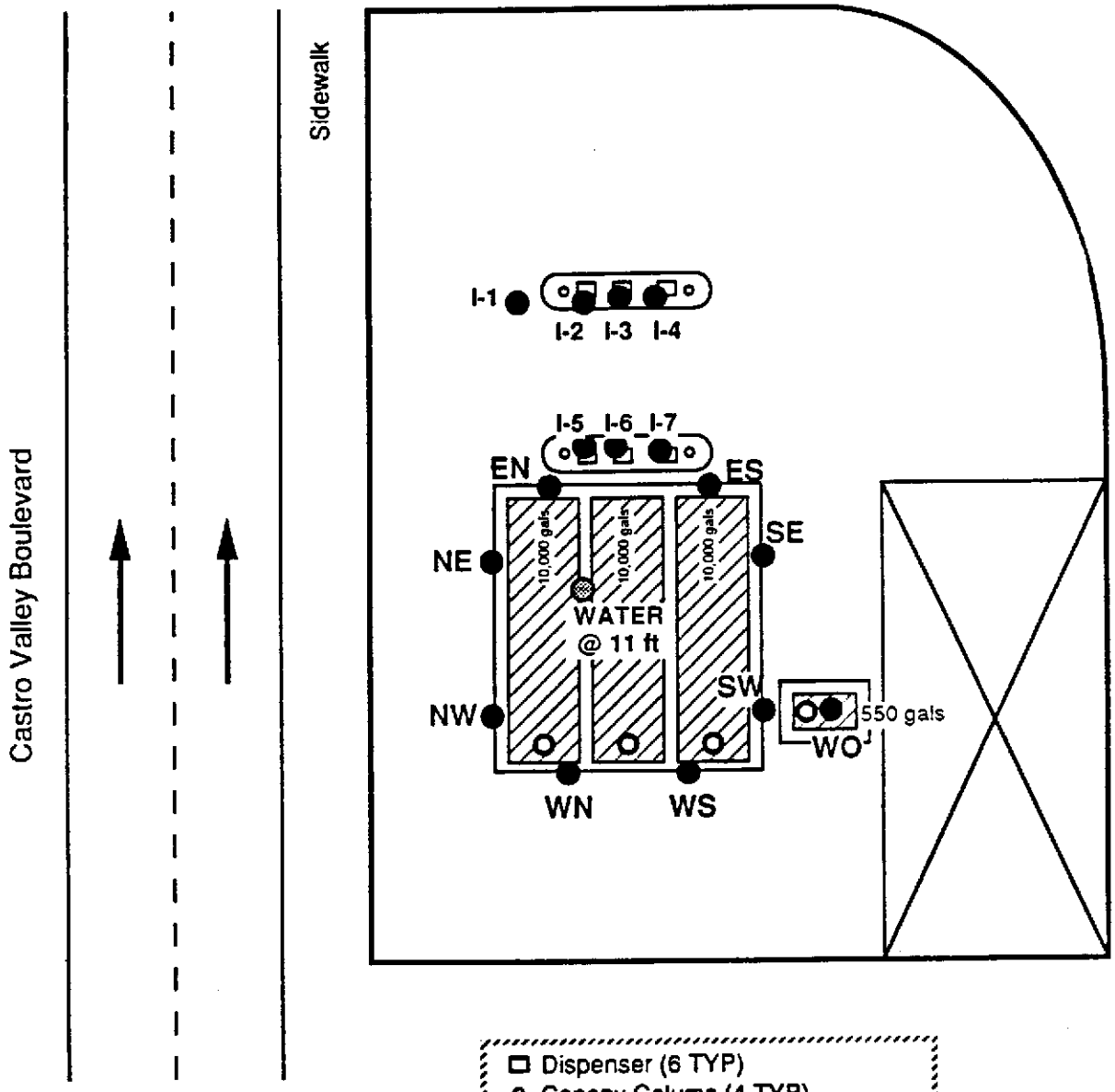
Base Map From
U.S. Geological Survey
Hayward, Calif.
7.5 Minute Quadrangle
Photorevised 1980

N

Scale in Feet

0 1000 2000 3000

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

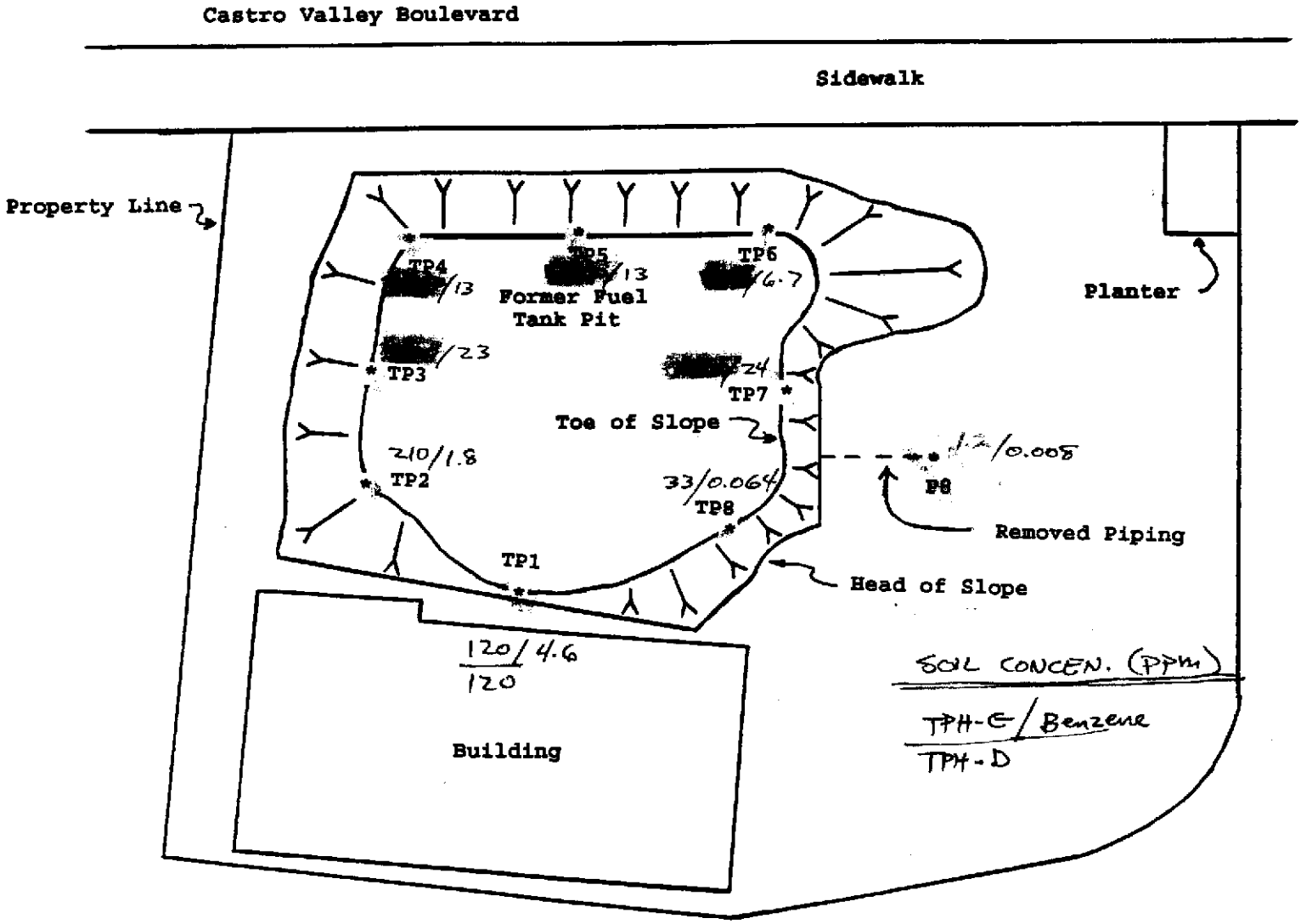


- Dispenser (6 TYP)
- Canopy Colums (4 TYP)
- Tank Fill Locations (4 TYP)
- Soil Sampling Locations (16 TYP)
- Water Sampling Location

Figure 2
SITE PLAN

Revisions	Date	Page		
0	26 APR 93	1	VIP Service Station c/o Patel, Lalji B. 385 Century Circle Danville, CA 94526	By: ACCUTITE 35 South Linden Avenue South San Francisco California 94080
		of		
		1		
← N	SCALE: 1"=20' (sampling locations only)		Site: **VIP SERVICE STATAION** **3889 Castro Valley Blvd** **Castro Valley, CA**	

P & D ENVIRONMENTAL
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916



Base Map From
P&D Environmental
October, 1993

Figure 3
SITE PLAN
VIP Service
3889 Castro Valley Blvd.
Castro Valley, California

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-94)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

92221026

GENERATOR

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.: CAC000895928 | 21026
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
V.I.P. SERVICE
385 Century Circle, Dublin CA. 94520

4. Generator's Phone (415) 973-9848

5. Transporter 1 Company Name: H & H Ship Service Company
6. US EPA ID Number: CAD004771168

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
PRC PATTERSON, INC.
13331 N. Highway 33
Patterson CA. 95363
10. US EPA ID Number: CAD083166728

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
OIL AND WATER NON-RCRA HAZARDOUS WASTE LIQUID	001	TT	03100	G
b.				
c.				
d.				

[redacted]

15. Special Handling Instructions and Additional Information
JOB #13474
24 Hr. Emergency Contact: H & H #(415) 543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

JOB SITE: FORMER GAS STATION
3889 Castro Valley Blvd.
Castro Valley, California

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Paul H. King (Agent for owner)	Paul H. King (Agent for owner)	10	19	93

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
[redacted] M. PENALVER	Estel	10	19	93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (12/91)
EPA 8700—22

Yellow: GENERATOR RETAINS

CONSTRUCTION MATERIALS TESTING, INC.

File No. 91775
December 2, 1993

P&D Environmental
300 Monte Vista, #101
Oakland, CA 94611

Attn: Paul King

Subject: 3889 Castro Valley Boulevard
Castro Valley, CA

RESULTS OF SOIL COMPACTION TESTING

Dear Mr. King:

Engineering technicians from our firm have performed the requested soil compaction testing on the backfill material placed in the tank removal excavation at the subject site. These tests were taken with a nuclear soil moisture/density gauge following the ASTM D2922 test procedure. The laboratory maximum densities were performed in accordance with ASTM D1557.

We understand that the required relative compaction was 90% except for the top 4 feet of compacted fill which needed 95%. Where tests were below this requirement, additional effort was made until the required compaction was achieved.

The results of the field and laboratory maximum density tests are shown on the attached tables.

Sincerely,

CONSTRUCTION MATERIALS TESTING, INC.

Donald G. Rose

DGR/lak

1000-U Detroit Avenue • Concord, CA 94518
(510) 825-2840 • FAX (510) 682-7953

T A B L E I

Summary of Laboratory Compaction Test Results

Sample No.	Source & Description	Max. Dry Density p.c.f.	Optimum/Moisture % dry wt.
1	Import: dark brown silty sand with gravel	130.7	7.9
2	Import: Livermore brown silt with rock	130.1	10.1

T A B L E II

Nomenclature
SG-Subgrade
EG-Existing Grade
FG-Finished Grade
AB-Aggregate Base

F-Denotes Failing Test
2F5-Second Numeral Denotes Retest No.

SUMMARY OF FIELD DENSITY TESTS

Test No.	Date 1993	Test Location 3889 Castro Valley Blvd, Castro Valley	Elev. Ft.	Dry Density p.c.f.	Moisture % dry wt.	Rel. Comp. % of Max.	Sample No.
1	10/22	10 ft west of center	FG-10.5	120.1	12.1	92	1
2	10/22	15 ft east of center	FG-9.5	119.1	10.4	92	2
3	10/22	10 ft northwest of center	FG-8.5	117.6	11.3	90	2
4	10/22	Center of excavation	FG-7	118.2	11.7	91	2
5	10/22	20 ft southeast of center	FG-7	119.7	10.6	92	1
6	10/22	4 ft from west end center	FG-6.5	116.7	11.7	90	2
7	10/22	7 ft from east end center	FG-6	119.9	10.8	92	1
8	10/25	8 ft southwest of center	FG-5	118.9	9.8	91	2
9	10/25	25 ft northeast of center	FG-4.5	121.4	11.5	93	2
10	10/25	Center of excavation	FG-3.5	124.0	11.0	95	2
11F13	10/25	5 ft from south side of centerline	FG-3	120.7	10.6	93	2
12	10/25	5 ft from north side of centerline	FG-2	126.4	9.7	97	2
13	10/25	5 ft from south side of centerline	FG-3	124.5	9.6	96	2
14	10/26	Southeast quarter of excavation	FG-2	123.9	12.1	95	2
15	10/26	Northwest quarter of excavation	FG-1	123.2	11.1	95	2
16	10/27	10 ft north of center	FG	123.4	8.4	95	2
17F18	10/27	15 ft south of center	FG	118.7	10.2	91	2
18	10/27	15 ft south of center	FG	124.0	9.0	95	2

CONSTRUCTION MATERIALS TESTING, INC.

Job Name: 3889 CASTRO VALLEY BLVD **Job No.:** 91775

Sample Description: BR SI W/ROCK **Sample No.:** 2

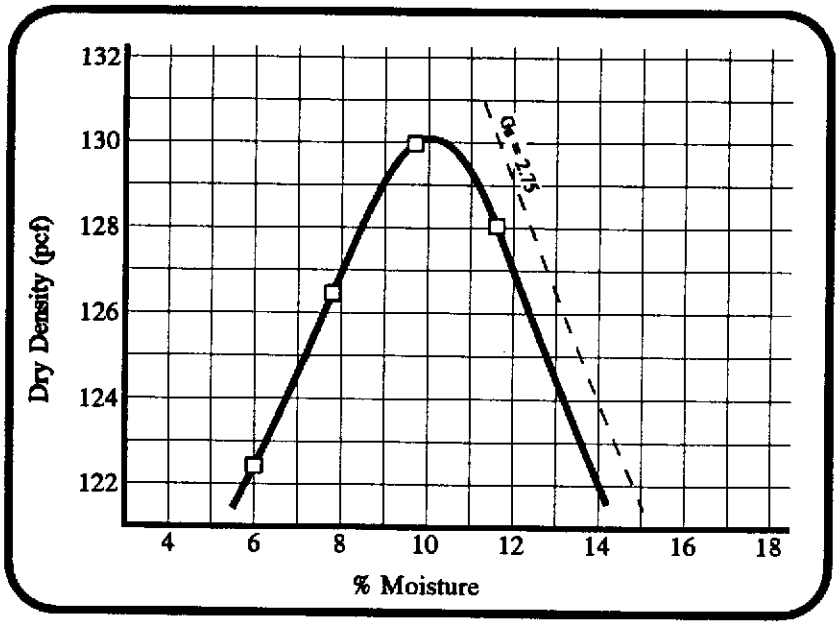
Source: IMPORT-LIVERMORE **Date:** 10/25/93

Client Info: P&D ENVIRONMENTAL **Sampled By:** AM

Classification Group Symbol: _____ (From ASTM D 2487) **Tested By:** JM

ASTM D 1557 method A

Moisture-Density Relations of Soils and Soil Aggregate Mixtures



MAX DENS = 130.1 pcf

OPT MOIST = 10.1 %

Moisture Ranges:

% Compaction	% Moisture
95%	6.6 – 13.4
90%	3.3 – 16.2
85%	0.1 – 19.3

Lab Data

% Retained on ¾" sieve:

Trial Number	1	2	3	4		
Wet Weight (g)	1962	2061	2155	2160		
Wet Density (pcf)	129.8	136.3	142.5	142.9		
Dry Weight (g)	1851	1912	1965	1936		
% Moisture	6.0	7.8	9.7	11.6		
Dry Density (pcf)	122.4	126.5	130.0	128.0		

$$\text{Wet Density} \begin{cases} \text{Method A} = 0.06614 \times \text{Wet Wt.} \\ \text{Method B,C,D} = 0.02939 \times \text{Wet Wt.} \end{cases} \qquad \%\ \text{Moisture} = 100 \times \frac{\text{Wet Wt.} - \text{Dry Wt.}}{\text{Dry Wt.}} \qquad \text{Dry Density} = \frac{100 \times \text{Wet Density}}{100 + \%\ \text{Moisture}}$$

1000-U Detroit Avenue • Concord, CA 94518
(510) 825-2840 • FAX (510) 682-7953

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

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Service, Castro Valley	Date Sampled: 10/19/93
		Date Received: 10/19/93
	Client Contact: Paul King	Date Extracted: 10/20/93
	Client P.O:	Date Analyzed: 10/20/93

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)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
32716	TP1-10.0	S	120,a	4.6	3.0	1.6	8.9	93
32717	TP2-10.0	S	210,b	1.8	1.7	27	15	90
32718	TP3-10.0	S	1800,a	23	68	27	160	118#
32719	TP4-10.0	S	750,a	13	46	15	87	102
32720	TP5-10.0	S	1300,b	13	63	17	110	90
32721	TP6-10.0	S	980,b	6.7	22	18	109	91
32722	TP7-10.0	S	3200,b	24	220	80	430	119
32723	TP8-10.0	S	33,b	0.064	0.090	0.13	0.24	84
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 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Service, Castro Valley	Date Sampled: 10/19/93
		Date Received: 10/19/93
	Client Contact: Paul King	Date Extracted: 10/20/93
	Client P.O:	Date Analyzed: 10/20/93

Total Recoverable Petroleum Hydrocarbons as Oil & Grease (with Silica Gel Clean-up) by Scanning IR Spectrometry*

EPA method 418.1 or 9073; Standard Methods 5520 C&F

Lab ID	Client ID	Matrix	TRPH+
32716	TP1-10.0	S	120
Detection Limit unless otherwise stated; ND means Not Detected		W	5 mg/L
		S	50 mg/kg

*water samples are reported in mg/L and soils in mg/kg

+ If TPH(d) is not requested then all positive results are run by direct injection chromatography with FID detection. The following comments pertain to these GC results: a) gasoline-range compounds (C6-C12) present; b) diesel range compounds (C10-C23) present; c) oil-range compounds (> C18) present; d) other patterned solvent(?); e) isolated peaks; f) GC compounds are absent or insignificant relative to TRPH inferring that complex biologically derived molecules (lipids?)are the source of IR absorption.

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: 10/20/93 Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.000	2.327	2.035	2.03	115	100	13.4
Benzene	0.000	0.184	0.178	0.2	92	89	3.3
Toluene	0.000	0.216	0.190	0.2	108	95	12.8
Ethylbenzene	0.000	0.188	0.182	0.2	94	91	3.2
Xylenes	0.000	0.606	0.588	0.6	101	98	3.0
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	0.0	22.4	22.2	20.8	108	107	0.9

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

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

Inv.# 1729 APd 26

P & D ENVIRONMENTAL
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 0047

PROJECT NAME: VIP Service - 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	Total oil and Grease (HRC)	EPA 8010	EPA 8270			PRESERVATIVE	REMARKS
				Waste oil Tank Pit									
TP1 - 10.0	10/19/93		Soil	Excavation sidewall at 10 foot depth	1	X	X	X	X			ICE	Normal Turn Around
TP2 - 10.0	"		"	Fuel Tank Pit Excavation Sidewall at 10 foot Depth	1	X						"	" " "
TP3 - 10.0	"		"	" " " "	1	X						"	" " "
TP4 - 10.0	"		"	" " " "	1	X						"	" " "
TP5 - 10.0	"		"	" " " "	1	X						"	" " "
TP6 - 10.0	"		"	" " " "	1	X						"	" " "
TP7 - 10.0	"		"	" " " "	1	X						"	" " "
TP8 - 10.0	"		"	" " " "	1	X						"	" " "

32716
32717
32718
32719
32720

32721
32722
32723

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

	VOAS	O & G	METALS	OTHER
PRESERVATIVE				

APPROPRIATE CONTAINERS ✓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT)	8	LABORATORY:
Paul H. King	10/19/93	5:50	Michael McGhee	TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	8	McCampbell Analytical
RELINQUISHED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**LABORATORY CONTACT:**		**LABORATORY PHONE NUMBER:**
Michael McGhee	10/19	6:40	[signature]	Ed Hamilton		(510) 798-1620
RELINQUISHED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED FOR LABORATORY BY: (SIGNATURE)**	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO		

REMARKS:

McCAMPBELL ANALYTICAL

SAMPLE ID: TP1-10.0
AEN LAB NO: 9311032-01
AEN WORK ORDER: 9311032
CLIENT PROJ. ID: 1729

DATE SAMPLED: 10/19/93
DATE RECEIVED: 11/02/93
REPORT DATE: 11/16/93

ANALYTE	METHOD/ CAS#	RESULT		REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Soil by EPA 8240	**EPA 8240**					
Acetone	67-64-1	ND		10000	ug/Kg	11/02/93
Benzene	71-43-2	2,200	*	500	ug/Kg	11/02/93
Bromodichloromethane	75-27-4	ND		500	ug/Kg	11/02/93
Bromoform	75-25-2	ND		500	ug/Kg	11/02/93
Bromomethane	74-83-9	ND		1000	ug/Kg	11/02/93
2-Butanone	78-93-3	ND		10000	ug/Kg	11/02/93
Carbon Disulfide	75-15-0	ND		1000	ug/Kg	11/02/93
Carbon Tetrachloride	56-23-5	ND		500	ug/Kg	11/02/93
Chlorobenzene	108-90-7	ND		500	ug/Kg	11/02/93
Chloroethane	75-00-3	ND		1000	ug/Kg	11/02/93
2-Chloroethyl Vinyl Ether	110-75-8	ND		1000	ug/Kg	11/02/93
Chloroform	67-66-3	ND		500	ug/Kg	11/02/93
Chloromethane	74-87-3	ND		1000	ug/Kg	11/02/93
Dibromochloromethane	124-48-1	ND		500	ug/Kg	11/02/93
1,1-Dichloroethane	75-34-3	ND		500	ug/Kg	11/02/93
1,2-Dichloroethane	107-06-2	ND		500	ug/Kg	11/02/93
1,1-Dichloroethene	75-35-4	ND		500	ug/Kg	11/02/93
cis-1,2-Dichloroethene	156-59-2	ND		500	ug/Kg	11/02/93
trans-1,2-Dichloroethene	156-60-5	ND		500	ug/Kg	11/02/93
1,2-Dichloropropane	78-87-5	ND		500	ug/Kg	11/02/93
cis-1,3-Dichloropropene	10061-01-5	ND		500	ug/Kg	11/02/93
trans-1,3-Dichloropropene	10061-02-6	ND		500	ug/Kg	11/02/93
Ethylbenzene	100-41-4	2,600	*	500	ug/Kg	11/02/93
2-Hexanone	591-78-6	ND		5000	ug/Kg	11/02/93
Methylene Chloride	75-09-2	ND		500	ug/Kg	11/02/93
4-Methyl-2-pentanone	108-10-1	ND		5000	ug/Kg	11/02/93
Styrene	100-42-5	ND		500	ug/Kg	11/02/93
1,1,2,2-Tetrachloroethane	79-34-5	ND		500	ug/Kg	11/02/93
Tetrachloroethene	127-18-4	ND		500	ug/Kg	11/02/93
Toluene	108-88-3	2,700	*	500	ug/Kg	11/02/93
1,1,1-Trichloroethane	71-55-6	ND		500	ug/Kg	11/02/93
1,1,2-Trichloroethane	79-00-5	ND		500	ug/Kg	11/02/93
Trichloroethene	79-01-6	ND		500	ug/Kg	11/02/93
Vinyl Acetate	108-05-4	ND		5000	ug/Kg	11/02/93
Vinyl Chloride	75-01-4	ND		1000	ug/Kg	11/02/93
Xylenes, Total	1330-20-7	14,000	*	1000	ug/Kg	11/02/93
#Extraction for BNAs	**EPA 3550**	-			Extrn Date	11/02/93
EPA 8270 - Soil matrix	**EPA 8270**					
Acenaphthene	83-32-9	ND		330	ug/Kg	11/04/93

McCAMPBELL ANALYTICAL

SAMPLE ID: TP1-10.0
AEN LAB NO: 9311032-01
AEN WORK ORDER: 9311032
CLIENT PROJ. ID: 1729

DATE SAMPLED: 10/19/93
DATE RECEIVED: 11/02/93
REPORT DATE: 11/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Acenaphthylene	208-96-8	ND	330	ug/Kg	11/04/93
Anthracene	120-12-7	ND	330	ug/Kg	11/04/93
Benzidine	92-87-5	ND	1600	ug/Kg	11/04/93
Benzoic Acid	65-85-0	ND	1600	ug/Kg	11/04/93
Benzo(a)anthracene	56-55-3	ND	330	ug/Kg	11/04/93
Benzo(b)fluoranthene	205-99-2	ND	330	ug/Kg	11/04/93
Benzo(k)fluoranthene	207-08-9	ND	330	ug/Kg	11/04/93
Benzo(g,h,i)perylene	191-24-2	ND	330	ug/Kg	11/04/93
Benzo(a)pyrene	50-32-8	ND	330	ug/Kg	11/04/93
Benzyl Alcohol	100-51-6	ND	660	ug/Kg	11/04/93
Bis(2-chloroethoxy)methane	111-91-1	ND	330	ug/Kg	11/04/93
Bis(2-choroethyl) Ether	111-44-4	ND	330	ug/Kg	11/04/93
Bis(2-chloroisopropyl) Ether	108-60-1	ND	330	ug/Kg	11/04/93
Bis(2-ethylhexyl) Phthalate	117-81-7	ND	660	ug/Kg	11/04/93
4-Bromophenyl Phenyl Ether	101-55-3	ND	330	ug/Kg	11/04/93
Butylbenzyl Phthalate	85-68-7	ND	330	ug/Kg	11/04/93
4-Chloroaniline	106-47-8	ND	660	ug/Kg	11/04/93
2-Chloronapththalene	91-58-7	ND	330	ug/Kg	11/04/93
4-Chlorophenyl Phenyl Ether	7005-72-3	ND	330	ug/Kg	11/04/93
Chrysene	218-01-9	ND	330	ug/Kg	11/04/93
Dibenzo(a,h)anthracene	53-70-3	ND	330	ug/Kg	11/04/93
Dibenzofuran	132-64-9	ND	330	ug/Kg	11/04/93
D-n-butyl Phthalate	84-74-2	ND	330	ug/Kg	11/04/93
1,2-Dichlorobenzene	95-50-1	ND	330	ug/Kg	11/04/93
1,3-Dichlorobenzene	541-73-1	ND	330	ug/Kg	11/04/93
1,4-Dichlorobenzene	106-46-7	ND	330	ug/Kg	11/04/93
3,3'-Dichlorobenzidine	91-94-1	ND	660	ug/Kg	11/04/93
Diethyl Phthalate	84-66-2	ND	330	ug/Kg	11/04/93
Dimethyl Phthalate	131-11-3	ND	330	ug/Kg	11/04/93
2,4-Dinitrotoluene	121-14-2	ND	330	ug/Kg	11/04/93
2,6-Dinitrotoluene	606-20-2	ND	330	ug/Kg	11/04/93
D-n-octyl Phthalate	117-84-0	ND	330	ug/Kg	11/04/93
1,2-Diphenylhydrazine	122-66-7	ND	330	ug/Kg	11/04/93
Fluoranthene	206-44-0	ND	330	ug/Kg	11/04/93
Fluorene	86-73-7	ND	330	ug/Kg	11/04/93
Hexachlorobenzene	118-74-1	ND	330	ug/Kg	11/04/93
Hexachlorobutadiene	87-68-3	ND	330	ug/Kg	11/04/93
Hexachlorocyclopentadiene	77-47-4	ND	330	ug/Kg	11/04/93
Hexachloroethane	67-72-1	ND	330	ug/Kg	11/04/93
Indeno(1,2,3-cd)pyrene	193-39-5	ND	330	ug/Kg	11/04/93
Isophorone	78-59-1	ND	330	ug/Kg	11/04/93
2-Methylnaphthalene	91-57-6	ND	330	ug/Kg	11/04/93
Naphthalene	91-20-3	ND	330	ug/Kg	11/04/93

McCAMPBELL ANALYTICAL

SAMPLE ID: TP1-10.0
AEN LAB NO: 9311032-01
AEN WORK ORDER: 9311032
CLIENT PROJ. ID: 1729

DATE SAMPLED: 10/19/93
DATE RECEIVED: 11/02/93
REPORT DATE: 11/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
2-Nitroaniline	88-74-4	ND	1600	ug/Kg	11/04/93
3-Nitroaniline	99-09-2	ND	1600	ug/Kg	11/04/93
4-Nitroaniline	100-01-6	ND	1600	ug/Kg	11/04/93
Nitrobenzene	98-95-3	ND	330	ug/Kg	11/04/93
N-Nitrosodimethylamine	62-75-9	ND	330	ug/Kg	11/04/93
N-Nitrosodiphenylamine	86-30-6	ND	330	ug/Kg	11/04/93
N-Nitrosodi-n-propylamine	621-64-7	ND	330	ug/Kg	11/04/93
Phenanthrene	85-01-8	ND	330	ug/Kg	11/04/93
Pyrene	129-00-0	ND	330	ug/Kg	11/04/93
1,2,4-Trichlorobenzene	120-82-1	ND	330	ug/Kg	11/04/93
4-Chloro-3-methylphenol	59-50-7	ND	330	ug/Kg	11/04/93
2-Chlorophenol	95-57-8	ND	330	ug/Kg	11/04/93
2,4-Dichlorophenol	120-83-2	ND	330	ug/Kg	11/04/93
2,4-Dimethylphenol	105-67-9	ND	330	ug/Kg	11/04/93
4,6-Dinitro-2-methylphenol	534-52-1	ND	1600	ug/Kg	11/04/93
2,4-Dinitrophenol	51-28-5	ND	1600	ug/Kg	11/04/93
2-Methylphenol	95-48-7	ND	330	ug/Kg	11/04/93
4-Methylphenol	106-44-5	ND	330	ug/Kg	11/04/93
2-Nitrophenol	88-75-5	ND	330	ug/Kg	11/04/93
4-Nitrophenol	100-02-7	ND	1600	ug/Kg	11/04/93
Pentachlorophenol	87-86-5	ND	1600	ug/Kg	11/04/93
Phenol	108-95-2	340 *	330	ug/Kg	11/04/93
2,4,5-Trichlorophenol	95-95-4	ND	330	ug/Kg	11/04/93
2,4,6-Trichlorophenol	88-06-2	ND	330	ug/Kg	11/04/93

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

INSTRUMENT: 12 AEN JOB NO: 9311032

CLIENT PROJ. ID: 1729

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8240
(SOIL MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)		
Date Analyzed	Client Id.	Lab Id.	1,2-Dichloroethane-d_4	Toluene-d_8	p-Bromofluorobenzene
11/02/93	TP1-10.0	01A	86.7	100.5	99.8

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
1,2-Dichloroethane-d_4	(80-135)
Toluene-d_8	(90-116)
p-Bromofluorobenzene	(82-114)

QUALITY CONTROL DATA

DATE ANALYZED: 11/03/93
SAMPLE SPIKED: 10260-08A
CLIENT PROJ. ID: 1729

AEN JOB NO: 9311032
INSTRUMENT: 12

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8240
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
1,1-Dichloroethene	50.0	ND	52.1	56.1	108.2	7.4
Trichloroethene	50.0	ND	49.7	51.7	101.4	3.9
Benzene	50.0	ND	50.7	49.2	99.9	3.0
Toluene	50.0	ND	50.9	48.9	99.8	4.0
Chlorobenzene	50.0	ND	49.9	50.1	100.0	0.4

CURRENT QC LIMITS (Revised 08/13/91)

Analyte	Percent Recovery	RPD
1,1-Dichloroethene	(61-143)	14.9
Trichloroethene	(72-121)	11.5
Benzene	(82-123)	10.0
Toluene	(80-118)	11.9
Chlorobenzene	(82-113)	10.0

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

QUALITY CONTROL DATA

DATE EXTRACTED: 11/02/93 AEN JOB NO: 9311032

CLIENT PROJ. ID: 1729 INSTRUMENT: 11

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8270
(SOIL MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)					
Date Analyzed	Sample Id.	Lab Id.	Nitro-benzene-d_5	2-Fluoro-biphenyl	Terphenyl-d_{14}	Phenol-d_5	2-Fluoro-phenol	2,4,6-Tribromo-phenol
11/04/93	TP1-10.0	01A	66.9	94.7	85.3	76.8	69.2	53.7

QC LIMITS (01/08/92)

ANALYTE	PERCENT RECOVERY
Nitrobenzene-d_5	(23-120)
2-Fluorobiphenyl	(30-115)
Terphenyl-d_{14}	(18-137)
Phenol-d_5	(24-113)
2-Fluorophenol	(25-121)
2,4,6-Tribromophenol	(19-122)

QUALITY CONTROL DATA

DATE EXTRACTED: 11/02/93
DATE ANALYZED: 11/04/93
CLIENT PROJ. ID: 1729

AEN JOB NO: 9311032
SAMPLE SPIKED: 9310260-18A
INSTRUMENT: 11

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8270
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Sample Result (ug/kg)	MS Result (ug/kg)	MSD Result (ug/kg)	Average Percent Recovery	RPD
Phenol	3,330	ND	2,100	2,610	70.7	21.7
2-Chlorophenol	3,330	ND	1,960	2,660	69.4	30.3
1,4-Dichlorobenzene	3,400	ND	1,780	2,230	60.3	26.3
N-Nitroso-di-n-propylamine	3,320	ND	1,820	2,420	63.9	28.3
1,2,4-Trichlorobenzene	3,330	ND	1,840	2,130	59.6	14.6
4-Chloro-3-methylphenol	3,270	ND	2,690	2,460	78.7	8.9
Acenaphthene	3,330	ND	2,310	2,730	75.7	16.7
4-Nitrophenol	3,300	ND	1,810	1,590	51.5	12.9
2,4-Dinitrotoluene	3,330	ND	2,530	2,630	77.5	3.9
Pentachlorophenol	3,380	ND	2,060	1,880	58.3	9.1
Pyrene	3,320	ND	1,970	2,160	62.2	9.2

QC LIMITS (CLP LIMITS)

Analyte	Percent Recovery	RPD
Phenol	(26- 90)	35
2-Chlorophenol	(25-102)	50
1,4-Dichlorobenzene	(28-104)	27
N-Nitroso-di-n-propylamine	(41-126)	38
1,2,4-Trichlorobenzene	(38-107)	23
4-Chloro-3-methylphenol	(26-103)	33
Acenaphthene	(31-137)	19
4-Nitrophenol	(11-114)	50
2,4-Dinitrotoluene	(28- 89)	47
Pentachlorophenol	(17-109)	47
Pyrene	(35-142)	36

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
ND = Not Detected

*** END OF REPORT ***

9311032

CHAIN OF CUSTODY RECORD

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

TURN AROUND TIME: ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

REPORT TO: [illegible] BILL TO: MAZ

PROJECT NUMBER: 1729 PROJECT NAME: PD/VIP

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	BTEX & TPH as Gasoline (602\8020 & 8015)	THP 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				COMMENTS
TP1-10.0		10-14-93		1	B		X						X									X	X										37216

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
[signature]	11-2-93		
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
RELINQUISHED BY:	DATE	TIME	RECEIVED BY LABORATORY:
	11/2/93	1910	Denise Harrington

REMARKS:
LAST DAY OF HOLD TIME!!
Thanks

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

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Service	Date Sampled: 10/19/93
		Date Received: 10/19/93
	Client Contact: Paul King	Date Extracted: 10/20/93
	Client P.O:	Date Analyzed: 10/20/93

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)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
32715	P8	S	1.2,b,d	0.008	0.008	0.014	0.034	93
Detection Limit unless otherwise 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

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/20/93 Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.000	2.327	2.035	2.03	115	100	13.4
Benzene	0.000	0.184	0.178	0.2	92	89	3.3
Toluene	0.000	0.216	0.190	0.2	108	95	12.8
Ethylbenzene	0.000	0.188	0.182	0.2	94	91	3.2
Xylenes	0.000	0.606	0.588	0.6	101	98	3.0
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	0.0	22.4	22.2	20.8	108	107	0.9

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

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

Inv. #1728 APD 27

P & D ENVIRONMENTAL
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0047	VIP Service

SAMPLED BY: (PRINTED AND SIGNATURE)

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Gas, BTEX	PRESERVATIVE	REMARKS
P8	10/14/93		Soil	Beneath Fuel Island Pipe	1	X	ICE	Normal Turn Around

32715

ICE/T ✓ GOOD CONDITION ✓ HEAD SPACE ABSENT ___

PRESERVATIVE APPROPRIATE ✓ CONTAINERS

	VOAS	O&G	METALS	OTHER

RELINQUISHED BY: (SIGNATURE) Paul W. Kirn	DATE 10/14/93	TIME 5:30	RECEIVED BY: (SIGNATURE) Michael McPhee	TOTAL NO. OF SAMPLES (THIS SHIPMENT) 1	LABORATORY: McCampbell Analytical
RELINQUISHED BY: (SIGNATURE) Michael McPhee	DATE 10/14	TIME 6:40	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF CONTAINERS (THIS SHIPMENT) 1	LABORATORY CONTACT: Ed Hamilton
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)		LABORATORY PHONE NUMBER: (510) 798-1620
					SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO

REMARKS:

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

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Service, Castro Valley	Date Sampled: 08/27/93
		Date Received: 08/28/93
	Client Contact: Paul King	Date Extracted: 08/31/93
	Client P.O:	Date Analyzed:08/31-09/01/93

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)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
32015	Comp A	S	39,b,d	ND< 0.01	0.031	0.035	0.22	97
Detection Limit unless otherwise 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 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Service, Castro Valley	Date Sampled: 08/27/93
		Date Received: 08/28/93
	Client Contact: Paul King	Date Extracted: 09/08/93
	Client P.O:	Date Analyzed:09/08/93

RCI (Reactivity, Corrosivity & Ignitability)

CA Title 22, Section 66261.21-66261.23

Lab ID	Client ID	Matrix	Reactivity[+]	Corrosivity (pH)	Ignitability[o]
32015	Comp A	S	negative	7.99	negative

[+] negative means no obvious reaction with water, no evolution of gas upon contact with water, appears to contain no reactive cyanide or sulfide (< ~ 5 mg/kg by EPA SW-846, chapter 7, modified), and shows no indication of explosivity.

[o] negative for a soil means the absence of spontaneous combustion and the absence of flammability upon exposure to a naked flame.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Tele: 510-798-1620 Fax: 510-798-1622

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Service, Castro Valley	Date Sampled: 08/27/93
		Date Received: 08/28/93
	Client Contact: Paul King	Date Extracted: 09/09-09/103
	Client P.O:	Date Analyzed:09/10/93

Lead*

EPA analytical method 239.2 or 7420+

Lab ID	Client ID	Matrix	Extraction°	Lead*
32015	Comp A	S	STLC	0.60
Detection Limit unless otherwise stated; ND means Not Detected		W	TTLC	0.005mg/L
		S	TTLC	4.0 mg/kg
		—	STLC,TCLP	0.20 mg/L

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

+ Lead is analysed using EPA method 7420 (AA Flame)for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

° EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22

DHS Certification No. 1644

Edward Hamilton, Lab Director

P & D ENVIRONMENTAL
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916

4D920

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0047	VEP Service - Castro Valley

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

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-G, BTEX	TPH-D	SVOC				PRESERVATIVE	REMARKS
COMP A	8/27/93		Soil		4	X	X	X				ICE	Normal Turn Around
COMP B	"		"		4	X						"	" " "
COMP C	"		"		4	X						"	" " "

32015
32016
32017

VOAS | O&G | METALS | OTHER

HEAT ___
GOOD CONDITION ✓
HEAD SPACE ABSENT ___
PRESERVATIVE APPROPRIATE ✓
CONTAINERS ✓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Paul W. King	8/27/93	3:30 PM	R Hamilton
R Hamilton	8/28/93	9:30	Ed
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT): 3
TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 12

LABORATORY: McCampbell Analytical
LABORATORY CONTACT: Ed Hamilton
LABORATORY PHONE NUMBER: (510) 798-1620

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO

REMARKS: Please Composite tubes for each COMP sample.

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

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Serivce, Castro Valley	Date Sampled: 08/27-09/03/93
		Date Received: 08/27-09/03/93
	Client Contact: Paul King	Date Extracted: 08/31-09/07/93
	Client P.O:	Date Analyzed:08/31-09/08/93

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)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
32016,32117	Comp B	S	320,b,d	1.2	12	3.5	38	100
32017,32118	Comp C	S	600,b,d	0.44	12	7.1	55	97
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 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Serivce, Castro Valley	Date Sampled: 09/03/93
		Date Received: 09/03/93
	Client Contact: Paul King	Date Extracted: 09/07/93
	Client P.O:	Date Analyzed:09/07/93

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	32117-32118			
Client ID	Comp B,C			
Matrix	S			
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	ND			
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< 100			
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	116			
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 EPA 8010/8020/EDB

Date: 09/07/93 Matrix: Soil

Analyte	Concentration (ug/kg)				% Recovery		
	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE	0	84	78	100	84	78	7.4
Trichloroethene	0	100	84	100	100	84	17.4
EDB	0	108	106	100	108	106	1.9
Chlorobenzene	0	108	94	100	108	94	13.9
Benzene	0	108	104	100	108	104	3.8
Toluene	0	108	108	100	108	108	0.0
Chlorobz (PID)	0	94	102	100	94	102	8.2

% 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: 09/01/93 Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.000	1.809	1.874	2.03	89	92	3.6
Benzene	0.000	0.184	0.188	0.2	92	94	2.2
Toluene	0.000	0.192	0.196	0.2	96	98	2.1
Ethyl Benzene	0.000	0.184	0.190	0.2	92	95	3.2
Xylenes	0.000	0.568	0.582	0.6	95	97	2.4
TPH (diesel)	0	311	320	300	104	107	2.7
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

APD 22

P & D ENVIRONMENTAL
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 0047

PROJECT NAME: VIP Service - Castro Valley

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

	SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	TPH-G BTEX	Forward 10 Metals	EPA 8010			PRESERVATIVE	REMARKS
016	COMP B	9/3/93	—	Soil	Stockpiled Soil	4	X	X	X			ICE	Normal Turn Around
017	COMP C	9/3/93	—	Soil	Stockpiled Soil	4	X	X	X			"	" " "

32117

32118

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATIVE | VOAS | O&G | METALS | OTHER
APPROPRIATE CONTAINERS ✓

see note for comp information; comp 4/1 comp 6 collected 9-3-93 and 8-27-93

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)			
Paul H. King	9/3/93	1525	J R Hamilton	TOTAL NO. OF SAMPLES (THIS SHIPMENT): 2	TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 8	LABORATORY: McCampbell Analytical
J R Hamilton	9/3/93	1640	J. Heame	LABORATORY CONTACT: Ed 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: Please composite each 4-point composite collected on 9/3/93 with the corresponding 4-point composite collected on 8/27/93 and perform analysis requested on this chain of custody. (B=32016, C=32017)

[illegible]

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 15, 1993 ChromaLab file number: 9309090

MCCAMPBELL ANALYTICAL, INC.

Attn: Ed Hamilton

RE: One soil sample for total Cam 17 Metal analysis (CA Title 22)

Project Name: P/V.I.P.
Project Number: 1572
Date Sampled: Sept. 3, 1993 Date Received: Sept. 7, 1993
Date Analyzed: Sept. 14, 1993

RESULTS: Sample I.D.: COMP B,C/32118,32117

Metals	Concentration (mg/Kg)	Detection Limit (mg/Kg)
Antimony (Sb)	N.D.	1.00
Arsenic (As)	N.D.	0.25
Barium (Ba)	104	0.25
Beryllium (Be)	0.36	0.05
Cadmium (Cd)	0.72	0.05
Cobalt (Co)	8.6	0.50
Chromium (Cr)	20	0.50
Copper (Cu)	20	0.25
Lead (Pb)	3.2	0.50
Mercury (Hg)	N.D.	0.05
Molybdenum (Mo)	3.6	0.25
Nickel (Ni)	33	0.50
Selenium (Se)	N.D.	0.50
Silver (Ag)	1.3	0.25
Thallium (Tl)	N.D.	2.00
Vanadium (V)	15	0.50
Zinc (Zn)	32	0.25

Method of Analysis: 3050/6010/7471

ChromaLab, Inc.

Refaat Mankarious
Inorganic Supervisor

Eric Tam
Laboratory Director

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

90/114850 13184
Order # 4783

SUBM #: 9309090
CLIENT: MCCAMBL
DUE: 09/14/93
REF: 13184

CHAIN OF CUSTODY REC

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

TURN AROUND TIME: ☐ 24 HOUR ☐ 48 HOUR ☑ 5 DAY

REPORT TO: EH BILL TO: MAI

PROJECT NUMBER: 1572 PROJECT NAME: P/ V.I.P.

PROJECT LOCATION: SAMPLER SIGNATURE:

SAMPLE ID	LOCATION	SAMPLING DATE	SAMPLING TIME	# CONTAINERS	TYPE CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	METHOD PRESERVED: HCL	HNO3	OTHER: ICE
~~Comp C~~	~~9/3/93~~	9/3/93		1	P		X						X
Comp B, C													

ANALYSIS REQUEST

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	~~Add~~ Forward ID Metals
														X

OTHER

COMMENTS: 32118 -32117

RELINQUISHED BY	DATE	TIME	RECEIVED BY
Jenni C Zkane	9/7/93		
RELINQUISHED BY	DATE	TIME	RECEIVED BY
RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY
	9/7	16:26	

REMARKS:

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

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Serivce, Castro Valley	Date Sampled: 09/03/93
		Date Received: 09/03/93
	Client Contact: Paul King	Date Extracted: 09/07/93
	Client P.O:	Date Analyzed:09/07/93

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	32117-32118			
Client ID	Comp B,C			
Matrix	S			
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	ND			
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< 100			
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	116			
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: 08/31/93 Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.000	1.924	1.965	2.03	95	97	2.1
Benzene	0.000	0.184	0.194	0.2	92	97	5.3
Toluene	0.000	0.192	0.196	0.2	96	98	2.1
Ethyl Benzene	0.000	0.184	0.188	0.2	92	94	2.2
Xylenes	0.000	0.566	0.582	0.6	94	97	2.8
TPH (diesel)	0	297	298	300	99	99	0.4
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: 09/01/93 Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.000	1.809	1.874	2.03	89	92	3.6
Benzene	0.000	0.184	0.188	0.2	92	94	2.2
Toluene	0.000	0.192	0.196	0.2	96	98	2.1
Ethyl Benzene	0.000	0.184	0.190	0.2	92	95	3.2
Xylenes	0.000	0.568	0.582	0.6	95	97	2.4
TPH (diesel)	0	311	320	300	104	107	2.7
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: 09/07-09/08/93 Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.000	2.014	1.964	2.03	99	97	2.5
Benzene	0.000	0.172	0.178	0.2	86	89	3.4
Toluene	0.000	0.180	0.184	0.2	90	92	2.2
Ethyl Benzene	0.000	0.176	0.180	0.2	88	90	2.2
Xylenes	0.000	0.546	0.550	0.6	91	92	0.7
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 AA METALS

Date: 09/08-09/10/93 Matrix: Soil

Analyte	Concentration (mg/kg,mg/L) Sample	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
Total Lead	0.0	104.0	110.0	100	104	110	5.6
Total Cadmium	1.3	110.0	101.0	100	109	100	8.5
Total Chromium	58.9	395.0	408.0	300	112	116	3.2
Total Nickel	49.2	135.0	130.0	100	86	81	3.8
Total Zinc	141.0	387.0	384.0	300	82	81	0.8
STLC/TCLP Lead	0.60	5.10	5.40	5.7	79	84	5.7
STLC Nickel	0.00	6.60	6.50	5.7	116	114	1.5

% 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: 09/07/93 Matrix: Soil

Analyte	Concentration (ug/kg)				% Recovery		
	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE	0	84	78	100	84	78	7.4
Trichloroethene	0	100	84	100	100	84	17.4
EDB	0	108	106	100	108	106	1.9
Chlorobenzene	0	108	94	100	108	94	13.9
Benzene	0	108	104	100	108	104	3.8
Toluene	0	108	108	100	108	108	0.0
Chlorobz (PID)	0	94	102	100	94	102	8.2

% 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

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Service, Castro Valley	Date Sampled: 10/08/93
		Date Received: 10/09/93
	Client Contact: Paul King	Date Extracted: 10/09/93
	Client P.O:	Date Analyzed:10/09-10/10/93

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)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
32575	COMP D	S	200,b	0.67	3.7	2.5	15	100
32576	COMP E	S	210,b	0.55	3.8	2.5	17	110
32577	COMP F	S	110,b	0.28	1.4	1.2	8.6	110
32578	COMP G	S	1000,b	2.2	28	16	110	122#
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

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/10/93 Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.000	1.783	1.822	2.03	88	90	2.2
Benzene	0.000	0.182	0.186	0.2	91	93	2.2
Toluene	0.000	0.202	0.208	0.2	101	104	2.9
Ethylbenzene	0.000	0.202	0.206	0.2	101	103	2.0
Xylenes	0.000	0.608	0.624	0.6	101	104	2.6
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

P & D ENVIRONMENTAL
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916

AD128

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0047	NEP Service - 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	PRESERVATIVE	REMARKS
Comp D	10/8/93		Soil	Stockpiled Soil	4	X	ICE	24 Hr Turn Around
Comp E	"		"	" "	4	X	"	" " " "
Comp F	"		"	" "	4	X	"	" " " "
Comp G	"		"	" "	4	X	"	" " " "

32575
32576
32577
32578

ICE/T ✓ VOAS O&G METALS OTHER
GOOD CONDITION ✓ PRESERVATIVE
HEAD SPACE ABSENT ✓ APPROPRIATE
CONTAINERS ✓

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT)	4	LABORATORY:
Paul H. King	10/8/93	3:30		TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	16	McCampbell Analytical
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT:		LABORATORY PHONE NUMBER:
	10/9/93	4:45		Ed Hamilton		(510) 798-1620
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO		

REMARKS: Please composite the 4 containers for each sample and then analyze.

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

P & D Environmental 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Service, Castro Valley	Date Sampled: 10/19/93
		Date Received:10/19/93
	Client Contact: Paul King	Date Extracted: 10/20/93
	Client P.O:	Date Analyzed: 10/20/93

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)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
32711	Comp-G1	S	110,b	0.67	0.81	0.37	3.8	87
32712	Comp-H	S	310,b	0.57	5.3	2.5	18	122#
32713	Comp-I	S	720,b	1.6	17	6.9	46	93
32714	Comp-J	S	28,d	ND	0.10	ND	ND	103
Detection Limit unless otherwise 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 300 Monte Vista, # 101 Oakland, CA 94611	Client Project ID: # 0047; VIP Service, Castro Valley	Date Sampled: 10/19/93
		Date Received:10/19/93
	Client Contact: Paul King	Date Extracted: 10/20/93
	Client P.O:	Date Analyzed: 10/20/93

Total Recoverable Petroleum Hydrocarbons as Oil & Grease (with Silica Gel Clean-up) by Scanning IR Spectrometry*

EPA method 418.1 or 9073; Standard Methods 5520 C&F

Lab ID	Client ID	Matrix	TRPH+
32714	Comp-J	S	670
Detection Limit unless otherwise stated; ND means Not Detected		W	5 mg/L
		S	50 mg/kg

*water samples are reported in mg/L and soils in mg/kg

+ If TPH(d) is not requested then all positive results are run by direct injection chromatography with FID detection. The following comments pertain to these GC results: a) gasoline-range compounds (C6-C12) present; b) diesel range compounds (C10-C23) present; c) oil-range compounds (> C18) present; d) other patterned solvent(?); e) isolated peaks; f) GC compounds are absent or insignificant relative to TRPH inferring that complex biologically derived molecules (lipids?)are the source of IR absorption.

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: 10/20/93 Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.000	2.327	2.035	2.03	115	100	13.4
Benzene	0.000	0.184	0.178	0.2	92	89	3.3
Toluene	0.000	0.216	0.190	0.2	108	95	12.8
Ethylbenzene	0.000	0.188	0.182	0.2	94	91	3.2
Xylenes	0.000	0.606	0.588	0.6	101	98	3.0
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	0.0	22.4	22.2	20.8	108	107	0.9

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

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

TW #1727

APD 28.

P & D ENVIRONMENTAL
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
0047	VIP Service - 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	7420	418.1			PRESERVATIVE	REMARKS
Comp G1	10/14/93		Soil	Basesample of Stockpiled contra	4	X						ICE	24 Hr Turn Around
Comp H	"		"	End bank pit soil stockpile	4	X						"	"
Comp I	"		"	" " " " "	4	X						"	"
Comp J	"		"	Westside soil stockpile	4	X	X	X				"	"

32711
32712
32713
32714

VOAS | O&G | METALS | OTHER

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATIVE APPROPRIATE ✓
CONTAINERS

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLES (THIS SHIPMENT)	4	LABORATORY:
Paul H. King	10/14/93	5:55		TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	16	McCampbell Analytical
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	LABORATORY CONTACT:		LABORATORY PHONE NUMBER:
	10/15	10:40		Ed Hamilton		(510) 798-1620
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES (X)NO		

REMARKS: Please composite the 4 containers for each comp sample prior to analysis

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

October 21, 1993 ChromaLab File#: 9310246

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: PD **Project#:** 1727
Submitted: October 20, 1993

re: One sample for Volatile Halogenated Organics analysis.

Sample: **COMP J/32714** *Matrix:* SOIL
Lab #: 33527-1219 *Sampled:* October 20, 1993 *Analyzed:* October 21, 1993
Method: EPA 8010

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	5	N.D.	--
VINYL CHLORIDE	N.D.	5	N.D.	--
BROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHENE	N.D.	5	N.D.	84
METHYLENE CHLORIDE	N.D.	25	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	5	N.D.	--
1,1-DICHLOROETHANE	N.D.	5	N.D.	--
CHLOROFORM	N.D.	5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	5	N.D.	--
CARBON TETRACHLORIDE	N.D.	5	N.D.	--
1,2-DICHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROETHENE	N.D.	5	N.D.	104
1,2-DICHLOROPROPANE	N.D.	5	N.D.	--
BROMODICHLOROMETHANE	N.D.	5	N.D.	--
2-CHLOROETHYL VINYL ETHER	N.D.	5	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5	N.D.	--
TETRACHLOROETHENE	N.D.	5	N.D.	107
DIBROMOCHLOROMETHANE	N.D.	5	N.D.	--
CHLOROBENZENE	N.D.	5	N.D.	--
BROMOFORM	N.D.	5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5	N.D.	129
1,3-DICHLOROBENZENE	N.D.	5	N.D.	--
1,4-DICHLOROBENZENE	N.D.	5	N.D.	--
1,2-DICHLOROBENZENE	N.D.	5	N.D.	--
FREON 113	N.D.	5	N.D.	--

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

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

2461593-2 ?
order #13788

RUSH

CHAIN OF CUSTODY RECO

SUBM #: 9310246
CLIENT: MCCAMBL
DUE: 10/21/93
REF: 13788

[X] 4 HOUR [ ] 48 HOUR ~~[X]~~ 5 DAY

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

REPORT TO: E.H. MAI	BILL TO: MAI
PROJECT NUMBER: 1727	PROJECT NAME: PD
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)	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				COMMENTS
COMP I				1	VOA		X						X					X															32714

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
[signature]	10-20	16:45	
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
RELINQUISHED BY:	DATE	TIME	RECEIVED BY LABORATORY:
	10/20	16:45	[signature]

REMARKS:
Need results by 4:30 PM please.

Total Containers: 1

Inv. # 1727

APD 28

P & D ENVIRONMENTAL
300 Monte Vista, #101
Oakland, CA 94611
Telephone (510) 658-6916

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NUMBER: 0047

PROJECT NAME: VIP Service – 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	8010	418.1 TPH			PRESERVATIVE	REMARKS
COMP G1	10/14/93		Soil	Resample of Stockpiled comp	4	X					ICE	24 Hr Turn Around
COMP H	"		"	Fuel tank pit soil stockpile	4	X					"	" " " "
COMP I	"		"	" " " " "	4	X					"	" " " "
COMP J	"		"	Waste oil soil stockpile	4	X	X	X			"	" " " "

32711
32712
32713
32714

ICE/T° ✓ GOOD CONDITION ✓ HEAD SPACE ABSENT ✓ PRESERVATIVE ✓ APPROPRIATE CONTAINERS ✓ VOAS | O & G | METALS | OTHER

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)		
Paul H. King	10/14/93	5:55	[signature]	TOTAL NO. OF SAMPLES (THIS SHIPMENT): 4; TOTAL NO. OF CONTAINERS (THIS SHIPMENT): 16	LABORATORY: McCampbell Analytical
[signature]	10/14	6:40	[signature]	LABORATORY CONTACT: Ed 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: Please composite the 4 containers for each comp sample prior to analysis

P&D ENVIRONMENTAL