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July 28, 2011

Dee Dean, Paralej (In Memoria: Tara Anne Hazher, Paralej

RECEIVED

2:05 pm, Jul 29, 2011 Alameda County Environmental Health

Mr. Jerry Wickham Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION WORK PLAN CERTIFICATION County Case # RO 2500 Former El Monte RV Service Center 4341 Howard Street Oakland, CA

Dear Mr. Wickham:

You will find enclosed one copy of the following document prepared by P&D Environmental, Inc.:

Subsurface Investigation Work Plan dated July 22, 2011 (document 0547.W1).

I declare, under penalty of perjury, that the information and/or recommendations contained in the above-mentioned document for the subject site is true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact me at 760-327-4232.

Thank you for your anticipated courtesy in this matter.

E. ACOBS

DEJ/

P&D ENVIRONMENTAL, INC.

55 Santa Clara Avenue, Suite 240 Oakland, CA 94610 (510) 658-6916

July 22, 2011 Work Plan 0547.W1

Mr. Jerry Wickham Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

SUBJECT: SOIL GAS AND GROUNDWATER SAMPLING AND WELL SURVEY WORK PLAN County File # RO 2500 Former El Monte RV Service Center 4341 Howard Street Oakland, CA

Dear Mr. Wickham:

P&D Environmental, Inc. (P&D) is pleased to present this work plan for soil gas and groundwater sample collection in accordance with a letter dated May 12, 2011 from the Alameda County Department of Environmental Health (ACDEH) and a telephone conversation between Paul King of P&D and Jerry Wickham of the ACDEH on May 24, 2011. The work scope includes collection of a total of four soil gas samples and one duplicate soil gas sample, and collection of two groundwater grab samples at property line locations at the former El Monte RV Site at 4341 Howard Street in Oakland, California. Analysis of the samples will be performed for Halogenated Volatile Organic Compounds (HVOCs); Total Petroleum Hydrocarbons as Gasoline (TPH-G), and for MTBE, benzene, toluene, ethylbenzene and xylenes. In addition, a well survey report that identifies any nearby wells that are present in regulatory agency data bases will be prepared in accordance with the May 12, 2011 ACDEH letter. All work will be performed under the direct supervision of a California professional geologist. A Site Location Map is attached as Figure 1, and a Site Plan showing the proposed drilling locations in the vicinity of the site are attached as Figures 3 and 4.

BACKGROUND

The subject site is the former El Monte RV Service Center and is bordered by a railroad spur to the south. Historical information for the subject site was obtained from the Artesian Environmental Consultants (Artesian) Groundwater Sampling Report dated January 19, 1996. On November 15, 1991 a 1,000 gallon gasoline underground storage tank (UST) was removed from the site, and petroleum was detected in soil samples collected at the time of UST removal. On June 24, 1993 Artesian personnel over-excavated the gasoline-impacted soil, resulting in 110 cubic yards of impacted soil removed and a pit measuring approximately 15 feet by 20 feet by 10 feet deep. On August 19, 1993 the excavation was backfilled with clean imported backfill material, and on August 31, 1993 the stockpiled soil that had been excavated was removed from the site. The location of the former UST pit and dispenser are shown in Figures 2, 3 and 4.

On June 25, 1993 Artesian personnel supervised installation of groundwater monitoring well MW-1 using 2-inch diameter PVC pipe to a total depth of 20 feet below the ground surface (bgs). The screened interval of the well was from 5 to 20 feet bgs. The laboratory analytical results for soil samples collected at depths of 5 and 10 feet bgs from borehole MW-1 showed that TPH-G and BTEX were not detected. Well MW-1 was sampled a total of seven times between June 25, 1993 and October 16, 1995 and the samples were analyzed for TPH-G and BTEX. In March and October 1995 the groundwater samples collected from well MW-1 were also analyzed for halogenated volatile organic compounds (HVOCs) using EPA Method 8010 associated with investigation of the extent of HVOCs detected in groundwater at the adjacent 500 High Street property (also referred to as the Bank of America site and also referred to as the Cobbledick-Kibbe site). On October 13 and 16, 1995 Artesian drilled borings B-1 through B-3 at locations to the west of the subject site building for collection of groundwater grab samples to further investigate the extent of HVOCs detected in groundwater grab samples to further investigate the west of HVOCs detected in groundwater at and near the subject site. The locations of Artesian well MW-1 and borings B-1, B-2 and B-3 are shown in Figures 3 and 4.

Historical information for the 500 High Street site in Oakland was obtained from the ACDEH Fuel Leak Site Case Closure letter dated February 4, 1998 for the 500 High Street site. On March 13, 1990 one 10,000 gallon UST which had contained diesel and gasoline at different times and one 2,000 gallon gasoline UST were removed from the 500 High Street site. On April 9, 1990 the UST pit was over-excavated. On February 26 and 27, 1991 wells MW-1 through MW-3 were installed in the vicinity of the former UST pit. On March 25, 1991 well MW-4 was installed near the site oil-water separator to further investigate the former UST pit. Based on the detected presence of oil in well MW-4, soil borings were drilled in the vicinity of the oil-water separator on May 23, 1991, well MW-5 was installed near the oil-water separator on November 21, 1991, and the 160 gallon oil-water separator was removed on November 26, 1991. Well MW-4 was subsequently destroyed and petroleum-impacted soil in the vicinity of the former oil-water separator was excavated. A total of seven soil samples were collected from the pit on November 27, 1991. The HVOCs cis-1,2-DCE, and trans-1,2-DCE were detected in the soil sample collected from directly beneath the oil-water separator, and the HVOC TCE was also detected in one of the pit soil samples. The excavation was described as appearing fairly complete in removing soil contamination. The locations of the 500 High Street UST pit, the oil-water separator pit, and the wells are shown in Figures 3 and 4.

To further evaluate the extent of HVOCs detected at the 500 High Street site, Blymyer Engineering, Inc. (Blymyer) drilled borings B-1 through B-4 in the vicinity of the 500 High Street site on April 27, 1994 for groundwater sample collection. Blymyer also collected a groundwater sample from the 4341 Howard Street site well MW-1 and identified the MW-1 well sample as MW-7. The locations of boreholes B-1 through B-4 are shown in Figures 3 and 4. Additional subsequent sampling of well MW-7 was also performed. On September 12, 1995 well MW-8 was installed at a location identified as immediately downgradient of the former oil-water separator. The low concentrations of HVOCs in well MW-8 relative to well MW-7, and the elevated

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P&D ENVIRONMENTAL, INC.

concentrations of HVOCs in Artesian's boring B-3 groundwater grab sample were identified as suggesting that the detected elevated HVOC concentrations could be originating from the El Monte RV Service Center.

A summary table of historical groundwater quality data for well MW-1 and borings B-1 through B-3 at 4341 Howard Street that was obtained from the Artesian Groundwater Sampling Report dated January 19, 1996 is attached with this work plan as Appendix A. Summary tables of historical groundwater quality data for the wells associated with the 500 High Street site and obtained from the ACDEH Fuel Leak Site Case Closure letter dated February 4, 1998 is attached with this work plan as Appendix B. No historical groundwater level or groundwater flow direction information was available associated with the 500 High Street site.

The ACDEH Fuel Leak Site Case Closure letter dated February 4, 1998 states that the ACDEH concurred that the TPH releases from both the 500 High Street and the 4341 Howard Street sites had been adequately investigated, and that analysis for petroleum hydrocarbons was discontinued for all wells beginning in 1996. Additionally, sampling would continue on a semi-annual basis for HVOCs. Following completion of an April 8, 1997 human health risk assessment using ASTM RBCA for the 500 High Street property, the ACDEH concluded that no further action was recommended for both the petroleum and HVOC releases for the 500 High Street site.

On April 18, 2011 P&D personnel purged well MW-1 at 4341 Howard Street using U.S. EPA lowflow methods and collected one groundwater sample from the well. The measured depth to water in the well prior to purging was 6.13 feet. The groundwater sample was analyzed at McCampbell Analytical, Inc. in Pittsburg, California (McCampbell) for TPH-G using EPA Methods 5030B/8015B modified; TPH-D and TPH-BO using EPA methods 3510C/8015B; and for VOCs and HVOCs using EPA Method 8260B. TPH-G, TPH-D, and TPH-BO were not detected. The only EPA 8260 compounds detected were TCE, cis-1,2-DCE, trans-1,2-DCE, vinyl chloride, and MTBE at concentrations of 87, 51, 23, 1.8 and 5.7 ug/L. Copies of the purge data sheet and laboratory report will be provided with the results of the subsurface investigation described in this work plan.

SCOPE OF WORK

The scope of work includes the following.

- Obtain a permit for drilling.
- Prepare a health and safety plan.
- Mark the proposed drilling locations with white paint and notify Underground Service Alert for underground utility location.
- Install 4 temporary soil gas wells to a total depth of 5 feet each and collect one soil gas sample from each temporary soil gas well. In addition one duplicate soil gas sample

will be collected from one of the temporary soil gas wells. The temporary soil gas wells will be destroyed following sample collection.

- Drill 2 soil borings at property boundary locations for collection of one groundwater grab sample from each borehole. Following groundwater grab sample collection each borehole will be filled with cement.
- Arrange for analysis of the four soil gas samples and 1 duplicate soil gas sample for TO-15 compounds (HVOCs).
- Arrange for analysis of the two groundwater samples for EPA Method 8260 compounds (HVOCs).
- Perform risk and hazard analysis for vapor intrusion to indoor air using the sample results.
- Prepare a report documenting soil gas and groundwater sample collection investigation procedures and results.
- Obtain nearby well data from regulatory agencies for a 2,000-foot radius.
- Prepare a well survey report.

Each of these is addressed below.

Permitting, Health and Safety Plan, Marking Drilling Locations

A permit will be obtained from the Alameda County Public Works Agency for borehole drilling. All necessary permit-related notifications will be made prior to drilling. Notification will also be provided to the ACDEH at least 72 hours prior to drilling.

A health and safety plan will be prepared for the scope of work identified in this work plan. In addition, the drilling locations will be marked with white paint, and Underground Service Alert will be notified for underground utility location for the proposed drilling locations.

Soil Gas Sample Collection

Install 4 temporary soil gas wells to a total depth of 5 feet each and collect one soil gas sample from each temporary soil gas well. In addition one duplicate soil gas sample will be collected from one of the temporary soil gas wells. The temporary soil gas wells will be destroyed following sample collection.

Each of the proposed temporary soil gas wells (SG1 through SG4) will be constructed by Vironex, Inc. of Pacheco, California driving a hollow 1-inch diameter Geoprobe drill rod with an expendable tip to a depth of 5 feet bgs, dislodging the expendable tip, and then inserting a 0.250-inch outside diameter (0.187-inch inside diameter) Teflon tube to 8 inches above the bottom of the hollow rod. A 2-inch long porous high-density polyethylene (HDPE) filter will be connected to the bottom of the tubing prior to inserting the tubing into the hollow rod. When the tubing is inserted into the drill rod, the bottom of the filter will be placed 6-inches above the bottom of the hollow rod. A

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P&D Environmental, Inc.

#2/16 Lonestar sack sand will be added to the annular space between the hollow rod and the Teflon tubing as the hollow rod is withdrawn from the ground until the lowermost 12 inches of the hole is filled with sand. Granular bentonite (with grains measuring 1 to 2 millimeters in diameter) will be placed in the annular space above the sand to a height of 12 inches above the sand, and the remaining annular space will be filled with a bentonite slurry to the ground surface.

At least 30 minutes after construction of the temporary soil gas wells, soil gas samples will be collected from each location. Soil gas samples will not be collected if more than $\frac{1}{2}$ inch of precipitation has occurred during the 5 days prior to the scheduled sampling date.

A soil gas sampling manifold with a 1-liter Summa canister as the sampling canister for each location (see Figure 5) will be assembled in a 35-gallon Rubbermaid bin that has been modified by cutting viewing ports into the sides of the bin and covering the viewing ports with transparent polycarbonate sheets. The Rubbermaid bin will also be modified to include a hole measuring approximately two inches square in the bottom of the bin to allow the bin to cover the temporary soil gas well while still allowing access to the temporary well through the bottom of the bin. At the time that the sampling manifold is assembled, the vacuum for the sample canister will be checked with a vacuum gauge and recorded.

Prior to sampling the soil gas, a 10 minute leak check of the sampling manifold will be performed by closing the valve located between the filter and the pressure gauge, opening the purge canister valve, and recording the manifold system vacuum (see Figure 5). No purge testing for purge volume determination will be performed because the samples will be collected using Summa canisters. Following successful verification of the manifold leak check, a default of three purge volumes will be extracted prior to sample collection. The purge volume will be calculated based on the void space surrounding the HDPE filter and the volume of the tube. The purge time will be calculated using a nominal flow rate provided by the flow controller of 200 milliliters per minute.

Following completion of the purging of three volumes, a tracer gas (2-Propanol) will be placed in a dish adjacent to the purge canister in the bin, and a lid for the bin that has been modified to include two gauntlet nitrile gloves for adjustment of equipment inside the bin while the bin lid is in place and a viewing port covered with a transparent polycarbonate sheet will be placed over the top of the bin, enclosing the top of the temporary well, the sampling manifold, and the 1-liter sample canister.

The vapor concentration of the 2-Propanol will be monitored with a Photoionization Detector (PID) until 2-Propanol vapor concentration appear to have equilibrated. The gloves in the lid of the bin will then be used to open the sample canister valve. Once the vacuum for the sample canister valve has decreased to 5 inches of mercury, the gloves in the lid of the bin will be used to close the sample canister valve. The pressure gage on the inlet side of the flow controller (see Figure 5) will be monitored during sample collection to ensure that the vacuum applied to the soil gas well does not exceed 100 inches of water.

One duplicate soil gas sample will be collected into a Summa canister from one of the temporary soil gas wells using a stainless steel sampling tee for the Summa canisters using methods described above. Following soil gas sample collection, a PID will be connected to the Teflon tubing to obtain a preliminary field value for the sample collection location. The soil gas Summa canister samples will be stored in a box and promptly shipped to the laboratory for extraction and analysis. Chain of custody procedures will be observed for all sample handling. Measurements of vacuums, purging and equilibration time intervals, and PID readings will be recorded on Soil Gas Sampling Data Sheets.

All drilling rods and associated drilling fittings will be cleaned with an Alconox solution wash followed by a clean water rinse. New Teflon tubing and filters will be used at each sample collection location. Clean, unused vacuum gages and stainless steel sampling manifolds will be used at each sample collection location. Following soil gas sample collection the Teflon tubing will be pulled from each temporary soil gas sampling well and a 1-inch diameter solid steel rod will be driven through the bentonite and sand to the total depth of the temporary soil gas sampling well. The solid steel rod will then be removed, and the borehole will be filled with neat cement.

Groundwater Sample Collection

Boreholes will be drilled at locations B4 and B5 as shown on Figures 2, 3 and 4 using a GeoProbe direct push drill rig equipped with a 2.5-inch outside diameter macrocore barrel sampler lined with transparent PVC liners. The depth to groundwater is anticipated to be approximately 6 feet bgs. Each borehole will be extended to a maximum depth of 15 feet bgs or until groundwater is encountered, whichever occurs first.

The soil from the borings will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. All soil from the boreholes will be evaluated with a Photoionization Detector (PID) equipped with a 10.6 eV bulb and calibrated using a 100 ppm isobutylene standard. No soil samples will be retained from the boreholes for laboratory analysis.

First encountered groundwater samples will be collected from the boreholes by placing temporary 1-inch diameter slotted PVC pipe into the boreholes and using disposable polyethylene tubing with a peristaltic pump and low flow purge methods to retrieve each sample from each borehole. Field parameters of conductivity, temperature, pH, turbidity and water level will be monitored during purging. Groundwater samples will be transferred from the tubing to 40-millileter VOAs and 1-liter glass amber bottles, all of which will be supplied by the laboratory and contain hydrochloric acid preservative. The sample bottles will be labeled and placed in a cooler with ice pending delivery to the laboratory. Chain of custody procedures will be observed for all sample handling.

The groundwater levels in the boreholes will be measured after sample collection, the temporary PVC pipe will be removed from each borehole, and the boreholes will then be filled with neat

cement grout. All drilling, and sample collection equipment will be cleaned with an Alconox solution followed by a clean water rinse or will consist of new materials prior to use in each borehole. Soil and water generated during subsurface investigation will be stored in drums at the site pending characterization and disposal.

Laboratory Analysis

All of the soil gas samples and the duplicate soil gas sample will be analyzed at Air Toxics Limited of Folsom California for TCE, cis-1,2-DCE, trans-1,2-DCE, TPH-G, MBTEX, and 2-Propanol (the tracer gas) using EPA Method TO-15. All of the groundwater samples will be analyzed at McCampbell for TPH-G using EPA Method 5030 in conjunction with modified EPA Method 8015, and for HVOCs and MBTEX using EPA Method 8260B. Chain of custody documentation will accompany the samples to the laboratory.

Risk and Hazard Analysis

The soil gas sample results will be used to evaluate the potential vapor intrusion hazard from soil gas using the HERD February 2009 JE spreadsheet, to determine if additional characterization of potential risk or hazard from potential vapor intrusion to indoor air needs to be performed for any of the groundwater grab samples.

Subsurface Investigation Report Preparation

A report will be prepared documenting soil gas and groundwater sample collection procedures, field observations, and the sample results. The report will include boring logs, summary tables, copies of the laboratory analytical reports, summaries of the risk and hazard analysis, a discussion of the results, and recommendations.

Well Survey and Report

Requests will be provided to the State of California Department of Water Resources and to ACPWA for well records for wells located within 2,000 feet of the subject site. A report will be prepared summarizing the findings of the survey.

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

Sincerely,

P&D Environmental, Inc.

Paul H. King Professional Geologist #5901 Expires 12/31/11



Attachments:

- Figure 1 Site Location Map
- Figure 2 Site Map Showing Proposed Sample Collection Locations
- Figure 3 Site Vicinity Map Showing TCE In Groundwater

Figure 4 – Site Vicinity Map Showing cis-1,2-DCE In Groundwater

Figure 5 – Typical Soil Gas Sampling Manifold

Appendix A – Historical Water Quality Data for 4341 Howard Street Site Appendix B - Historical Water Quality Data for 500 High Street Site

PHK 0547.W1

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FIGURES











Figure 5
Typical Soil Gas Sampling Manifold
Former El Monte RV
4341 Howard Street
Oakland, California

P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610

APPENDIX A

Historical Water Quality Data for 4341 Howard Street Site

Table 2 Groundwater Laboratory Analytical Results

4341 Howard Street, Oakland, California

-			trans	cis		Other EPA				Ethyl	Total
	Sample	Date	1.2 DCE	1,2 DCE	TCE	Method 8010	TPH-g	Benzene	Toluene	benzene	Xylenes
Ka.	D	Sampled	µg/L	µg/L	_μg/L	compounds	mg/L	µg/L	μ g/L	_μg/L_	µg/L
M-7)	MW-1 (1)	6/25/93	NA	NA	NA	NA	<0.05 (2)	<0.5	<0.5	<0.5	<0.5
	MW-1	<i>7/</i> 27/93	NA	NA	NA	NA	0.25	1.7	<0.5	<0.5	<0.5
	MW-1	4/27/94	NA	NA	NA	NA	0.34	2.1	<0.5	<0.5	<0.5
	MW-1	7 <i>1</i> 29/94	NA	NA	NA	NA	0.41	1.8	<0.5	<0.5	<0.5
	MW-1	10/25/94	NA	NA	NA	NA	<0.05	<0.5	<0.5	<0.5	<0.5
	MW-1	3/23/95	12	36	220	ND(3)	0.08	1.6	<0.5	<0.5	<0.5
	MW-1	10/16/95	7.2	91	91	ND	<0.05	0.6	<0.5	<0.5	<0.5
rab	BIAQ	10/13/95	<0.5	2.2	4.3	ND	NA	NA	NA	NA	NA
WY	B2 AQ (4)	10/13/95	3.4	22	9.7	ND	NA	NA	NA	NA	NA
m (B3 AQ	10/13/95	9.4	[*] 120	83	. ND	NA	NA	NA	NA	NA

Notes

(1) Grab water sample collected during well installation

(2) 0.37 mg/L of unknown compounds in gasoline range

(3) All other EPA METHOD 8010 analytes were below laboratory reporting limits

(4) Groundwater reacted with preservative forming small bubbles in VOA

mg/L = milligrams per Liter; equivalent to parts per million (ppm)

 $\mu g/L = micrograms$ per Liter; equivalent to parts per billion (ppb)

TPH-g = Total Petroleum Hydrocarbons as Gasoline

trans-1,2 DCE = trans 1,2 Dichloroethene

cis-1,2 DCE = cis 1,2 Dichloroethene

TCE = Trichloroethene

NA = Not Analyzed

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APPENDIX B

Historical Water Quality Data for 500 High Street Site Table I, Summary of Groundwater Sample Analytical Besults for Petroleum Hydrocarbuns. BEI Job No. 92242, Bank of America 500 High Street, Oakland, California

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Sample Identification	Sampling Date	Modifi Metho (m	ied EPA od 8015 og/L)		EPA Me (µş	thod 602 z/L)					
		TPH as diesel	TPH as gasoline	Benzene	Toluene	Ethyl- benzene	Total Xylenes				
MW-1	3/4/91	0.18	0.67	280	3.1	16	40				
	11/26/91	<0.05	0.17	12	1.1	<0.5	4.9				
	12/17/91	NA	NA	NA	NA	NA	NA				
	9/13/93	<0.05	0.05	1.1	<0.5	<0.5	0.74				
	4/27/94	0.13	0.08	5.2	<0.5	0.7	<0.5				
	8/3/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	10/26/94	0.12*	<0.05	<0.5	<0.5	<0.5	<0.5				
	3/22/95	0.16	0.21	14	<0.5	<0.5	<0.5				
:	6/26/95	0.18°	<0.05	0.8	<0.5	<0.5	<0.5				
	10/12/95	0.09°	<0.05	<0.5	<0,5	<0.5	<0.5				
	2/21/96	NA	NA	NA	NA	NA	NA				
	8/22/96	NA	NA	NA	NA	NA	NA				
	2/24/97	ŃÁ	NA	NA	NA	NA	NA				
MW-2	3/4/91	<0.05	0.07	<0.5	<0.5	<0.5	<0.5				
	11/26/91	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	12/17/91	NA	NA	NA	NA	NA	NA				
	9/13/93	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	4/27/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	8/3/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	10/26/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	3/22/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	6/27/95	0.16	<0.05	<0.5	<0.5	<0.5	<0.5				
(10/12/95	0.14*	<0.05	<0.5	<0.5	<0.5	<0.5 ``				
	2/21/96	NA	NA	NA	NA	NA	NA				
	8/21/96	NA	NA	NA	NA	NA	NA				
	2/24/97	NA	NA	NA	NA	NA	NA				
			n sanag								
MW-3	3/4/91	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	11/26/91	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	12/17/91	NA	NA	NA	NA	NA	NA				
Ţ	9/13/93	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
l l l l l l l l l l l l l l l l l l l	4/27/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	8/3/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
[10/25/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	3/23/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5				
	6/26/95	0.12°	<0.05	<0.5	<0.5	<0.5	<0.5				
	10/13/95	0.08°	<0.05	<0.5	<0.5	<0.5	<0.5				
ſ	2/21/96	NA	NA	NA	NA	NA	NA				

Table I, Summary of Groundwater Sample Analytical Results for Petroleum Hydrocarbons BEI Job No. 92242, Bank of America 500 High Street, Oakland, California

Sample Identification	Sampling Date	Modifi Metho (m	ed EPA d 8015 g/L)		EPA Met (µg	thod 602 r/L)	
		TPH as diesel	TPH as gasoline	Benzene	Toluene	Ethyl- benzene	Total Xylenes
	8/22/96	NA	NA	NA	NA	NA	NA
	2/24/97	NA	NA	NA	NA	NA	NA
	e opistanie		a janagut n	e i sesti jing			
MW-4	3/27/91	<0.05	0.17	2.7	<0.5	<0.5	<0.5
MW-5	11/26/91	<0.05	0.06	<0.5	0.7	<0.5	1.1
	12/12/91	NA	<0.05	<0.5	<0.5	<0.5	<0.5
	9/13/93	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	4/27/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	8/3/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	10/25/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	3/22/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	6/27/95	0.22*	<0.05	<0.5	<0.5	<0.5	<0.5
	10/12/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	2/20/96	NA	NA	NA	NA	NA	NA
	8/21/96	NA	NA	NA	NA	NA	NA
	2/25/97	NA	NA	NA	NA	NA	NA
<u>An eskenigerinek</u>					CAO MARI		
MW-6	3/19/92	0.073	<0.05	<0.5	<0.5	<0.5	<0.5
	9/13/93	<0.05	<0.05	<0.5	<0.5	<0.5	0.85
	4/27/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	8/3/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	10/26/94	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	4/6/95	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5
	6/28/95	0.14"	<0.05	<0.5	<0.5	<0.5	<0.5
Í	10/13/95	0.09*	<0.05	<0.5	<0.5	<0,5	<0.5
	2/20/96	NA	NA	NA	NA	NA	NA
	8/21/96	NA	NA	NA	NA	NA	NA
	2/24/97	NA	NA	NA	NA	NA	NA
		8368 P					
MW-7 @	4/27/94	<0.05	0.11	1.6	<0.5	<0.5	<0.5
	8/3/94	<0.05	0.14	8.5	<0.5	<0.5	<0.5
[10/25/94	0.0 8 °	0.23	1.0	0.8	<0.5	<0.5
Ī	4/6/95	<0.05	<0.05	0.8	<0.5	<0.5	<0.5
	6/27/95	0.15°	0.184	1.6	<0.5	<0.5	<0.5
[10/16/95	0.09"	0.08	0.9	<0.5	<0.5	<0.5
	2/20/96	NA	NA	NA	NA	NA	NA
[8/21/96	NA	NA	NA	NA	NA	NA
	2/24/97	NA	NA	NA	NA	NA	NA
					MARCENC	A THE PARTY OF	

Table I, Summary of Groundwater Sample Analytical Results. for Petroleum Hydrocarbons BEI Job No. 92242, Bank of America 500 High Street, Oakland, California

Sample Identification	Sampling Date	Modifi Metho (m	ed EPA d 8015 g/L)	EPA Method 602 (µg/L)						
		TPH as diesel	TPH as gasoline	Benzene	Toluene	Ethyl- benzene	Total Xylenes			
MW-8	10/12/95	0.11 ^{c,b}	<0.05	<0.5	<0.5	<0.5	<0.5			
	2/20/96	NA	NA	NA	NA	NA	NA			
	8/21/96	NA	NA	NA	NA	NA	NA			
	2/25/97	NA	NA	NA	NA	NA	NA			
	·									
PIT-1	12/17/91	NA	NA	NA	NA	NA	NA			
					gani kazar da 19					
B-1-AQ	4/27/94	0.19	<0.05	<0.5	1.6	<0.5	3.0			
B-2-AQ	4/27/94	0.14	<0.05	<0.5	1.3	<0,5	1.9			
B-3-AQ	4/27/94	0.18	<0.05	<0.5	0.8	<0,5	1.1			
B-4-AQ	4/27/94	NA*	NA*	<0.5	0.9	<0.5	<0.5			
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Notes:

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		will'energy and line .
. mg/L	=	mulgrams per liter
pg/L	=	micrograms per liter
TPH	Ħ	Total Petroleum Hydrocarbons
NA	=	Not analyzed
, e⇔	=	Well installed by Mr. Jim Minor, trustee
<x< td=""><td>2</td><td>less than the method reporting limit (x)</td></x<>	2	less than the method reporting limit (x)
DHS	=	Department of Health Services
a	=	Insufficient water to allow analysis
ħ	=	The laboratory reports this result as an unknown hydrocarbon with several peaks
¢	=	The laboratory reports that this result appears to be a heavier hydrocarbon than diesel.
d	×	The laboratory reports that this result has an atypical pattern for gasoline analysis.
•	*	The laboratory reports that Freon 113 was detected in the sample and the method blank concentrations of 1.0 and 1.1 μ g/L, respectively.

Bold results indicate concentrations above the listed method detection limit.

Maximum Contaminant Levels (MCLs) ^f Benzen	e =	1 µg/L (Primary DHS MCL)
Toluene	, =	150 µg/L (Primary DHS MCL)
Ethylbe	nzene =	700 µg/L (Primary DHS MCL)
Total X	ylenes =	1,750 µg/L (Primary DHS MCL)

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Information obtained from Compilation of Federal and State Drinking Water Standards and Criteria, July 1995, Quality Assurance Technical Document No. 3, State of California Department of Water Resources.

	Table II, i	Summary of BEI 500 I	Groundwat Job No. 92 High Street	er Sample 242, Bank , Oakland,	Analytic of Americ Californ	al Resu a la	lts for H	VOs	
Sample Identification	Sampling Date			EF	HVOs PA Method (µg/L)	8010			
		Chloroform	cis- 1,2-DCE	trans- 1,2-DCE	1,1- DCE	TCE	1,1,1- TCA	1,1,2- TCA	Vinyl Chloridø
MW-1	3/4/91	<0.4	NA	NA	NA	NA	NA	NA	NA
	11/26/91	<0.4	NA	NA	NA	NA	NA	NA	NA
	12/17/91	<0.4	21	. 5.8	<0.4	58	<2.5	<2.5	<5.0 .
	9/13/93	<0.4	3.4	1.6	<0.4	22	<0.5	<0.5	<1.0
	4/27/94	<0.4	<0.4*	<0.4	<0.4	21	<1	<1	<0.4
	8/3/94	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	0.9
	10/26/94	<0.4	2.9	1.0	<0.4	19	<0.4	<1	<0.4
	3/22/95	<0,4	2.4	2.4	<0.4	16	<0.4	<1	<0.4
	6/26/95	<0.4	2.9	0.8	<0.4	16	<0.4	<1	<0.4
	10/12/95	<0.4	2.0	0.57	<0.4	18	<0.4	<1	<0.4
	2/21/96	<0.4	3.8	<0.4	<0.4	15	<0.4	<1	. <0.4
	8/22/96	<0.4	1.7	1.2	<0.4	16	<0.4	<1	<0.4
	2/24/97	<0.4	2.7	1.5	<0.4	13	<0.4	<1	<0.4
MW-2	3/4/91	<0.4	NA	NA	NA	NA	NA	NA	NA
	11/26/91	<0.4	NA	NA	NA	NA	NA	NA	NA
	12/17/91	<0.4	<2.5	<2.5	<0.4	<2.5	<2.5	<2.5	<5.0
	9/13/93	<0.4	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	1.0
	4/27/94	<0.4	<0.4*	<0.4	<0.4	<0.4	<1	<1	<0.4
	8/3/94	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4
	10/26/94	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4
	3/22/95	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4
	6/27/95	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4
	10/12/95	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4
	2/21/96	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4
	8/21/96	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4
	2/24/97	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4

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		500	High Stree	t, Oakland	, Californ	iia 👘			
Sample Identification	Sampling Date			E	HVOs PA Methoo (µg/L)	3 8010			
		Chloroform	cis- 1,2-DCE	trans- 1,2-DCE	1,1- DCE	TCE	1,1,1- TCA	1,1,2- TCA	Vinyl Chlorid
MW-3	3/4/91	<0.4	NA	NA	NA	NA	NA	NA	NA
	11/26/91	<0.4	NA	NA	NA	NA	NA	NA	NA
	12/17/91	<0.4	<2.5	<2.5	<0.4	4.0	<2.5	<2.5	<5.0
	9/13/93	<0.4	<0.5	<0.5	<0.4	1.8	<0.5	<0.5	<1.0
	4/27/94	<0.4	<0.4*	<0.4	<0.4	1.1	<1	<1	<0.4
	8/3/94	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4
	10/26/94	<0.4	<0.4	<0.4	<0.4	1.4	<0.4	<1	<0.4
	3/22/95	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<1	<0.4
	6/26/95	<0.4	<0.4	<0.4	<0.4	1.7	<0.4	<1	<0.4
	10/13/95	<0.4	<0.4	<0.4	<0.4	2.4	<0.4	<1	<0.4
	2/21/96	<0.4	<0.4	<0.4	<0.4	3.2	<0.4	<1	<0.4
	8/22/96	<0.4	0.8	<0.4	<0.4	3.0	<0.4	<1	<0.4
	2/24/97	<0.4	1.3	<0.4	<0.4	4.3	<0.4	<1	<0.4
MW-4	3/27/91	<0.4	NA	NA	NA	NA	NA	NA	NA
MW-5	. 11/26/91	<0.4	NA	NA	NA	NA	NA	NA	NA
	12/12/91	<0.4	55	\$2	<0.4	93	<1.0	<1.0	<2.0
	9/13/93	<0.4	11	9.1	<0.4	39	<0.5	<0.5	<1.0
	4/27/94	<0.4	27*	18	<0.4	51	<1	<1	1.4
	8/3/94	<0.4	36	<0.4	<0.4	<0.4	<0.4	<1	1.6
	10/26/94	<0.4	21	11	<0.4	52	<0.4	<1	<0.4
	8/22/95	<0.4	<0.4	17	<0.4	32	<0.4	<1	<0.4
	6/27/95	<0.4	12	9.6	<0.4	29	<0.4	<1	<0.4
	10/12/95	<0.4	11	5.1	<0.4	30	<0,4	<1	<0.4
	2/20/96	<0.4	17	12	<0.4	26	<0.4	<1	<0.4

	Table II,	Summary of BEI 500	Groundwa Job No. 92 High Stree	ter Sample 2242, Bank t. Oakland	Analytic of Ameri , Califori	al Resi ca iia	ılts for F	IVOs	
Sample Identification	Sampling Date		3	El	HVOs PA Methoc (µg/L)	i 8010			
	 	Chloroform	cis- 1,2-DCE	trans- 1,2-DCE	1,1- DCE	тсе	1,1,1- TCA	1,1,2- TCA	Vinyl Chloride
	8/21/96	<0.4	10	8.5	<0.4	27	<0.4	<1	0.5
	2/25/97	<0.4	12	9.2	<0.4	24	<0.4	<1	<0.4
		C.C. States V	1912-9919						
MW-6	3/19/92	<0.4	18	1.0	<0.4	42	5	<1	3
,	9/13/93	<0.4	21	11	<0.4	43	<0.5	<0.5	<1.0
	4/27/94	<0.4	18*	7.5	<0.4	36	<1	<1	<0.4
i '	8/3/94	<0.4	26	7.8	<0.4	37	<0.4	<1	1.0
/	10/26/94	<0.4	16	6.0	<0.4	30	<0.4	<1	<0.4
1	4/6/95	<0.4	. 12	6.4	<0.4	28	<0.4	<1	<0.4
/	6/26/95	<0.4	15	9.2	<0.4	31	<0.4	<1	<0.4
· · · · · · · · · · · · · · · · · · ·	10/13/95	<0.4	16	5.4	<0.4	31	<0.4	<1	<0.4
	2/20/96	<0.4	9.8	6.1	<0.4	18	<0.4	<1	<0.4
1 : '	8/21/96	<0.4	13	7.9	<0.4	28	<0.4	<1	0.5
L/	2/24/97	<0.4	13	8.2	<0.4	31	<0.4	<1	0.5
<u> Alexandre</u>		Stop s and		<u> </u>	<u>Course</u>			Sec. 19	
PIT-1	12/17/91	<0.4	2.8	1.3	<0.4	3.2	3.1	<2.5	<5.0
		<u> (493-768)</u>	<u>. Care a se consec</u>		<u> </u>				<u> anna a</u>
MW-7*	4/27/94	<0.4	200*	25	<0.4	130	<1	<1	3.6
1	8/3/94	<0.4	210	<0.4	<0.4	180	<0.4	<1	1.4
1	10/26/94	<0.4	200	22	0.7	180	<0.4	<1	<0.4
1	4/6/95	<0.4	53	12	1.5	190	<0.4	<1	0.9
1	6/27/95	<0.4	120	18	1.6	230	<0.4	<1	2.1
1 '	10/12/95	<2.0	150	16	2.2	150	<2	<2	2
1 '	2/20/96	<0.4	110	21	2.1	130	<0.4	<1	<0.4
1 '	8/21/96	<0.4	98	22	1.7	310	<0.4	<1	1.2
1 1	2/24/97	<0.4	96	24	2.3	210	<0.4	<1	2.1

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Sample Identification	Sampling Date	HVOs EPA Method 8010 (µg/L)							
		Chloroform	cis- 1,2-DCE	trans- 1,2-DCE	1,1- DCE	TCE	1,1,1- TCA	1,1,2- TCA	V Ch
						5-3-3-7-8 			
MW-8	10/12/95	0.54	5.7	2.7	<0.4	13	<0.4	<1	<
4	2/20/96	<0.4	5.9	4.1	<0.4	8.2	<0.4	<1	
	8/21/96	<0.4	4.2	3.4	<0.4	10	<0.4	<1	
	2/25/97	<0.4	4.2	3.1	<0.4	8.5	<0.4	<1	
					ېيىن ئىلىنىتى مەربىرى				
B-1-AQ	4/27/94	<0.4	12*	3.7	<0.4	4.5		<1	ļ
B-2-AQ	4/27/94	<0.4	5.0*	0.4	<0.4	<0.4	<1	<1	
B-3-AQ	4/27/94	<0.4	10ª	0.4	<0.4	16	<1	<1	
B-4-AQ	4/27/94	<0.4	<0.4*	<0.4	<0.4	11	<1	<1	

Table II, Summary of Groundwater Sample Analytical Results for HVOs, continued

Notes:

HVOs	=	Halogenated Volatile Organics
DCE	=	Dichloroethene
TCE	=	Trichloroethene
TCA	=	Trichloroethane
µg/L	=	micrograms per liter
NA		Not analyzed
<x< td=""><td>-</td><td>less than the method reporting limit (x)</td></x<>	-	less than the method reporting limit (x)
•	=	Technically nonreportable concentration, cis-1,2-DCE laboratory standard was not run by laboratory; please refer to Status Report, Former
		Cobbledick-Kibbe Site, dated June 16, 1994, by Blymyer Engineers, Inc.
6	H	Well installed by Mr. Jim Minor, Trustee

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Bold results indicate concentrations over the listed method detection limit.

Maximum Contaminant Levels (MCLs)^c:

=	6 µg/L (Primary DHS MCL)
=	10 µg/L (Primary DHS MCL)
=	6 µg/L (Primary DHS MCL)
=	5 µg/L (Primary DHS MCL)
=	200 µg/L (Primary DHS MCL)
=	5 µg/L (Primary DHS MCL)
=	0.5 µg/L (Primary DHS MCL)

[°] Information obtained from *Compilation of Federal and State Drinking Water Standards and Criteria*, July 1995, Quality Assurance Technical Document No. 3, State of California Department of Water Resources.