RO 161

Additional Soil and Groundwater Investigation Report
for
3744 Depot Road
Hayward, California

F. 6. 2004

Prepared For:
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PIERS Project Number: 04028

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March 1, 2004

Mr. Scott Seery
Alameda County Health Services Agency
Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-657 7

RE: Report of Additional Soil and Groundwater Investigation
3744 Depot Road, Hayward, CA

Dear Mr. Seery:

This report summarizes the additional Phase II investigation proposed in PIERS' work plan that was submitted to you in December 2003. The purpose of this work was to complete the additional characterization necessary at the Property to proceed towards case closure.

SITE DESCRIPTION AND BACKGROUND

The Property is located on the south side of Depot Road, between the intersections of Depot Road with Cabot Boulevard and Foley Street, in the City of Hayward, County of Alameda, State of California. A Property Vicinity Map is included with this report (Figure 1). The present tenant is American Auto Dismantler, an automobile salvage operation. The current use of the Property involves the storage and demolition of automobiles.

A summary of the previous work at the Property, and list of previous reports, work plans, sand agency correspondences concerning the removal of two underground storage tanks (USTs) at the Property, is included in PIERS' work plan dated December 2003.

RO 161

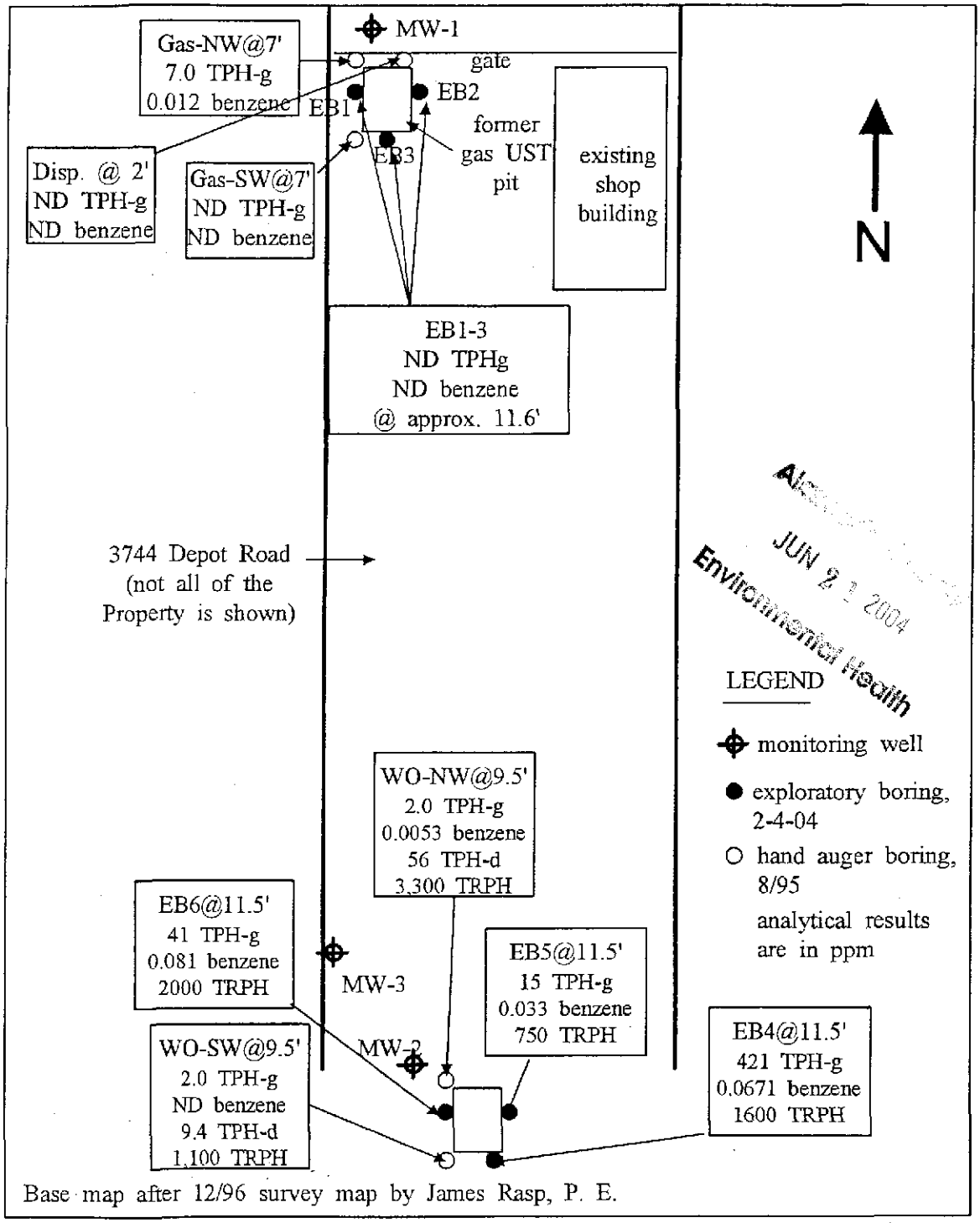

FIGURE 2
SOIL ANALYTICAL DATA

3744 DEPOT ROAD
HAYWARD, CALIFORNIA

FEBRUARY 2004
SCALE: 1" = 50'

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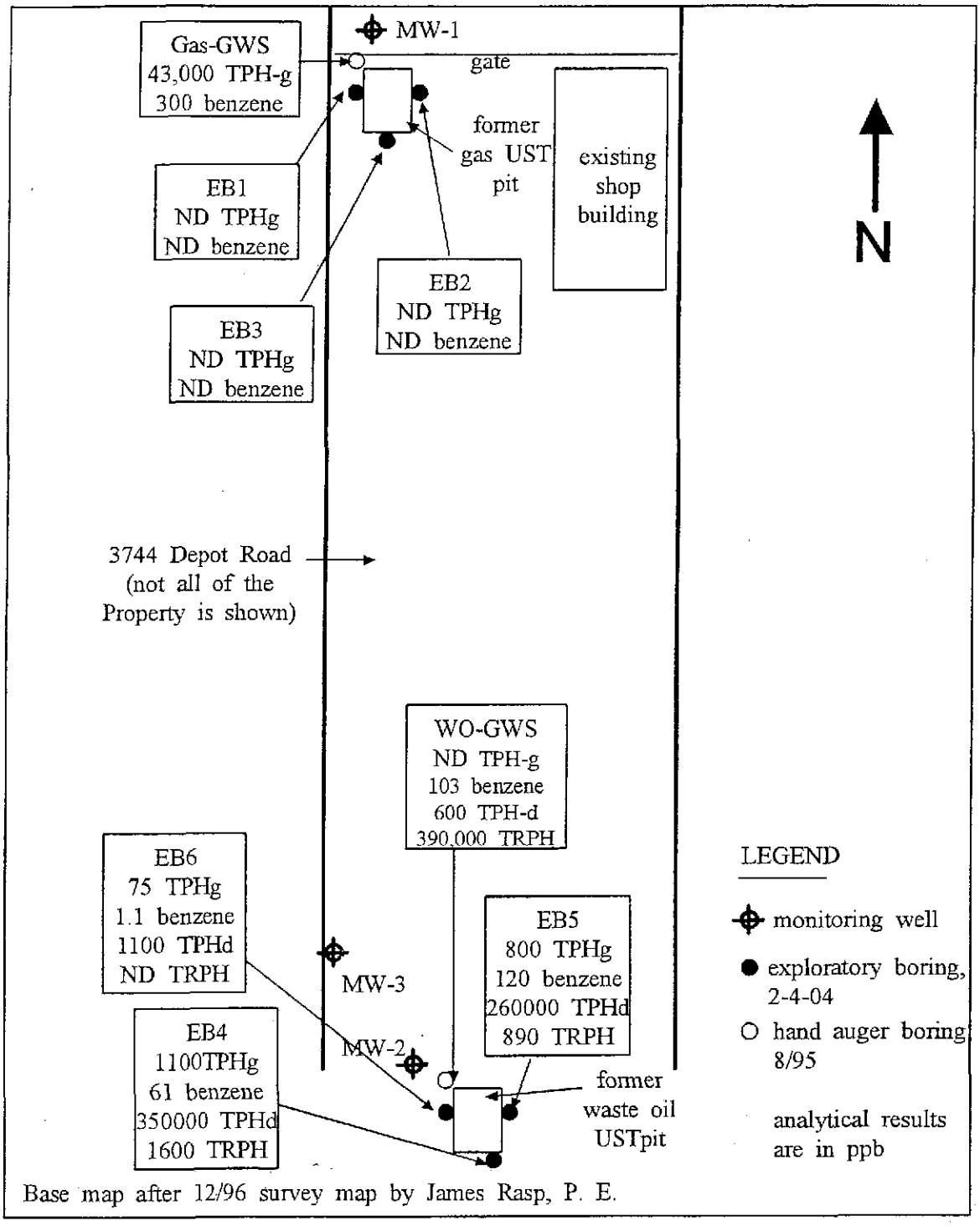

FIGURE 3

GROUNDWATER ANALYTICAL DATA - BORINGS

3744 DEPOT ROAD
HAYWARD, CALIFORNIA

FEBRUARY 2004
SCALE: 1" = 50'

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Field Log of Boring EB-1

Location of Boring

See Site Plan

Approximate scale: 1" =

Logged by	Joel Gregar		
Weather	Clear, mild		
Conditions			
Drilling Contractor	Vironex		
Drilling Equipment	Geoprobe		
Driller's Name	Stan		
Drilling Method	Direct push		
Sampling Methods	Coring		
Hammer Weight	—	Drop	—
Start Time		Date	2/4/04
Completion Time		Date	2/4/04
Time of Backfilling	pm	Date	2/4/04 By Vironex
Boring Depth, feet	16'		
Casing Depth, feet	—		
Water Depth, feet	12'		
Time			
Date	2/4/04		
Surface Elevation	Datum		

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log
				↓ Continuously Cored ↓					1	
									2	ML
									3	
									4	
									5	
									6	
									7	
									8	
									9	
									10	

4" of concrete over 4" of sand & gravel base

2 8" V. dark brown clayey silt (ML), moist, v. stiff

2 5' brown clayey silt (ML)

2 7' olive clayey silt (ML), mottled, some pores, no odor.

2 8' brown odor (all above excavated material placed back into excavation after aeration?)

Project Name 3744 Depot Rd. Hayward

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Field Log of Boring EB-1
(continued)

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log
						EB-1 11.7			1	
									2	
									3	
									4	
									5	
									6	
									7	
									8	
									9	
									10	
									1	
									2	
									3	
									4	
									5	
									6	
									7	
									8	
									9	
									10	

(continuous)

@10.7 Olive clayey silt (ML) appears undisturbed (native)

@12' Abundant water, fairly clear

ML @13.7 grades to olive silt (ML)

TD - 16'

Sampled water immediately

Backfilled later same day with bentonite & neat cement grout using tremie

Project Name 3744 Depot Rd, Project No. 04028 Sheet 2 of 2

Field Log of Boring EB-2

Location of Boring	
See site map	
Approximate scale: 1" =	

Logged by	Joel Greger		
Weather	clear & mild		
Conditions			
Drilling Contractor	Vironex		
Drilling Equipment	Geoprobe		
Driller's Name	Stan		
Drilling Method	Direct push		
Sampling Methods	Coring		
Hammer Weight	—	Drop —	
Start Time		Date 2/4/04	
Completion Time		Date 2/4/04	
Time of Backfilling		Date 2/4/04	By Vironex
Boring Depth, feet	16'		
Casing Depth, feet	—		
Water Depth, feet	12.5'		
Time			
Date	2/4/04		
Surface Elevation	Datum		

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log	Description
				← Continuous (4 cored) →							4" of pavement, 4" sand + gravel base
									1	—	[illegible] brown clayey silt (ML)
									2		v. moist to sl. moist, stiff
										ML	
									3		Conditions appear
									4		identical to EB-1
									5		
									6		
									7		
									8		
									9		
									10		

Project Name 3744 Depot Rd Hayward Project No. 04028 Sheet 1 of 2

Field Log of Boring EB-2
(continued)

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log
				Continuous						F? N
									11	
						EB-2 11.6'			12	▽
									13	
									14	
									15	
									16	
									7	
									8	
									9	
									0	
									1	
									2	
									3	
									4	
									5	
									6	
									7	
									8	
									9	
									0	

@10.6' appears undisturbed (native), olive clayey silt (ML)
@11.6 wet to saturated but no free water [illegible]
@12.5-14' slightly sandier, saturated, abundant water
@14' - clayey silt (ML), as above

TD-16' sampled water immediately
Back filled later same day w/ bentonite + neat cement grout using tremie

Project Name 3744 Depot Rd Project No. 04028 Sheet 2 of 2

Field Log of Boring EB-3

Location of Boring	See site plan
Logged by	Joel Greger
Weather	clear & mild
Conditions	
Drilling Contractor	Vironex
Drilling Equipment	Geoprobe
Driller's Name	Stan
Drilling Method	Direct push
Sampling Methods	coring
Hammer Weight	—
Drop	—
Start Time	
Date	2/4/04
Completion Time	≈1040 AM
Date	2/4/04
Time of Backfilling	
Date	2/4/04
By	Vironex
Boring Depth, feet	16
Casing Depth, feet	—
Water Depth, feet	5.61
Time	2:50PM
Date	2/4/04
Surface Elevation	
Datum	

Approximate scale: 1" =

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log	Description
				Continuously cored (0–10)					0		@0 - Dk. brown clayey silt (ML)
									1		
									2	ML	
									3		
									4		
									5	▽	
						EB3-5.5'			6		
									7		@7.6 Grades to clayey silt (ML), color lt. brown to olive, mottled, plant remains, moist, v. stiff
									8		
									9		@8-9.3 - Dk. brown to brown w/ a few angular gravels
									10		@10.3 - olive clayey silt (ML)

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Project No. 04028

Sheet 1 of 2

Field Log of Boring EB-3
(continued)

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log
				↑		EB3(10.5'			11	
						EB3(11.5')			12	
				cont'd views					13	ML
									14	sandy
									15	ML
									16	

@14.2-14.7 sandy silt (ML) but no free water, tighter than EB2 as it beyond edge of former tank pit, then clayey silt as above

TD 16

Backfilled w bentonite & neat cement grout using tremie

No free water upon completion installed casing water v. slow to accumulate, sampled 4 hrs. later @ 2:50 PM, wat @ 5.61'

Note:
DTW in MW1 1043 AM
5.51' below TOC

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Field Log of Boring EB-4

Location of Boring

See site map

Approximate scale: 1" =

Logged by	Joel Greger
Weather	clear & mild
Conditions	
Drilling Contractor	Vironex
Drilling Equipment	Geoprobe
Driller's Name	Stan
Drilling Method	direct push
Sampling Methods	Coring
Hammer Weight — Drop —	
Start Time 11 AM	Date 2/4/04
Completion Time	Date 2/4/04
Time of Backfilling	Date 2/4/04 By Vironex
Boring Depth, feet	16
Casing Depth, feet	—
Water Depth, feet	6.9
Time	
Date	2/4/04
Surface Elevation	Datum

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log
				continuous core		EB4 (4.5') EB4 (7.5')			1 2 3 4 5 6 7 8 9 10	▽ ? ?

4" of concrete, then 1 foot of mottled clayey silt (fill)
@1' Dk. brown clayey silt (ML)

(ML)
@5' clayey silt, as above
@6.5 odor of hydrocarbons, becomes grayish-brown (stained?), some plant remains

@9.5' change from dk brown to olive gray, appears undisturbed (native?) @9.7'

Project Name 3744 Depot Rd Hayward

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Field Log of Boring EB-4
(continued)

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log
									11	ML
						EB4(11.5')			12	sandy
									13	
									14	
									15	
									16	
									7	
									8	
									9	
									0	
									1	
									2	
									3	
									4	
									5	
									6	
									7	
									8	
									9	
									0	

clayey silt (ML), asaboue
11.5 - odor of hydrocarbons, slightly gray (stained?) olive-gray color
@ 12' - wet
@ 12.8' 2" sandy silt zone, water has a sheen, odor of hydrocarbons

TD - 16'
odor 6-16'
sheen on water

sampled ground water immediately

water later rose to 6.9'

Backfilled later same day w bentonite + neat cement grout using tremie

Project Name 3744 Depot Rd Project No. 04028 Sheet 2 of 2

Field Log of Boring EB-5

Location of Boring

See site plan

Approximate scale: 1" =

Logged by	Joel Gregor
Weather	clear & mild
Conditions	
Drilling Contractor	Vironex
Drilling Equipment	Geoprobe
Driller's Name	Stan
Drilling Method	Direct Push
Sampling Methods	coring
Hammer Weight —	Drop —
Start Time	Date 2/4/04
Completion Time	Date 2/4/04
Time of Backfilling	Date 2/4/04 By Vironex
Boring Depth, feet	16'
Casing Depth, feet	—
Water Depth, feet	6.2 after completion of sampling (10 minutes)
Time	
Date	2/4/04
Surface Elevation	Datum

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log
				Cont. runs		EB5(5.5')			1 2 3 4 5 6 7 8 9 10	
						EB5(7.5')				

0-4' DK brown clayey silt (ML), sl. moist, v. stiff

lithology identical to EB-4

@ 5.5' pass-66 sl. odor?

@ 7.5' little to no odor

@ 9.5 - definite odor below 9.5

Project Name 3744 Depot Rd Hayward

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Field Log of Boring EB-5
(continued)

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log
				Continuous		EB5 (11.5)			1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0	

Lithology identical to EB4

@11.5 sig. odor of hydrocarbons but less than in EB4

@12-16' Clayey silt, ML

Free water @ 13.4 with heavy sheen, sl. sandy zone

TD-16

collected sample immediately

Sheen on Sample

Backfilled later same day w bentonite & neat cement grout, Grout thru tremie

Project Name 3744 Dent Rd Project No 64028 Sheet 2 of 2

Field Log of Boring EB-6

Location of Boring	See site plan
Approximate scale: 1" =	
Logged by	Joel Greger
Weather	Clear, mild
Conditions	
Drilling Contractor	Vironex
Drilling Equipment	Geoprobe
Driller's Name	Stan
Drilling Method	direct push
Sampling Methods	coring
Hammer Weight	—
Drop	—
Start Time / Date	2/4/04
Completion Time / Date	2/4/04
Time of Backfilling	right after
Date	2/4/04
By	Vironex
Boring Depth, feet	16'
Casing Depth, feet	—
Water Depth, feet	6.3 after sampling (10 min. later)
Time	
Date	2/4/04
Surface Elevation	
Datum	

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log	Description
				Continuously cored (0–10)							0-4' Brown clayey silt (ML) as in EB 4 + 5
									1		
									2		
									3		
									4		4-8' Brn-Dk brn. clayey silt (ML), mod. odor
									5		5.5- mod- [illegible] odor Note - says 4.5' on COC
						EB6 (5.5)			6	▽	
									7	silt	
						EB6 (8)			8		
									9		9.3' becomes gray stained
									10		

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Field Log of Boring EB-6
(continued)

Drilling Rate (minutes per foot)	Sampler Type	Blows per 6 inches	Inches Driven	Inches Recovered	Sample Condition	Sample No./Depth	Penetrometer (tsf)	Standard Penetration Blow Count	Depth in Feet	Graphic Log
				Continuous		EB-6 @ 11.5			1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0	

@ 11-12' - mottled w gray staining
@ 12-14 strong odor, lessening below 14', clayey silt (ML), no sand/per zones or free water observed.

TD = 16'

Dry upon completion but closed quickly to 6.3

Backfilled w bentonite + neat cement grout using tremie

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RECENT FIELD ACTIVITIES – THIS INVESTIGATION

On February 4, 2004, six soil borings were completed at the Property, and the three groundwater wells were sampled. Three borings, designated as EB-1 through EB-3 on the attached Figures 2 and 3, were completed around the former gasoline underground storage tank (UST) pit. Three additional borings, designated as EB-4 through EB-6, were completed around the former waste oil UST pit. The locations of the borings and wells are shown on Figures 2 through 4.

The borings were completed using a Geoprobe drill rig provided by Vironex, Inc., of San Leandro, California, a state-licensed driller. Prior to drilling, a drilling permit was obtained from the Alameda County Department of Public Works, and the Alameda County Water District (ACWD) was notified.

The borings were all completed to a depth of sixteen feet below grade. All of the borings were continuously cored using four-foot drilling rods with plastic liners. After retracting the samples, soil samples retained for analyses were separated by cutting the liners with a small hand saw. The remaining liners were cut lengthwise and the soils were examined for evidence of contamination and for lithology.

The groundwater at the Property appears to occur in confined or semi-confined conditions. During drilling, groundwater was not observed in the soil cores until approximately twelve feet below grade, but later was measured in several of the borings at 5.5 to 6.0 feet below grade, consistent with the depth to water in monitoring wells MW-1 and MW-2.

The subsurface conditions encountered in the borings consisted of several inches of concrete over a few inches of sand and gravel base, then very dark brown clayey silt. The color varied from a mottled olive green to very dark brown to a depth of 10.0 to 10.5 feet, suggesting that the original soils excavated from the tank pits had been placed back in the excavations. Below approximately 10.0 to 10.5 feet, the soils appeared to be olive-green, native clayey silt (beneath the tank pit backfill).

Borings completed around former Gasoline UST (EB-1 through EB-3):

In EB-1 and EB-2, abundant water was encountered at twelve feet below grade, and grab groundwater samples were collected immediately. In EB-3, the soils partially closed after withdrawing the rods, and it was difficult to install the casing. Although sandy silt was present in this borehole between approximately 14.2 to 14.7 feet below grade, there was little water present at the time the cores were retrieved. Groundwater was initially very slow to collect in this borehole, but several hours later was measured at approximately 5.61 feet below grade. Also, the depth to groundwater in nearby well MW-1 was measured at approximately 5.51 feet below the top of the casing. The borings completed around the former gasoline pit had no obvious evidence of contamination, such as odors or staining. Soil samples were retained for analysis from approximately 11.5 feet below grade, corresponding to approximately one foot within native material beneath the former tank pit.

Borings completed around former Waste Oil UST (EB-4 through EB-6):

The borings around the former waste oil UST encountered similar lithologic conditions, and also encountered odors and staining indicating hydrocarbon contamination. In boring EB-4, an odor was noted beginning at 5.5 feet below grade, where the soils appeared to be stained grayish brown, continuing to 16 feet below grade. The soils were saturated below 12 feet. A two-inch sandy silt zone, where the groundwater had a slight sheen, was observed at 12.8 feet below grade. In EB-5, the odor began at approximately 11.5 feet below grade. Groundwater with a sheen was observed at approximately 13.4 feet below grade. At EB-6, a moderate odor was observed beginning at approximately 5.5 feet below grade, with gray staining below approximately 9.3 feet below grade. The odor was generally less than in EB-4. Groundwater was relatively slow to collect in this borehole.

From these borings, soil samples were retained for analyses from approximately 11.5 feet below grade, corresponding to approximately one foot within native material beneath the former tank pit. Also, shallow samples from between 4.5 and 5.5 feet below grade were retained for analysis because apparent odors and/or staining was observed, and because the groundwater rises to about 5 to 6 feet below grade under hydrostatic pressure.

About one hour after sampling, the depth to groundwater in the boreholes was measured at between approximately 6.2 to 6.9 feet below grade. Groundwater in MW-2 was measured at approximately 5.17 feet below the top of the casing, or approximately 6.03 feet below grade. All of the borings appeared to be within the original excavation, as at the other tank pit.

METHODOLOGY

Soil samples were collected continuously in the borings using the Geoprobe. The samples were collected in a drilling rod lined with a plastic liner. The portion of the liner containing the sample selected for analyses was cut and then sealed with Teflon-lined plastic caps, labeled, and placed in individually sealed plastic bags. The samples were stored in a cooler, on ice, prior to same-day delivery to the state-certified laboratory.

Upon completion of each of the borings to approximately 16 feet below grade, one-inch slotted casings were installed in the holes to facilitate sample collection, and to insure that the holes remained open. The casings were later used as tremie pipes for grouting. The groundwater samples were collected using small diameter vinyl tubing fitted with a check ball in the tip. The vinyl tubing was surged within the water-bearing zone, which allowed the water to rise to the surface, where it was decanted into VOAs or one-liter amber bottles, as appropriate. The containers were sealed with Teflon-lined screw caps, labeled, and stored, on ice, for delivery to a state-certified laboratory.

Properly executed Chain of Custody documentation accompanied all of the samples. During field sampling, any equipment placed in the well and re-used was decontaminated before re-use by cleaning with Alconox or equivalent detergent, following by double rinsing with distilled or deionized water.

Following sample collection, the borings were backfilled with neat cement to the surface using the one-inch casings as tremie pipes. Bentonite was used to seal the saturated zone. Cuttings generated during drilling were placed in DOT-approved 5-gallon pails and or placed on visqueen, pending analysis and proper disposal.

Well Sampling: Prior to purging, wells MW-1 and MW-3 were checked for total depth and depth to the water table using an electronic sounder. Both wells appeared to have no sediment and the well bottoms were measured at 15 feet. The wells were then purged of a minimum of three casing volumes of groundwater using a pump. During purging operations, the field parameters of pH, temperature, and electrical conductivity were recorded. The turbidity meter was not functioning properly; however, it was noted that the turbidity improved markedly in well MW-1 to a slightly cloudy condition, and to almost clear of turbidity in well MW-2. The well purging was terminated when successive parameter measurements varied by less than 10%, and after approximately 28 gallons had been removed from well MW-1, and approximately 16 gallons from MW-2, representing over 16 and over 9 casing volumes, respectively. Groundwater Sampling Forms with the measurements of the field parameters for these two wells are attached to this report.

The groundwater samples from wells MW-21 and MW-2 were then obtained using a stainless steel bailer. The sample containers were handled and the bailer was decontaminated between uses as described above.

Well MW-3, which existed on the site prior to any investigations for hydrocarbons, consists of a six-inch steel casing that extends to approximately thirty feet. The screened interval and other construction details are unknown. The well is plumbed to a pump and the water is routed to the Property building for use as non-potable water. On the day of drilling, groundwater was present in the well approximately six inches below the top of the casing, probably due to recent pumping. Therefore, the well was not purged or monitored. Groundwater samples were obtained by filling the containers from the water present at the top of the casing.

ANALYTICAL RESULTS

The samples were analyzed by McCampbell Analytical Laboratory in Pacheco, California, a state-certified laboratory. All of the soil and groundwater samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline; and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Methods 8015C and 8020; and for Oil and Grease by Method 9071. The three grab groundwater samples from the borings at the waste oil tank pit were analyzed for TPH as diesel by EPA Method 8015C; the LUFT five metals; and volatile organic compounds and the fuel oxygenates by EPA Method 8260B. The three grab groundwater samples from the borings at the former gasoline tank pit, and the three groundwater samples from the existing wells, were also analyzed for the fuel oxygenates by EPA Method 8260B. The groundwater sample from well MW-2 was also analyzed for TPH as diesel.

The analytical results are summarized along with historical analytical results on Tables 1 through 3, and depicted on Figures 2 through 4. The analytical results of the soil and grab groundwater samples collected from EB-1 through EB-3 around the former gasoline tank pit, and the groundwater sample from well MW-1, were completely non-detectable for TPH as gasoline and BTEX. MTBE was non-detectable in the soil samples, but was detected in all of the water samples at concentrations ranging between 3.4 to 6.0 parts per billion (ppb).

The analytical results of the soil samples collected at approximately 11.5 feet below grade from borings EB-4 through EB-6 in the vicinity of the former waste oil UST contained elevated concentrations of oil and grease, and relatively low concentrations of TPH as gasoline and BTEX constituents. MTBE was not detected. Because odors had been detected at relatively shallow depths and because the groundwater rises to approximately five to six feet below grade, samples from 3.5 to 5.5 feet below grade in these borings were also analyzed. These results were entirely non-detectable.

The analytical results for the grab groundwater samples collected from these borings indicated elevated concentrations of TPH as gasoline, TPH as diesel, oil and grease, BTEX constituents, and MTBE. The highest concentrations were encountered in EB-4, consistent with field observations. EB-4 contained concentrations of TPHG at 1,100 ppb, TPHD at 350,000 ppb, TRPH at 1,600 ppb, MTBE at <2.5 ppb, benzene at 61 ppb, toluene at 3.0 ppb, ethylbenzene at 11 ppb and xylenes at 66 ppm. EPA Method 8240 and 8270 constituents and all of the LUFT five metals except nickel were non-detectable. Nickel was detected at concentrations ranging between 5.5 and 13 ppb. All of the other fuel oxygenates were also non-detectable except for TBA, which was detected in EB-5 at a concentration of 32 ppb.

In nearby well MW-2, the analytical results of the groundwater sample were non-detectable for TPH as gasoline, oil and grease, and BTEX constituents. TPH as diesel and MTBE were detected at concentrations of 67 and 84 ppb, respectively. The other fuel oxygenates were non-detectable.

In well MW-3, the analytical results of the groundwater sample was non-detectable for TPH as gasoline, oil and grease, and benzene, toluene, and ethylbenzene. Xylenes and MTBE were detected at concentrations of 8.5 and 0.79 ppb, respectively. The other fuel oxygenates were non-detectable.

HYDROLOGIC CONDITIONS

Over time, the hydraulic gradient at the site has been measured as 0.0017 feet per foot (ft/ft), 0.002 ft/ft, and 0.0009 ft/ft, all essentially flat gradients. The groundwater elevation is approximately 5 feet below grade; however, there are fluctuations of up to 5 feet in elevation over time. It is reasonable to assume that, based on the flat gradient, shallow water depth and nearby San Francisco Bay, that the groundwater at the site may be tidally influenced; in which case, the gradient fluctuates. The relative flatness of the gradient also allows us to assume that any contaminants may have migrated back and forth around the point source. The direction of flow has been measured over time as southerly and northerly; however, as well MW-3 is constructed differently than the other two wells, these measurements may not reflect true groundwater conditions.

DISCUSSION

The soil samples from borings EB-1 through EB-3 and well MW-1 in the vicinity of the former gasoline UST were non-detectable for all analytes except for MTBE, which was detected in groundwater at concentrations ranging up to 6.0 ppb. As shown on Tables 1 through 3 and Figures 2 through 4, these findings are consistent with the predominantly non-detectable results of previous sampling, except for the initial grab groundwater sample (GAS-GWS in 1995). MTBE in the vicinity of the former waste oil UST pit occurs at significantly higher concentrations. The concentrations of MTBE of up to 6.0 ppb in these three borings may be unrelated to the former gasoline tank. No further investigation of the former gasoline tank vicinity appears warranted.

Elevated concentrations of hydrocarbons, particularly oil and grease, are present in soil in the vicinity of the former waste oil tank pit at depths of between approximately seven (1995 sampling) to 11.5 feet below grade. Because the groundwater has been observed to rise from a depth of approximately 11.5 feet below grade at first water to approximately 5.5 feet below grade after stabilization, it is assumed that local groundwater is under semi-confined conditions. TPH as gasoline and BTEX constituents are relatively low in soil in the vicinity of the former waste oil pit, and only benzene was detected in excess of the ESL. In groundwater, significantly elevated dissolved concentrations of TPH as gasoline, diesel, oil and grease, BTEX constituents, and MTBE are present in the vicinity of the borings, but are largely non-detectable in nearby wells MW-2 and MW-3. In these wells, only MTBE occurs in excess of the ESLs.

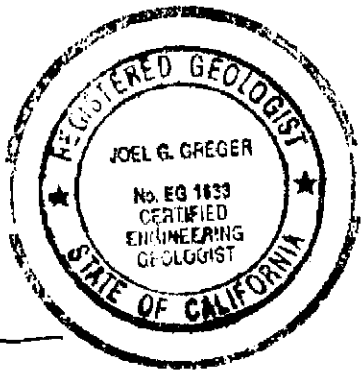
The next phase of work should include additional borings within the former waste oil tank pit to further delineate the lateral and vertical extent of the contamination. The soil samples would be analyzed for TPH as gasoline, diesel, BTEX, MTBE, and oil and grease. If significant contamination is determined to be held by the confining conditions of the soil, then it may be feasible to perform source material removal by excavation, or possibly treat the soil for accelerated degradation of contaminants.

Because of the low permeability of the soils and the relatively low mobility of heavy hydrocarbons, the impacts in groundwater appear to be largely confined to the vicinity of the former waste oil pit; however, additional delineation is proposed to confirm this. PIERS proposes to complete additional borings at a farther distance from the waste oil pit to attempt to define a non-detectable extent of hydrocarbons in groundwater. A soil sample would be obtained from each boring at any obvious evidence of contamination, and at approximately 11.5 feet below grade. Also, grab groundwater samples would be obtained. The soil samples would be analyzed for TPH as gasoline, diesel, oil and grease, BTEX, and MTBE. The groundwater samples would be analyzed for all of these constituents plus the other fuel oxygenates.

Prior to implementing this investigative work, a work plan would be prepared and submitted to the Alameda County Health Care Services Agency.

If you have any questions report, please do not hesitate to contact our office.

Sincerely,
PIERS Environmental Services, Inc.



Joel G. Greger
Senior Project Manager
CEG # EG1633, REA # 07079

Kay Pannell
Chief Operations Officer
REP #5800, REA-II #20236

Attachments
Figures 1 through 4
Tables 1 through 3
Groundwater Sampling Forms
Laboratory Analytical Data Sheets and Chain of Custody Forms

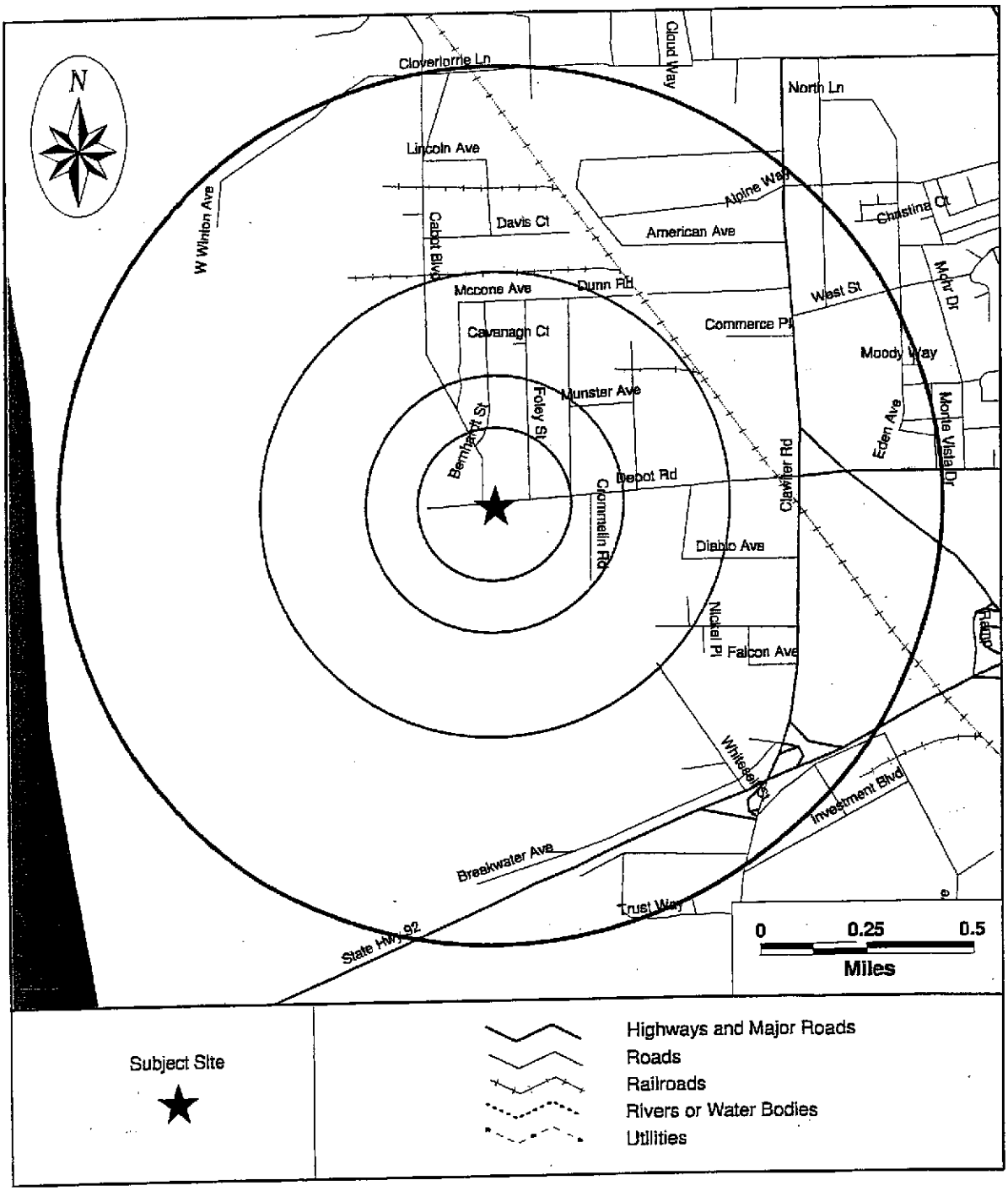


FIGURE 1
SITE VICINITY MAP

3744 DEPOT ROAD
HAYWARD, CALIFORNIA

NOVEMBER 2003
NOT TO SCALE

PIERS ENVIRONMENTAL SERVICES, INC. 1330 S. BASCOM AVE., SUITE F, SAN JOSE, CA 95128
PHONE: 408-559-1248 FAX: 408-559-1224 WWW.PIERSES.COM

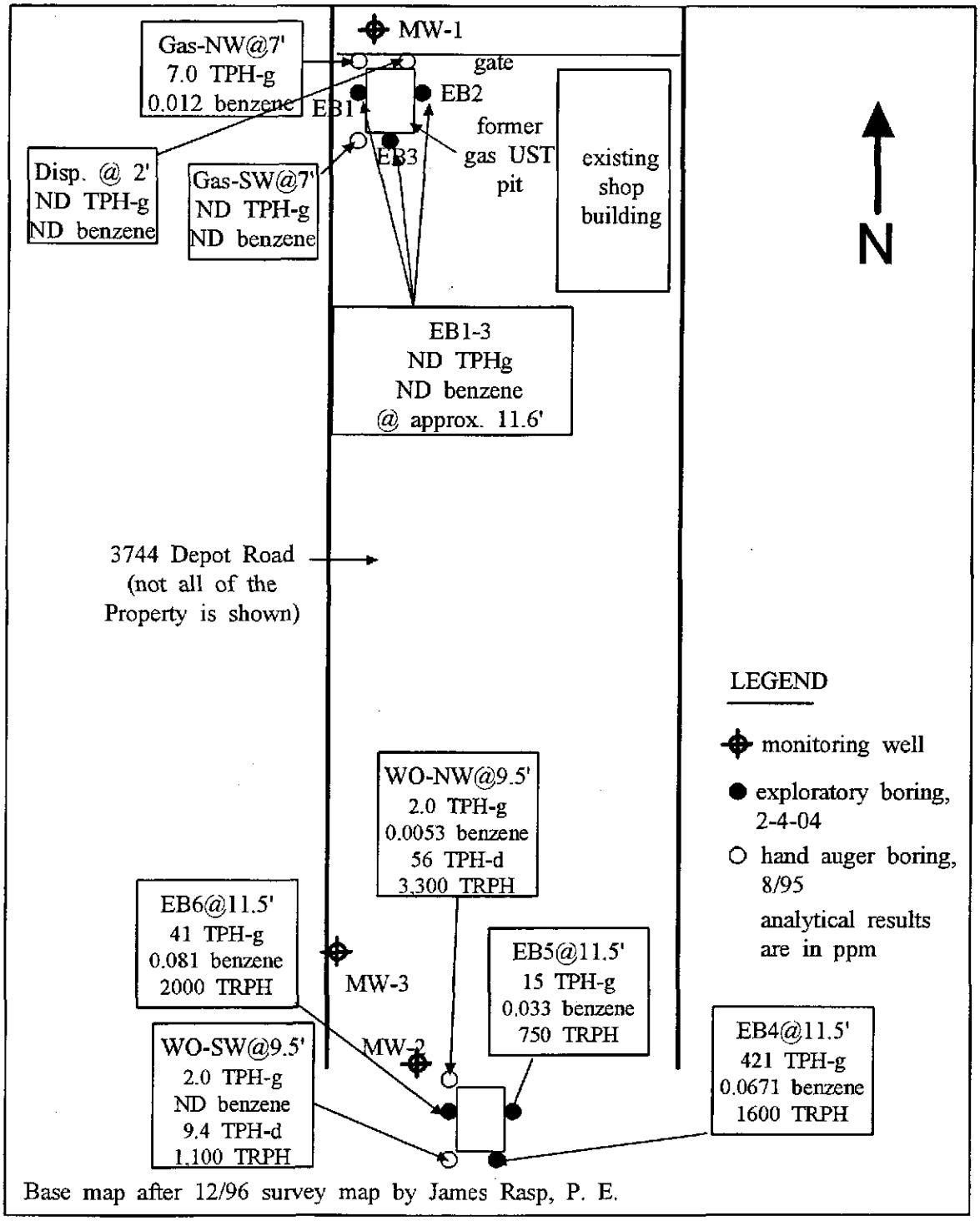


FIGURE 2
SOIL ANALYTICAL DATA

3744 DEPOT ROAD
HAYWARD, CALIFORNIA

FEBRUARY 2004
SCALE: 1" = 50'

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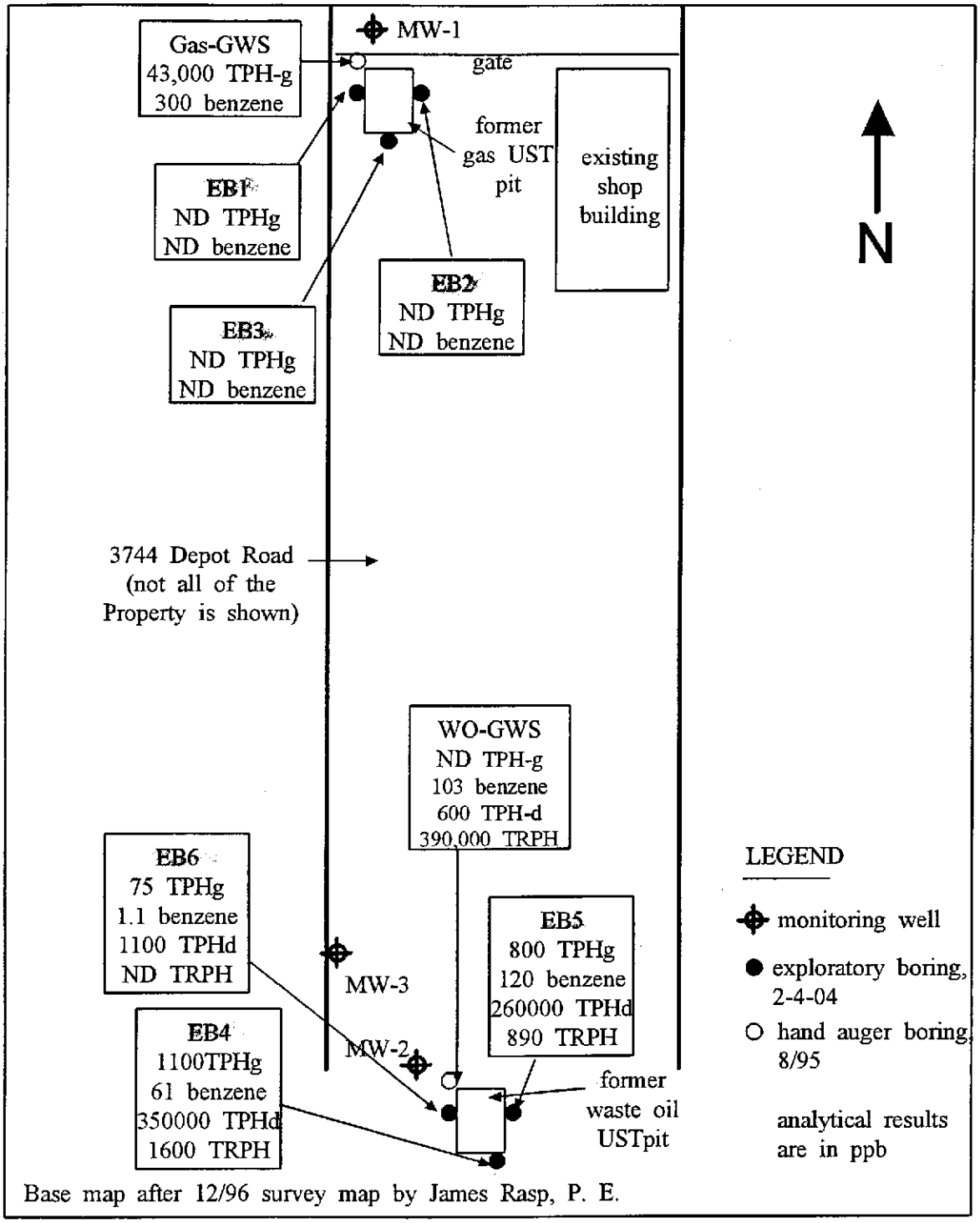

FIGURE 3

GROUNDWATER ANALYTICAL DATA - BORINGS

3744 DEPOT ROAD
HAYWARD, CALIFORNIA

FEBRUARY 2004
SCALE: 1" = 50'

PIERS ENVIRONMENTAL SERVICES, INC. 1330 S. BASCOM AVE., SUITE F, SAN JOSE, CA 95128
PHONE: 408-559-1248 FAX: 408-559-1224 WWW.PIERSES.COM

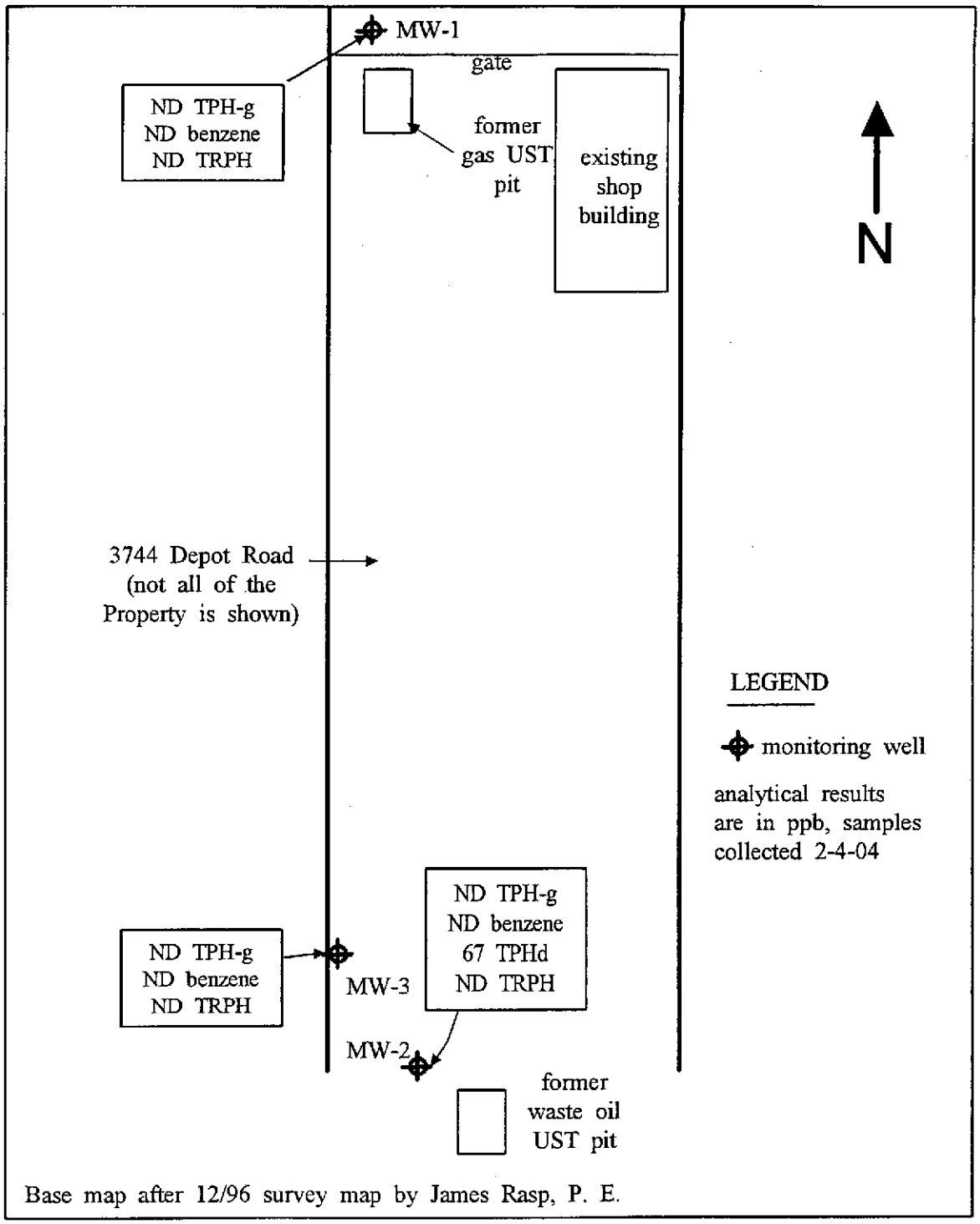

FIGURE 4

GROUNDWATER ANALYTICAL DATA – MONITORING WELLS

3744 DEPOT ROAD
HAYWARD, CALIFORNIA

FEBRUARY 2004
SCALE: 1" = 50'

PIERS ENVIRONMENTAL SERVICES, INC. 1330 S. BASCOM AVE., SUITE F, SAN JOSE, CA 95128
PHONE: 408-559-1248 FAX: 408-559-1224 WWW.PIERSES.COM

TABLE 1
Laboratory Analytical Results - Soil
3744 Depot Road, Hayward, CA

Sample No./ Depth	Date	TPHG	TPHD	TRPH	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes (Total)	VOCs 8240	VOCs 8270
GAS-SQ@7	8-29-95	ND	ND	ND	NA	ND	ND	**0.014**	ND	ND	ND
GAS-NW@7	8-29-95	**7.0**	ND	ND	NA	**0.012**	**0.014**	**0.089**	**1.0**	ND	ND
DISP@2	8-29-95	ND	ND	ND	NA	ND	ND	ND	**0.073**	ND	ND
WO-SW@7	8-29-95	**2**	**9.4**	**1,100**	NA	**0.0091**	ND	ND	ND	ND	ND
WO-NW@9.5*	8-29-95	**2**	**56**	**3,300**	NA	**0.063**	**0.0093**	**0.171**	**0.055**	*	*
MW1@5.5	10-28-96	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
MW2@5.5	10-28-96	ND	ND	**52**	NA	ND	ND	ND	ND	ND	ND
EB1 (11.7')	2-4-04	<1.0	NA	<50	<0.05	<0.005	<0.005	<0.005	<0.005	NA	NA
EB2 (11.6')	2-4-04	<1.0	NA	<50	<0.05	<0.005	<0.005	<0.005	<0.005	NA	NA
EB3 (11.5')	2-4-04	<1.0	NA	<50	<0.05	<0.005	<0.005	<0.005	<0.005	NA	NA
EB4 (5.5')**	2-4-04	<1.0	NA	<50	<0.05	<0.005	<0.005	<0.005	<0.005	NA	NA
EB4 (11.5')	2-4-04	**42**	NA	**1,600**	<0.25	**0.067**	**0.066**	**0.11**	**0.92**	NA	NA
EB5 (4.5')	2-4-04	<1.0	NA	<50	<0.05	<0.005	<0.005	<0.005	<0.005	NA	NA
EB5 (11.5')	2-4-04	**15**	NA	**750**	<0.17	**0.033**	**0.036**	<0.017	**0.032**	NA	NA
EB6 (5.5')	2-4-04	<1.0	NA	<50	<0.05	<0.005	<0.005	<0.005	<0.005	NA	NA
EB6 (11.5')	2-4-04	**41**	NA	**2,000**	<0.10	**0.081**	**0.083**	**0.14**	**0.064**	NA	NA
ESL - Commercial		**100**	**100**	**100**	**0.023**	**0.044**	**2.9**	**3.3**	**1.5**		

ND = not detected, NA = not analyzed
Results are in parts per million.

TPHD analyzed by EPA Method 8015M.
TPHG and BTEXanalyzed by EPA Method 8020.

TPHG = Total Petroleum Hydrocarbons as gasoline
TPHD = Total Petroleum Hydrocarbons as diesel
TRPH = Total Recoverable Petroleum Hydrocarbons, by EPA 418.1 or SW 9071B.

* Acetone was also detected at a concentration of 0.098 ppm, napthalene at 0.825 ppm, and 2-methyl-napthalene at 1.970 ppm.
The commercial ESLs for acetone, napthalene, and 2-methyl-napthalene in shallow soils are 0.24, 4.2 and 0.25 ppm, respectively.
BTEX constituents were also detected by EPA Method 8240 at slightly lower concentrations than those shown (by EPA Method 8020).

** This sample is erronously reported as EB4 (3.5') on the laboratory data sheets.

TABLE 2 - GROUNDWATER - MONITORING WELLS
Laboratory Analytical Results
3744 Depot Road, Hayward, CA

Well No.	Date	TPHG	TPHD	TRPH	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes (Total)	VOCs 8240	VOCs 8270
MW-1	11-26-96	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
MW-1	4-29-97	ND	NA	ND	NA	ND	ND	ND	ND	NA	NA
MW-1	3-30-99	NA	NA	NA	NA	ND	ND	ND	ND	*	NA
MW-1	2-4-04	<50	NA	<5.0	**3.4**	<0.5	<0.5	<0.5	<0.5	NA	NA
MW-2	11-26-96	ND	ND	ND	NA	ND	ND	ND	ND	ND	32**
MW-2	4-29-97	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND
MW-2	3-30-99	NA	NA	NA	NA	ND	ND	ND	ND	NA	NA
MW-2	2-4-04	<50	**67**	<5.0	**84**	<0.5	<0.5	<0.5	<0.5	NA	NA
MW-3	11-26-96	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA
MW-3	2-4-04	<50	NA	<5.0	**8.5**	<0.5	<0.5	<0.5	**0.79**	NA	NA
ESL (comm.)		**100**	**100**	**100**	**5.0**	**1.0**	**40**	**30**	**13**		

ND = not detected NA = not detected Results are in parts per billion (ppb).

TPHD analyzed by EPA Method 8015M.
TPHG and BTEX analyzed by EPA Method 8020.

MTBE by 8260. All other fuel oxygenates were non-detectable on the 2-4-04 sampling event.

TPHG = Total Petroleum Hydrocarbons as gasoline.
TPHD = Total Petroleum Hydrocarbons as diesel.
TRPH = Total Recoverable Petroleum Hydrocarbons, by EPA 418.1 or SW 9070A.

* 5.5 ppb of bromodichloromethane and 8.4 ppb of dibromochloromethane were detected. The ESL for these compounds in ground water is 100 ppb.

** 32 ppb of di-n-butylphthalate (no ESL).

TABLE 3 - GRAB GROUNDWATER SAMPLES
Laboratory Analytical Results
3744 Depot Road, Hayward, CA

Sample No.	Date	TPHG	TPHD	TRPH	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	VOCs 8240	VOCs 8270
GAS-GWS	8-29-95	**43,000**	ND	ND	NA	**300**	**360**	**1,400**	**10,000**	ND	ND
WO-GWS	8-29-95	ND	**600**	**390**	NA	**103**	ND	**17**	**21**	**141***	**57****
MW1-GWS	8-29-95	ND	ND	**2.9**	NA	ND	ND	ND	ND	ND	ND
EB-1 water	2-4-04	<50	NA	<5.0	**4.3**	<0.5	<0.5	<0.5	<0.5	NA	NA
EB-2 water	2-4-04	<50	NA	<5.0	**3.9**	<0.5	<0.5	<0.5	<0.5	NA	NA
EB-3 water	2-4-04	<50	NA	<5.0	**6.0**	<0.5	<0.5	<0.5	<0.5	NA	NA
EB-4 water*	2-4-04	**1,100**	**350,000**	**1,600**	<2.5	**61**	**3.0**	**11**	**66**	NA	NA
EB-5 water*	2-4-04	**800**	**260,000**	**890**	**7.5 ****	**120**	**1.9 (8020)**	**4.4**	**11**	NA	NA
EB-6 water*	2-4-04	**75**	**1,100**	<5.0	**37**	**1.1**	<0.5	**1.1**	**0.70**	NA	NA
ESL (comm.)		**100**	**100**	**100**	**5.0**	**1.0**	**40**	**30**	**13**		

ND = not detected NA = not analyzed

TPHD analyzed by EPA Method 8015M.
TPHG analyzed by EPA Method 8020.
BTEX and MTBE by EPA Method 8260.

Results are in parts per billion (ppb).
TPHG = Total Petroleum Hydrocarbons as gasoline
TPHD = Total Petroleum Hydrocarbons as diesel
TRPH = *Total Recoverable Petroleum Hydrocarbons, by* EPA 418.1 or SW 9070A.

* Cadmium, chromium, lead and zinc were non-detectable. Nickel was detected at concentrations of 5.5, 8.5, and 13 ppb in EB-4, EB-5, and EB-6, respectively. The ESL for nickel in groundwater is 8.2 ppb.

Except for MTBE, fuel oxygenates were non-detectable in EB-1 through EB-6, except for in EB-5, where 32 ppb of TBA was detected. The ESL for TBA in groundwater is 12 ppb.

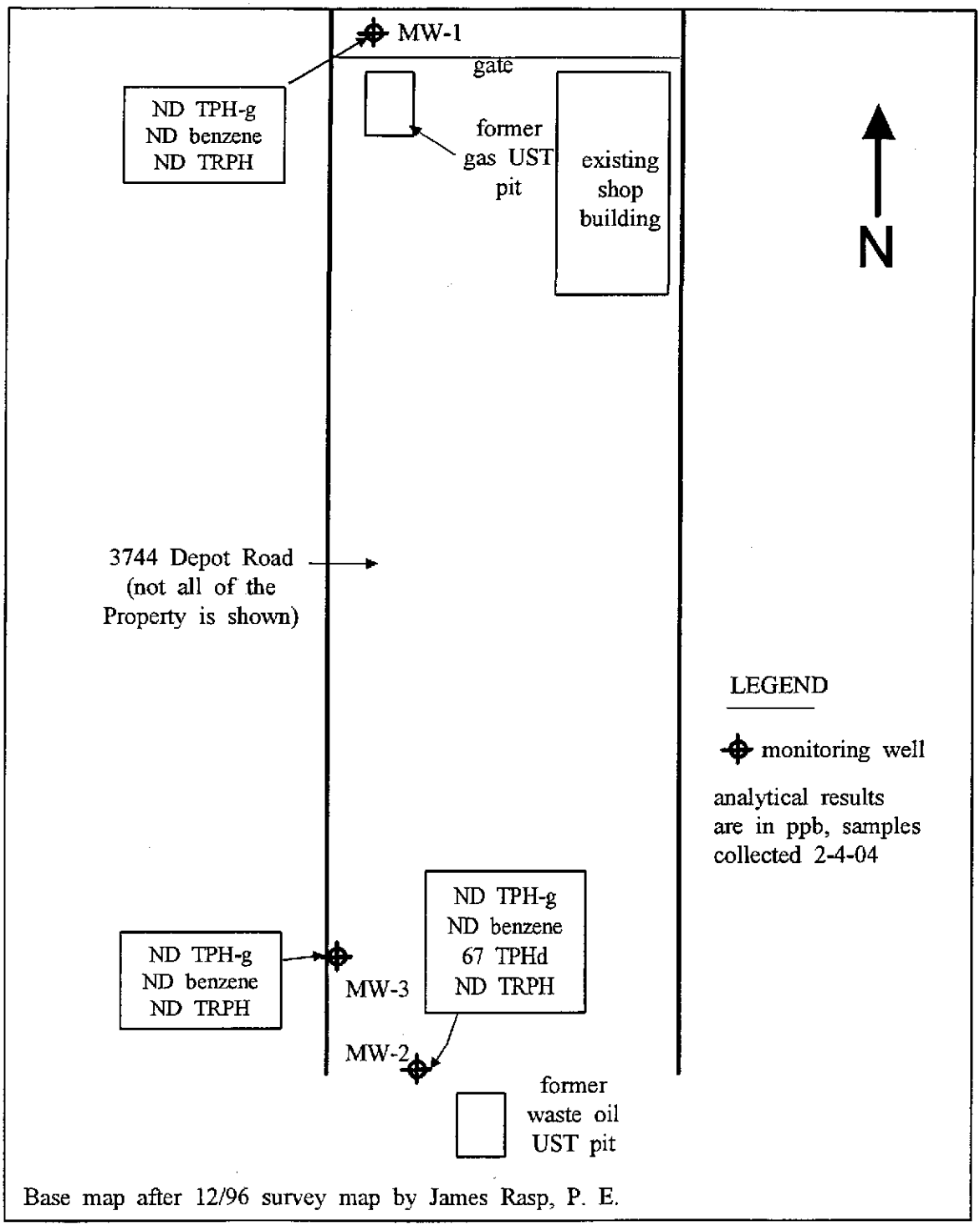

FIGURE 4

GROUNDWATER ANALYTICAL DATA – MONITORING WELLS

3744 DEPOT ROAD
HAYWARD, CALIFORNIA

FEBRUARY 2004
SCALE: 1" = 50'

PIERS ENVIRONMENTAL SERVICES, INC. 1330 S. BASCOM AVE., SUITE F, SAN JOSE, CA 95128
PHONE: 408-559-1248 FAX: 408-559-1224 WWW.PIERSES.COM

GROUNDWATER SAMPLING FORMS

Groundwater Sampling Form

Project Name: 3744 Depot Rd Hayward
Site Address: _____
Project Number: 04028
Developed By: Brian - Vironex

Date: 2-4-04
Page: 1 of 1

Well ID
MW1

Calc Well Volume: 0.17 ~~gal/ft~~, **DTW Measurements:**
Initial: 5.51 TOC, 6.19 TOB
Well Diameter: 2"
Recharge: 5.51
Well Volume: 0.77 gal per 10 ft
DTB: 15'

Purge Method
Peristaltic _____
Gear Drive _____
Submersible X
Surge block (on casing)

Pump Depth 14.5 ft.
Hand Bailed _____
Air Lift _____
Other _____

Instruments Used
YSI: _____
Hydac _____
Omedga _____
Other _____
Hanna X T, ph, cond.
Micro pl - turb.

Time	Temp ___C X F	Conductivity	PH	Purge Volume Gallons	Turbidity	Comments
10:18 Am	60.8	16.61	7.72	0	~~0.7 NTU~~	muddy water
10:21	62.5	12.35	7.53	7	463.8 ?	getting clearer
10:23	62.6	12.49	7.23	12	104.4	getting clearer
10:25	62.7	12.74	7.29	15	76.2	getting clearer
10:28	62.7	12.70	7.36	21	Meter not working	Sl. cloudy Sl. muddy
10:30				28 total gal purged		Sl. cloudy

16' 4" casing vol

Groundwater Sampling Form

Project Name: 3744 Depot Road
Site Address: _____
Project Number: 04028
Developed By: Vironex - Brian

Date: 2-4-04
Page: 1 of 1

Well ID: MW2

DTW Measurements:

Calc Well Volume: 0.171 gal/ft
Well Diameter: 2"
Well Volume: 171 gal in 10 ft

Initial: 5.17 TOC
Recharge: _____
DTB: 15

Purge Method
Peristaltic _____
Gear Drive _____
Submersible X

Pump Depth 14 ft.
Hand Bailed _____
Air Lift _____
Other _____

Instruments Used
YSI: _____
Hydac _____
Omedga _____
Other _____
Hanna X

Time	Temp ___C X F	Conductivity	PH	Purge Volume Gallons	Turbidity	Comments
2:08pm	63.5	2180	6.87	1 gal	muddy	(turbid meter not working)
2:11pm	63.0	2150	6.87	6 gal.	sl. hetty	
2:15	64.0 ~~7.08~~	2112	7.08	12 gal	"	well bailed dry
2:39	64.0	2050	7.06	16 gal	almost clear	

had to wait for 9.4 casing vol

LABORATORY ANALYTICAL DATA SHEETS
& CHAIN OF CUSTODY FORMS

McCampbell Analytical, Inc.

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

Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
1330 S. Bascom Avenue, Ste. F		Date Received: 02/04/04
San Jose, CA 95128	Client Contact: Joel Greger	Date Extracted: 02/13/04
	Client P.O.:	Date Analyzed: 02/14/04

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

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0402066

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0402066-008D	MW-2	W	67,b	1	93.8

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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

QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0402066

EPA Method: SW8015C Extraction: SW3510C BatchID: 10362 Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	112	108	3.71	70	130
%SS:	N/A	2500	N/A	N/A	N/A	113	110	2.64	70	130

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

NONE

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

0402006

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☐ Yes ☐ No

Report To: ~~Amy~~ Joel Greger Bill To: PIERS
Company: Piers Environmental
1330 S. Bascom Ave, Suite F
San Jose CA 95128 E-Mail:
Tele: ( ) 408 559 1248 Fax: (408 559 1224
Project #: 04028 Project Name: 3744 Depot Rd
Project Location: 3744 Depot Rd Hayward
Sampler Signature: Joel [signature]

	SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / ~~8240~~ (8260) VOCs	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals dissolved	Lead (7240/7421/239.2/6010)	RCI	8260 EDB/EDC Fuel Oxygenates	Oil & Grease 9071	Other	Comments
+	EB1-water	3744 Depot Rd	2/4/04	am	4	1-L 3-V	X					X	X			X															X	X		
+2	EB2-water	↓	↓		4	1-L 3-V	X					X	X			X															X	X		
+3	EB3-water			↓	4	1-L 3-V	X					X	X			X															X	X		
+3	EB4-water			pm	7	1-L 3-V	X					X	X			X	X							X				X			X	X		
+15	EB5-water				11	1-L 3-V	X					X	X			X	X							X				X			X	X		
+3	EB6-water	↓	↓	↓	7	1-L 3-V	X					X	X			X	X							X				X			X	X		
+2	MW1			am	4	1-L 3-V	X					X	X			X															X	X		
+	MW2			pm	4	1-L 3-V	X					X	X			X	(X)														X	X		
+	MW3	↓	↓	pm	4	1-L 3-V	X					X	X			X	(X)														X	X		

Added 2-12-04

Relinquished By:	Date:	Time:	Received By:
Joel [signature]	2-4-04	4:17 Am	[signature] Valle
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT No
DECHLORINATED IN LAB ____

PRESERVATION ✓ (VOAS) O&G METALS OTHER
APPROPRIATE CONTAINERS ✓
PERSERVED IN LAB ____

TO Melissa

Feb 10 2004 5:26PM JOEL GREGER 510 7871457
McCAMPBELL ANALYTICAL INC 9257984612 02/12/04 07:35pm P. 001
P.8

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0402066

Report to:
Joel Greger
Piers Environmental
1330 S. Bascom Avenue, Ste. F
San Jose, CA 95128
TEL: (408) 559-1248
FAX: (408) 559-1224
ProjectNo: #04028; 3744 Depot Rd.
PO:

Bill to:
Accounts Payable
Piers Environmental
1330 S. Bascum Avenue, Ste. F
San Jose, CA 95128

Requested TAT: **5 days**
Date Received: **2/4/04**
Date Add-On: **2/12/04**
Date Printed: **2/13/04**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0402066-008	MW-2	Water	2/4/04	☐	D														

Test Legend:

1	TPH(D)_W	2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

Comments: Tph (d) added 02/12 per J.G.

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

McCampbell Analytical, Inc.

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

Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
1330 S. Bascom Avenue, Ste. F		Date Received: 02/04/04
San Jose, CA 95128	Client Contact: Joel Greger	Date Extracted: 02/04/04
	Client P.O.:	Date Analyzed: 02/04/04-02/05/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0402065

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	EB1 (11.7)	S	ND	ND	ND	ND	ND	ND	1	93.1
002A	EB2 (11.6')	S	ND	ND	ND	ND	ND	ND	1	99.2
005A	EB3 (11.5)	S	ND	ND	ND	ND	ND	ND	1	96.7
008A	EB4 (11.5)	S	42,g,m	ND<0.25	0.067	0.066	0.11	0.92	5	96.9
011A	EB5 (11.5)	S	15,g,m	ND<0.17	0.033	0.036	ND<0.017	0.032	3.3	96.8
014A	EB6 (11.5')	S	41,g,m	ND<0.10	0.081	0.083	0.014	0.064	2	79.6

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

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

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

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
		Date Received: 02/04/04
1330 S. Bascom Avenue, Ste. F	Client Contact: Joel Greger	Date Extracted: 02/04/04
San Jose, CA 95128	Client P.O.:	Date Analyzed: 02/04/04

Hexane Extractable Material With Silica Gel Treatment*

Analytical methods: SW9071B Work Order: 0402065

Lab ID	Client ID	Matrix	HEMSGT	DF	% SS
0402065-001A	EB1 (11.7)	S	ND	1	N/A
0402065-002A	EB2 (11.6')	S	ND	1	N/A
0402065-005A	EB3 (11.5)	S	ND	1	N/A
0402065-008A	EB4 (11.5)	S	1600	1	N/A
0402065-011A	EB5 (11.5)	S	750	1	N/A
0402065-014A	EB6 (11.5')	S	2000	1	N/A
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	NA	NA	
		S	50	mg/Kg	

* water samples are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in mg/wipe, product/oil/non-aqueous liquid samples in mg/L.

DF = dilution factor (may be raised to dilute target analyte or matrix interference).

surrogate diluted out of range or not applicable to this sample.

g) sample extract repeatedly cleaned up with silica gel until constant IR result achieved; h) a lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0402065

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 10223 Spiked Sample ID: 0402048-017A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	0.12	0.60	76.8	82.1	5.27	103	105	1.84	70	130
MTBE	ND	0.10	96.8	104	7.20	90.1	92.5	2.58	70	130
Benzene	ND	0.10	106	109	3.38	106	109	2.70	70	130
Toluene	ND	0.10	88.3	90	1.91	92.9	96.1	3.36	70	130
Ethylbenzene	ND	0.10	109	110	0.115	112	115	2.06	70	130
Xylenes	ND	0.30	95.3	95	0.350	100	107	6.45	70	130
%SS:	87.9	0.10	116	115	0.866	113	118	4.33	70	130

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

NONE

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

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

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

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

TL QA/QC Officer

McCampbell Analytical, Inc.

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

QC SUMMARY REPORT FOR SW9071B

Matrix: S WorkOrder: 0402065

EPA Method: SW9071B Extraction: SM5520DF_S BatchID: 10241 Spiked Sample ID: 0402065-001A

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
HEMSGT	ND	100	95	94	1.06	100	100	0	70	130

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

NONE

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

surrogate diluted out of range.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0402065

Report to:
Joel Greger
Piers Environmental
1330 S. Bascom Avenue, Ste. F
San Jose, CA 95128

TEL: (408) 559-1248
FAX: (408) 559-1224
ProjectNo: #04028; 3744 Depot Rd.
PO:

Bill to:
Accounts Payable
Piers Environmental
1330 S. Bascum Avenue, Ste. F
San Jose, CA 95128

Requested TAT: 5 days
Date Received: 2/4/04
Date Printed: 2/4/04

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0402065-001	EB1 (11.7)	Soil	2/4/04	☐	A	A													
0402065-002	EB2 (11.6')	Soil	2/4/04	☐	A	A													
0402065-003	EB3 (5.5')	Soil	2/4/04	☑	A	A													
0402065-004	EB3 (10.5)	Soil	2/4/04	☑	A	A													
0402065-005	EB3 (11.5)	Soil	2/4/04	☐	A	A													
0402065-006	EB4 (4.5')	Soil	2/4/04	☑	A	A													
0402065-007	EB4 (7.5)	Soil	2/4/04	☑	A	A													
0402065-008	EB4 (11.5)	Soil	2/4/04	☐	A	A													
0402065-009	EB5 (5.5)	Soil	2/4/04	☑	A	A													
0402065-010	EB5 (7.5)	Soil	2/4/04	☑	A	A													
0402065-011	EB5 (11.5)	Soil	2/4/04	☐	A	A													
0402065-012	EB6 (4.5)	Soil	2/4/04	☑	A	A													
0402065-013	EB6 (8')	Soil	2/4/04	☑	A	A													
0402065-014	EB6 (11.5')	Soil	2/4/04	☐	A	A													

Test Legend:

1	9071B_SG_S	2	G-MBTEX_S	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

Comments:

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

2857

040205

McCAMPBELL ANALYTICAL, INC.

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Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: PIERS ENVIRONMENTAL Bill To: PIERS ENVIRONMENTAL

Company: Joel Gregor

1330 S. Bascom Ave, Suite F

San Jose CA 95128 E-Mail:

Tele: (510) 787-6867 Fax: (510) 787-1457

Project #: 04028 Project Name: 3744 Depot Rd

Project Location: 3744 Depot Road, Hayward

Sampler Signature: Joel Gregor

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: Oil & Grease 9071	Other: Fuel Oxygenates-8260	Comments
EB1 (11.7')	9US UST	2/4/04	am	1	Liner		X				X				X															X		
EB2 (11.6')							X				X				X															X		
EB3 (5.5')							X				X																					hold
EB3 (10.5')							X				X																					hold
EB3 (11.5')	↓		↓				X				X				X														X			
EB4 (4.5')	WUpit		pm				X				X																					hold
EB4 (7.5')							X				X																					hold
EB4 (11.5')							X				X				X																	
EB5 (5.5')							X				X																			X		hold
EB5 (7.5')							X				X																					hold
EB5 (11.5')							X				X				X																	
EB6 (4.5')	↓	↓	↓	↓	↓		X				X																			X		hold

Relinquished By:	Date:	Time:	Received By:
Joel Gregor	2-4-04	13:30	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

PRESERVATION VOAS | O&G | METALS pH<2 | OTHER

*Please circle water type:
GROUND WASTE DRINKING RECREATIONAL EFFLUENT

Filter Samples for Metals analysis: Yes / No

M.S

04026G5

McCAMPBELL ANALYTICAL, INC.

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Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Joel Greger	Bill To: PIERS
Company: PIERS ENVIRONMENTAL	
1330 S. Bascom Ave, Suite F	
San Jose CA 95128	E-Mail:
Tele: (510) 998 6867	Fax: (510) 788 7457
Project #: 04028	Project Name: 3744 Depot Rd
Project Location: 3744 Depot Rd, Hayward	
Sampler Signature: Joel Greger	

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: Oil & Grease 5071	Comments
EB6 (8')	W.O.P.T	2/4/04	pm	1	Liner		X				X																					hold
EB6 (11.5')	↓	↓	↓	1	↓		X				X				X																X	

Relinquished By:	Date:	Time:	Received By:
Joel Greger	2-4-04	4:30 p.m.	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

PRESERVATION	VOAS	O&G	METALS pH<2	OTHER

*Please circle water type:
GROUND WATER DRINKING RECREATIONAL EFFLUENT

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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
1330 S. Bascom Avenue, Ste. F		Date Received: 02/04/04
San Jose, CA 95128	Client Contact: Joel Greger	Date Extracted: 02/04/04-02/06/04
	Client P.O.:	Date Analyzed: 02/04/04-02/06/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0402066

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	EB1-Water	W	ND	ND	ND	ND	ND	ND	1	114
002A	EB2-Water	W	ND,i	ND	ND	ND	ND	ND	1	111
003A	EB3-Water	W	ND,i	6.6	ND	ND	ND	ND	1	119
004A	EB4-Water	W	1100,a,h,i	ND	55	3.0	12	73	1	111
005A	EB5-Water	W	800,a,h,i	ND<20	100	1.9	4.5	12	1	113
006A	EB6-Water	W	75,a,i	33	1.2	ND	1.1	0.97	1	111
007A	MW-1	W	ND,i	ND	ND	ND	ND	ND	1	112
008A	MW-2	W	ND	72	ND	ND	ND	ND	1	112
009A	MW-3	W	ND	8.8	ND	ND	ND	0.79	1	109

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

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

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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Telephone : 925-798-1620 Fax : 925-798-1622
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Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
1330 S. Bascom Avenue, Ste. F		Date Received: 02/04/04
San Jose, CA 95128	Client Contact: Joel Greger	Date Extracted: 02/04/04
	Client P.O.:	Date Analyzed: 02/05/04-02/09/04

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

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0402066

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0402066-004D	EB4-Water	W	350,000,g,b,h,i	1000	---#
0402066-005D	EB5-Water	W	260,000,g,h,i	1000	---#
0402066-006D	EB6-Water	W	1100,g,d,b,i	1	108

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
		Date Received: 02/04/04
1330 S. Bascom Avenue, Ste. F	Client Contact: Joel Greger	Date Extracted: 02/04/04
San Jose, CA 95128	Client P.O.:	Date Analyzed: 02/06/04

Total Recoverable Petroleum Oil & Grease without Silica Gel Clean-Up*

Analytical methods: SW9070A Work Order: 0402066

Lab ID	Client ID	Matrix	TRPOG	DF	% SS
0402066-001C	EB1-Water	W	ND	1	N/A
0402066-002C	EB2-Water	W	ND,i	1	N/A
0402066-003C	EB3-Water	W	ND,i	1	N/A
0402066-004C	EB4-Water	W	1600,h,i	1	N/A
0402066-005C	EB5-Water	W	890,h,i	1	N/A
0402066-006C	EB6-Water	W	ND,i	1	N/A
0402066-007C	MW-1	W	ND,i	1	N/A
0402066-008C	MW-2	W	ND	1	N/A
0402066-009C	MW-3	W	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	5.0	mg/L
	S	NA	NA

* water samples are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in mg/wipe, product/oil/non-aqueous liquid samples in mg/L.

DF = dilution factor (may be raised to dilute target analyte or matrix interference).

surrogate diluted out of range or not applicable to this sample.

g) sample extract repeatedly cleaned up with silica gel until constant IR result achieved; h) a lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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Telephone : 925-798-1620 Fax : 925-798-1622
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Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
		Date Received: 02/04/04
1330 S. Bascom Avenue, Ste. F	Client Contact: Joel Greger	Date Extracted: 02/05/04
San Jose, CA 95128	Client P.O.:	Date Analyzed: 02/05/04

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0402066

Lab ID	0402066-004B
Client ID	EB4-Water
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<25	5.0	5.0	Acrolein (Propenal)	ND<25	5.0	5.0
Acrylonitrile	ND<10	5.0	2.0	tert-Amyl methyl ether (TAME)	ND<2.5	5.0	0.5
Benzene	61	5.0	0.5	Bromobenzene	ND<2.5	5.0	0.5
Bromochloromethane	ND<2.5	5.0	0.5	Bromodichloromethane	ND<2.5	5.0	0.5
Bromoform	ND<2.5	5.0	0.5	Bromomethane	ND<2.5	5.0	0.5
2-Butanone (MEK)	ND<5.0	5.0	1.0	t-Butyl alcohol (TBA)	ND<25	5.0	5.0
n-Butyl benzene	9.0	5.0	0.5	sec-Butyl benzene	ND<2.5	5.0	0.5
tert-Butyl benzene	ND<2.5	5.0	0.5	Carbon Disulfide	ND<2.5	5.0	0.5
Carbon Tetrachloride	ND<2.5	5.0	0.5	Chlorobenzene	ND<2.5	5.0	0.5
Chloroethane	ND<2.5	5.0	0.5	2-Chloroethyl Vinyl Ether	ND<5.0	5.0	1.0
Chloroform	ND<2.5	5.0	0.5	Chloromethane	ND<2.5	5.0	0.5
2-Chlorotoluene	ND<2.5	5.0	0.5	4-Chlorotoluene	ND<2.5	5.0	0.5
Dibromochloromethane	ND<2.5	5.0	0.5	1,2-Dibromo-3-chloropropane	ND<2.5	5.0	0.5
1,2-Dibromoethane (EDB)	ND<2.5	5.0	0.5	Dibromomethane	ND<2.5	5.0	0.5
1,2-Dichlorobenzene	ND<2.5	5.0	0.5	1,3-Dichlorobenzene	ND<2.5	5.0	0.5
1,4-Dichlorobenzene	ND<2.5	5.0	0.5	Dichlorodifluoromethane	ND<2.5	5.0	0.5
1,1-Dichloroethane	ND<2.5	5.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND<2.5	5.0	0.5
1,1-Dichloroethene	ND<2.5	5.0	0.5	cis-1,2-Dichloroethene	ND<2.5	5.0	0.5
trans-1,2-Dichloroethene	ND<2.5	5.0	0.5	1,2-Dichloropropane	ND<2.5	5.0	0.5
1,3-Dichloropropane	ND<2.5	5.0	0.5	2,2-Dichloropropane	ND<2.5	5.0	0.5
1,1-Dichloropropene	ND<2.5	5.0	0.5	cis-1,3-Dichloropropene	ND<2.5	5.0	0.5
trans-1,3-Dichloropropene	ND<2.5	5.0	0.5	Diisopropyl ether (DIPE)	ND<2.5	5.0	0.5
Ethylbenzene	11	5.0	0.5	Ethyl tert-butyl ether (ETBE)	ND<2.5	5.0	0.5
Hexachlorobutadiene	ND<2.5	5.0	0.5	Hexachloroethane	ND<2.5	5.0	0.5
2-Hexanone	ND<2.5	5.0	0.5	Isopropylbenzene	5.4	5.0	0.5
4-Isopropyl toluene	ND<2.5	5.0	0.5	Methyl-t-butyl ether (MTBE)	ND<2.5	5.0	0.5
Methylene chloride	ND<2.5	5.0	0.5	4-Methyl-2-pentanone (MIBK)	ND<2.5	5.0	0.5
Naphthalene	130	5.0	0.5	Nitrobenzene	ND<50	5.0	10
n-Propyl benzene	21	5.0	0.5	Styrene	ND<2.5	5.0	0.5
1,1,1,2-Tetrachloroethane	ND<2.5	5.0	0.5	1,1,2,2-Tetrachloroethane	ND<2.5	5.0	0.5
Tetrachloroethene	ND<2.5	5.0	0.5	Toluene	3.0	5.0	0.5
1,2,3-Trichlorobenzene	ND<2.5	5.0	0.5	1,2,4-Trichlorobenzene	ND<2.5	5.0	0.5
1,1,1-Trichloroethane	ND<2.5	5.0	0.5	1,1,2-Trichloroethane	ND<2.5	5.0	0.5
Trichloroethene	ND<2.5	5.0	0.5	Trichlorofluoromethane	ND<2.5	5.0	0.5
1,2,3-Trichloropropane	ND<2.5	5.0	0.5	1,1,2-Trichloro-1,2,2-trifluoroethane	ND<50	5.0	10
1,2,4-Trimethylbenzene	86	5.0	0.5	1,3,5-Trimethylbenzene	25	5.0	0.5
Vinyl Chloride	ND<2.5	5.0	0.5	Xylenes	66	5.0	0.5

Surrogate Recoveries (%)

%SS1:	102	%SS2:	99.9
%SS3:	102		

Comments: h,i

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

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

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

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Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
		Date Received: 02/04/04
1330 S. Bascom Avenue, Ste. F	Client Contact: Joel Greger	Date Extracted: 02/05/04
San Jose, CA 95128	Client P.O.:	Date Analyzed: 02/05/04

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0402066

Lab ID	0402066-005B
Client ID	EB5-Water
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<25	5.0	5.0	Acrolein (Propenal)	ND<25	5.0	5.0
Acrylonitrile	ND<10	5.0	2.0	tert-Amyl methyl ether (TAME)	ND<2.5	5.0	0.5
Benzene	120	5.0	0.5	Bromobenzene	ND<2.5	5.0	0.5
Bromochloromethane	ND<2.5	5.0	0.5	Bromodichloromethane	ND<2.5	5.0	0.5
Bromoform	ND<2.5	5.0	0.5	Bromomethane	ND<2.5	5.0	0.5
2-Butanone (MEK)	ND<5.0	5.0	1.0	t-Butyl alcohol (TBA)	32	5.0	5.0
n-Butyl benzene	14	5.0	0.5	sec-Butyl benzene	3.2	5.0	0.5
tert-Butyl benzene	ND<2.5	5.0	0.5	Carbon Disulfide	ND<2.5	5.0	0.5
Carbon Tetrachloride	ND<2.5	5.0	0.5	Chlorobenzene	ND<2.5	5.0	0.5
Chloroethane	ND<2.5	5.0	0.5	2-Chloroethyl Vinyl Ether	ND<5.0	5.0	1.0
Chloroform	ND<2.5	5.0	0.5	Chloromethane	ND<2.5	5.0	0.5
2-Chlorotoluene	ND<2.5	5.0	0.5	4-Chlorotoluene	ND<2.5	5.0	0.5
Dibromochloromethane	ND<2.5	5.0	0.5	1,2-Dibromo-3-chloropropane	ND<2.5	5.0	0.5
1,2-Dibromoethane (EDB)	ND<2.5	5.0	0.5	Dibromomethane	ND<2.5	5.0	0.5
1,2-Dichlorobenzene	ND<2.5	5.0	0.5	1,3-Dichlorobenzene	ND<2.5	5.0	0.5
1,4-Dichlorobenzene	ND<2.5	5.0	0.5	Dichlorodifluoromethane	ND<2.5	5.0	0.5
1,1-Dichloroethane	ND<2.5	5.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND<2.5	5.0	0.5
1,1-Dichloroethene	ND<2.5	5.0	0.5	cis-1,2-Dichloroethene	6.7	5.0	0.5
trans-1,2-Dichloroethene	ND<2.5	5.0	0.5	1,2-Dichloropropane	ND<2.5	5.0	0.5
1,3-Dichloropropane	ND<2.5	5.0	0.5	2,2-Dichloropropane	ND<2.5	5.0	0.5
1,1-Dichloropropene	ND<2.5	5.0	0.5	cis-1,3-Dichloropropene	ND<2.5	5.0	0.5
trans-1,3-Dichloropropene	ND<2.5	5.0	0.5	Diisopropyl ether (DIPE)	ND<2.5	5.0	0.5
Ethylbenzene	4.4	5.0	0.5	Ethyl tert-butyl ether (ETBE)	ND<2.5	5.0	0.5
Hexachlorobutadiene	ND<2.5	5.0	0.5	Hexachloroethane	ND<2.5	5.0	0.5
2-Hexanone	ND<2.5	5.0	0.5	Isopropylbenzene	5.7	5.0	0.5
4-Isopropyl toluene	ND<2.5	5.0	0.5	Methyl-t-butyl ether (MTBE)	7.5	5.0	0.5
Methylene chloride	ND<2.5	5.0	0.5	4-Methyl-2-pentanone (MIBK)	ND<2.5	5.0	0.5
Naphthalene	22	5.0	0.5	Nitrobenzene	ND<50	5.0	10
n-Propyl benzene	19	5.0	0.5	Styrene	ND<2.5	5.0	0.5
1,1,1,2-Tetrachloroethane	ND<2.5	5.0	0.5	1,1,2,2-Tetrachloroethane	ND<2.5	5.0	0.5
Tetrachloroethene	ND<2.5	5.0	0.5	Toluene	ND<2.5	5.0	0.5
1,2,3-Trichlorobenzene	ND<2.5	5.0	0.5	1,2,4-Trichlorobenzene	ND<2.5	5.0	0.5
1,1,1-Trichloroethane	ND<2.5	5.0	0.5	1,1,2-Trichloroethane	ND<2.5	5.0	0.5
Trichloroethene	ND<2.5	5.0	0.5	Trichlorofluoromethane	ND<2.5	5.0	0.5
1,2,3-Trichloropropane	ND<2.5	5.0	0.5	1,1,2-Trichloro-1,2,2-trifluoroethane	ND<50	5.0	10
1,2,4-Trimethylbenzene	13	5.0	0.5	1,3,5-Trimethylbenzene	10	5.0	0.5
Vinyl Chloride	ND<2.5	5.0	0.5	Xylenes	11	5.0	0.5

Surrogate Recoveries (%)

%SS1:	105	%SS2:	101
%SS3:	100		

Comments: h,i

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

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

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

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Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
		Date Received: 02/04/04
1330 S. Bascom Avenue, Ste. F	Client Contact: Joel Greger	Date Extracted: 02/05/04
San Jose, CA 95128	Client P.O.:	Date Analyzed: 02/05/04

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0402066

Lab ID	0402066-006B
Client ID	EB6-Water
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	1.1	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	1.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	1.6	1.0	0.5	sec-Butyl benzene	0.69	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	1.1	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	0.5	Hexachloroethane	ND	1.0	0.5
2-Hexanone	ND	1.0	0.5	Isopropylbenzene	0.76	1.0	0.5
4-Isopropyl toluene	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	37	1.0	0.5
Methylene chloride	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Naphthalene	9.7	1.0	0.5	Nitrobenzene	ND	1.0	10
n-Propyl benzene	2.0	1.0	0.5	Styrene	ND	1.0	0.5
1,1,1,2-Tetrachloroethane	ND	1.0	0.5	1,1,2,2-Tetrachloroethane	ND	1.0	0.5
Tetrachloroethene	ND	1.0	0.5	Toluene	ND	1.0	0.5
1,2,3-Trichlorobenzene	ND	1.0	0.5	1,2,4-Trichlorobenzene	ND	1.0	0.5
1,1,1-Trichloroethane	ND	1.0	0.5	1,1,2-Trichloroethane	ND	1.0	0.5
Trichloroethene	ND	1.0	0.5	Trichlorofluoromethane	ND	1.0	0.5
1,2,3-Trichloropropane	ND	1.0	0.5	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	10
1,2,4-Trimethylbenzene	0.62	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	0.70	1.0	0.5

Surrogate Recoveries (%)

%SS1:	97.3	%SS2:	102
%SS3:	110		

Comments: i

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

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

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
		Date Received: 02/04/04
1330 S. Bascom Avenue, Ste. F	Client Contact: Joel Greger	Date Extracted: 02/05/04
San Jose, CA 95128	Client P.O.:	Date Analyzed: 02/05/04

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0402066

Lab ID	0402066-001B	0402066-002B	0402066-003B	0402066-007B	Reporting Limit for DF =1	
Client ID	EB1-Water	EB2-Water	EB3-Water	MW-1		
Matrix	W	W	W	W		
DF	1	1	1	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND	ND	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethanol	ND	ND	ND	ND	NA	50
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methanol	ND	ND	ND	ND	NA	500
Methyl-t-butyl ether (MTBE)	4.3	3.9	6.0	3.4	NA	0.5
Surrogate Recoveries (%)						
%SS:	104	103	99.9	104		
Comments		i	i	i		

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

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

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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		Date Received: 02/04/04
1330 S. Bascom Avenue, Ste. F	Client Contact: Joel Greger	Date Extracted: 02/05/04
San Jose, CA 95128	Client P.O.:	Date Analyzed: 02/05/04

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0402066

Lab ID	0402066-008B	0402066-009B			Reporting Limit for DF =1	
Client ID	MW-2	MW-3				
Matrix	W	W				
DF	5	1			S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<2.5	ND			NA	0.5
t-Butyl alcohol (TBA)	ND<25	ND			NA	5.0
1,2-Dibromoethane (EDB)	ND<2.5	ND			NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<2.5	ND			NA	0.5
Diisopropyl ether (DIPE)	ND<2.5	ND			NA	0.5
Ethanol	ND<250	ND			NA	50
Ethyl tert-butyl ether (ETBE)	ND<2.5	ND			NA	0.5
Methanol	ND<2500	ND			NA	500
Methyl-t-butyl ether (MTBE)	84	8.5			NA	0.5
Surrogate Recoveries (%)						
%SS:	98.6	101				
Comments						

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

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

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Piers Environmental	Client Project ID: #04028; 3744 Depot Rd.	Date Sampled: 02/04/04
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1330 S. Bascom Avenue, Ste. F	Client Contact: Joel Greger	Date Extracted: 02/04/04
San Jose, CA 95128	Client P.O.:	Date Analyzed: 02/05/04

LUFT 5 Metals*

Extraction method: E200.7/E200.9 Analytical methods: E200.7/E200.9 Work Order: 0402066

Lab ID	Client ID	Matrix	Extraction	Cadmium	Chromium	Lead	Nickel	Zinc	DF	% SS
004E	EB4-Water	W	DISS.	ND	ND	ND	0.0055	ND	1	N/A
005E	EB5-Water	W	DISS.	ND	ND	ND	0.0085	ND	1	N/A
006E	EB6-Water	W	DISS.	ND	ND	ND	0.013	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	DISS.	0.005	0.005	0.005	0.005	0.02	mg/L
	S	TTLC	NA	NA	NA	NA	NA	NA

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

means surrogate recovery outside of acceptance range due to matrix interference; & means surrogate diluted out of acceptance range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water/liquid- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipe/filter - As, Se, Tl); 7471B (Hg).

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; j) reporting limit raised due to insufficient sample amount; k) results are reported by dry weight; y) estimated values due to low surrogate recovery; z) reporting limit raised due to matrix interference.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0402066

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 10238 Spiked Sample ID: 0402074-002A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	92.4	93.7	1.37	92.1	88.5	3.95	70	130
MTBE	ND	10	91.5	92.2	0.743	90	96.1	6.50	70	130
Benzene	ND	10	101	102	1.56	100	97.9	2.13	70	130
Toluene	ND	10	103	106	2.22	104	102	2.27	70	130
Ethylbenzene	ND	10	108	109	1.36	106	105	1.45	70	130
Xylenes	ND	30	110	110	0	107	107	0	70	130
%SS:	117	10	112	112	0	113	112	1.00	70	130

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

NONE

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

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

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

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0402066

EPA Method: SW8015C	Extraction: SW3510C	BatchID: 10233	Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	112	112	0	70	130
%SS:	N/A	2500	N/A	N/A	N/A	115	117	1.72	70	130

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

NONE

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

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QC SUMMARY REPORT FOR SW9070A

Matrix: W WorkOrder: 0402066

EPA Method: SW9070A	Extraction: SM5520BF_W	BatchID: 10242	Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TRPOG	N/A	100	N/A	N/A	N/A	96	99	3.08	70	130

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

NONE

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

surrogate diluted out of range.

DHS Certification No. 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0402066

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 10239	Spiked Sample ID: 0402066-008B

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	ND	10	120	125	4.29	117	120	2.68	70	130
Chlorobenzene	ND	10	88.9	93.1	4.68	109	106	2.55	70	130
1,1-Dichloroethene	ND	10	105	109	4.25	94.1	93.6	0.480	70	130
Methyl-t-butyl ether (MTBE)	83.74	10	NR	NR	NR	91.1	91.8	0.691	70	130
Toluene	ND	10	105	110	4.01	107	107	0	70	130
Trichloroethene	ND	10	87.6	90.6	3.38	78.8	79.2	0.556	70	130
%SS1:	98.6	10	97.7	96.6	1.11	97.3	99.3	2.09	70	130
%SS2:	102	10	96.9	98.4	1.55	98.2	99.8	1.60	70	130
%SS3:	104	10	103	100	2.65	100	99.2	1.16	70	130

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

NONE

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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

DHS Certification No. 1644

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QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0402066

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 10239	Spiked Sample ID: 0402066-008B

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
tert-Amyl methyl ether (TAME)	ND<2.5	10	112	114	1.83	89.3	90.6	1.45	70	130
t-Butyl alcohol (TBA)	ND<25	50	95.8	94.4	1.49	72	73.4	2.01	70	130
1,2-Dibromoethane (EDB)	ND<2.5	10	101	103	1.44	93	91.4	1.67	70	130
1,2-Dichloroethane (1,2-DCA)	ND<2.5	10	120	123	2.46	119	121	1.87	70	130
Diisopropyl ether (DIPE)	ND<2.5	10	118	122	3.77	108	110	1.61	70	130
Ethanol	ND<250	500	120	102	15.7	89.1	90.6	1.59	70	130
Ethyl tert-butyl ether (ETBE)	ND<2.5	10	114	117	1.85	91.5	91.9	0.409	70	130
Methanol	ND<2500	2500	101	99.8	0.768	97.3	97	0.287	70	130
Methyl-t-butyl ether (MTBE)	83.74	10	NR	NR	NR	91.1	91.8	0.691	70	130
%SS1:	98.6	10	97.7	96.6	1.11	97.3	99.3	2.09	70	130

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

NONE

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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

DHS Certification No. 1644

_____QA/QC Officer

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QC SUMMARY REPORT FOR E200.7/E200.9

Matrix: W WorkOrder: 0402066

EPA Method: E200.7/E200.9 Extraction: E200.7/E200.9 BatchID: 10243 Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Cadmium	N/A	1	N/A	N/A	N/A	94.6	99.2	4.74	80	120
Chromium	N/A	1	N/A	N/A	N/A	94.5	100	5.79	80	120
Nickel	N/A	1	N/A	N/A	N/A	98.1	106	7.23	80	120
Zinc	N/A	1	N/A	N/A	N/A	96.9	101	3.88	80	120

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

NONE

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

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

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

N/A = not applicable to this method.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

TL QA/QC Officer

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 0402066

Report to:
Joel Greger
Piers Environmental
1330 S. Bascom Avenue, Ste. F
San Jose, CA 95128
TEL: (408) 559-1248
FAX: (408) 559-1224
ProjectNo: #04028; 3744 Depot Rd.
PO:

Bill to:
Accounts Payable
Piers Environmental
1330 S. Bascum Avenue, Ste. F
San Jose, CA 95128

Requested TAT: 5 days
Date Received: 2/4/04
Date Printed: 2/4/04

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0402066-001	EB1-Water	Water	2/4/04	☐		B	C	A											
0402066-002	EB2-Water	Water	2/4/04	☐		B	C	A											
0402066-003	EB3-Water	Water	2/4/04	☐		B	C	A											
0402066-004	EB4-Water	Water	2/4/04	☐	B		C	A	E	D									
0402066-005	EB5-Water	Water	2/4/04	☐	B		C	A	E	D									
0402066-006	EB6-Water	Water	2/4/04	☐	B		C	A	E	D									
0402066-007	MW-1	Water	2/4/04	☐		B	C	A											
0402066-008	MW-2	Water	2/4/04	☐		B	C	A											
0402066-009	MW-3	Water	2/4/04	☐		B	C	A											

Test Legend:

1	8260B_W	2	9-OXYS_W	3	9070A_SG_W	4	G-MBTEX_W	5	LUFT_Dis
6	TPH(D)_W	7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

Comments:

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

04020606

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☐ Yes ☐ No

Report To: ~~Piers~~ Joel/Gregor Bill To: PIERS
Company: Piers Environmental
1330 S. Bascom Ave, Suite F
San Jose CA 95128 E-Mail:
Tele: ( ) 408 559 1248 Fax: ( ) 408 559 1224
Project #: 04028 Project Name: 3744 Depot Rd
Project Location: 3744 Depot Rd Hayward
Sampler Signature: Joel [signature]

	SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA ~~624 / 8240~~ / (8260) VOCs	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals dissolved	Lead (7240/7421/239.2/6010)	RCI	Other: 8260 Eight Fuel Oxygenates	Oil & Grease 9071			Comments
+	EB1-water	3744 Depot Rd	2/4/04	Am	4	1-L 3-V	X					X	X			X															X	X			
+2	EB2-water	↓	↓	↓	4	1-L 3-V	X					X	X			X															X	X			
+25	EB3-water	↓	↓	↓	4	1-L 3-V	X					X	X			X															X	X			
+5	EB4-water	↓	↓	Pm	7	2-L 5-V	X					X	X			X	X							X				X			X	X			
+10	EB5-water	↓	↓	↓	11	2-L 9-V	X					X	X			X	X							X				X			X	X			
+2	EB6-water	↓	↓	↓	7	2-L 5-V	X					X	X			X	X							X				X			X	X			
+2	MW1	↓	↓	Am	4	1-L 3-V	X					X	X			X															X	X			
+	MW2	↓	↓	Pm	4	1-L 3-V	X					X	X			X															X	X			
+	MW3	↓	↓	Pm	4	1-L 3-V	X					X	X			X															X	X			

Relinquished By:	Date:	Time:	Received By:
Joel [signature]	2-4-04	4:17 Pm	[signature] Valle
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT No
DECHLORINATED IN LAB ____

	VOAS	O&G	METALS	OTHER
PRESERVATION	✓			

APPROPRIATE CONTAINERS ✓
PERSERVED IN LAB ____