October 30, 2008

VIA ALAMEDA COUNTY FTP SITE

Mr. Paresh C. Kharti
Alameda County Environmental Health
1331 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: **Groundwater Monitoring Report – Third Quarter 2008**
Guy's Service Station
3820 San Leandro Street
Oakland, California
ACEH Fuel Leak Case No. RO0000089
Global ID T0600102250

Dear Mr. Kharti:

On behalf of Kelly Engineer, Pangea Environmental Services, Inc. (Pangea) has prepared this *Groundwater Monitoring Report – Third Quarter 2008*. The report describes groundwater monitoring, sampling, and other site activities.

If you have any questions or comments, please call me at (510) 435-8664 or email briddell@pangeaenv.com.

Sincerely,
Pangea Environmental Services, Inc.

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Groundwater Monitoring Report – Third Quarter 2008*

cc: Kelly Engineer, All Star, Inc., 1791 Pine Street, Concord, California, 94520
SWRCB Geotracker (electronic copy)

GROUNDWATER MONITORING REPORT – THIRD QUARTER 2008

Guy's Service Station
3820 San Leandro Street
Oakland, California

October 30, 2008

Prepared for:

Kelly Engineer
1791 Pine Street
Concord, CA 94520

Prepared by:

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, California 94612

Written by:

REGISTERED PROFESSIONAL ENGINEER
ROBERT G. CLARK-RIDDELL
No. C 049629
Exp. SEPT 2010
CIVIL
STATE OF CALIFORNIA

Morgan Gillies
Project Manager

Bob Clark-Riddell, P.E.
Principal Engineer

INTRODUCTION

On behalf of Kelly Engineer, Pangea Environmental Services, Inc. (Pangea) performed groundwater monitoring and sampling during the current quarter at the Guy's service station located at 3820 San Leandro Street, Oakland, California. The purpose of the monitoring and sampling is to evaluate dissolved contaminant concentrations and groundwater flow direction. Monitoring well locations, current groundwater analytical results, elevation data, and the estimated groundwater flow direction are shown on Figure 1. Current and historical data are summarized on Table 1.

SITE BACKGROUND

The site is a relatively level parcel occupying approximately 5,500 square feet on the northern corner of San Leandro Street and 39th Avenue in Oakland, California. The surrounding properties are primarily residential, although commercial/retail businesses occupy San Leandro Street east and west of the site. The site has operated as a retail gasoline/diesel service station since at least 1993 when Mr. Engineer commenced operations, and also includes a very small convenience store. A Phillips 66 station operated at the site for many years beforehand.

Four fuel (two diesel and two gasoline) underground storage tanks (USTs) were reportedly removed by American Consulting Remediation and Construction in January 1998 and new 20,000-gallon fuel USTs were installed. Soil samples collected during tank removal activities contained elevated concentrations of petroleum hydrocarbons. Total petroleum hydrocarbons as gasoline (TPHg) concentrations in soil ranged from 34 to 2,600 parts per million (ppm), while total petroleum hydrocarbons as diesel (TPHd) ranged from 11 to 3,700 ppm. As a result of the detected contamination an unauthorized release form (URF) was issued for the site and excavation of petroleum impacted soil was conducted to the extent practicable onsite as shown on Figure 1. According to Mr. Engineer, no final excavation report was prepared but the excavation extended to the property boundary in all directions except the northwestern direction. Based on the approximate 16 ft depth of the excavation, a total of approximately 1,200 tons of soil was excavated and disposed off site. During UST installation, the excavation was backfilled with pea gravel.

Soil and groundwater investigations have been conducted at the site since 1998. In July 1998, Brunsing Associates, Inc. drilled six soil borings and installed three groundwater monitoring wells to assess soil and groundwater conditions. ACC Environmental Consultants, Inc. (ACC) conducted periodic groundwater monitoring at the site from September 2000 to June 2004. In August 2003, ACC completed eight direct-push borings to further characterize the presence of petroleum hydrocarbons and MTBE in onsite and offsite soil and groundwater at the site. Pangea began groundwater monitoring at the site in May 2008. In the *Site Conceptual Model with Preferential Pathway Evaluation and Investigation Workplan* (Workplan) dated July 25, 2008, Pangea proposed collecting three soil gas samples to evaluate

potential contaminant volatilization to indoor air, and installing one to two offsite monitoring wells to help define the extent of the plume. In a letter dated September 4, 2008, Alameda County Environmental Health (ACEH) approved the Workplan and requested the addition of one to two monitoring wells if necessary to characterize the vertical extent of contaminants.

GROUNDWATER MONITORING AND SAMPLING

On September 18, 2008, onsite monitoring wells and one tank backfill well were gauged for depth-to-water and inspected for separate-phase hydrocarbons (SPH) prior to collection of groundwater samples. Well caps were removed from all monitoring wells and technicians allowed at least 15 minutes for water-level equilibration before measuring depth to water. During groundwater monitoring, Pangea's technician noted that the well cap for MW-3 was under pressure and that groundwater is slow to recharge during well purging. These observations suggest that 15 minutes may not be adequate time for water levels to fully equilibrate prior to gauging. This conclusion is further supported by the prevalence of low permeability clay in site soil and well MW-3's proximity to the tank complex. To further evaluate this conclusion, Pangea calculated and compared the difference in groundwater elevation in each well between consecutive monitoring events as shown on Table 1. The results of this evaluation indicate that the difference in water levels in individual site wells between consecutive monitoring events varies widely. To accurately evaluate groundwater flow direction during future monitoring events, Pangea plans to remove all well caps the day before groundwater monitoring to allow water levels to fully equilibrate.

Prior to sample collection, approximately three casing volumes of water were purged using disposable bailers, an electric submersible pump, or a peristaltic pump. During well purging, field technicians measured the pH, temperature, conductivity, total dissolved solids (TDS) and oxygen reduction potential (ORP). A groundwater sample was collected from each well with a disposable bailer, and decanted into the appropriate containers supplied by the analytical laboratory. Groundwater samples were labeled, placed in protective plastic bags, and stored on crushed ice at or below 4^{o} C. All samples were transported under chain-of-custody to the State-certified analytical laboratory. Purge water was stored onsite in DOT-approved 55-gallon drums. Groundwater monitoring field data sheets, including purge volumes and field parameter measurements, are presented in Appendix A.

MONITORING RESULTS

Current and historical groundwater elevation data and analytical results are described below and summarized on Table 1. Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015Cm, benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8021B. Samples were analyzed by McCampbell

Analytical, Inc., of Pittsburg, California, a State-certified laboratory. The laboratory analytical report is included in Appendix B.

Groundwater Flow Direction

Based on depth-to-water data collected on September 18, 2008, the overall groundwater flow direction onsite is generally towards the southwest at a gradient of approximately 0.05ft/ft. Groundwater elevation data and the inferred groundwater flow direction are shown on Figure 1. The inferred groundwater flow direction is generally consistent with previous monitoring results. However, as noted above, the wells appear to have not fully equilibrated prior to water level measurement resulting in a 'steeper' gradient and altering the calculated groundwater flow direction. Depth-to-water and groundwater elevation data are presented in Table 1.

Hydrocarbon Distribution in Groundwater

No SPH was observed in any site wells. The maximum TPHg and benzene concentrations detected were 69,000 µg/L and 8, 700 µg/L, respectively, in source area well MW-3. Significantly lower hydrocarbon concentrations were detected in wells MW-1 and MW-2. TPHg concentration increases from the previous monitoring event may be due to the historic low water levels measured in well MW-3 this quarter. Hydrocarbon concentrations were generally within historic ranges in site monitoring wells this quarter. Hydrocarbon concentration data are summarized in Table 1 and on Figure 1.

Historic data suggests that contaminant concentrations are stable or decreasing in source area well MW-3. Historic data from wells MW-1 and MW-2 suggests that contaminants are naturally attenuating in site groundwater located further from the source area.

Fuel Oxygenate Distribution in Groundwater

The maximum MTBE concentration was detected in well MW-3 at 18,000 µg/L. No MTBE was detected in offsite, crossgradient well MW-2 or in upgradient on site well MW-1. As shown on Table 1, MTBE concentrations recorded this quarter are generally within historical ranges.

OTHER SITE ACTIVITIES

Investigation Workplan

Pangea recently submitted a *Site Conceptual Model with Preferential Pathway Evaluation and Investigation Workplan* (Workplan) dated July 25, 2008 to ACEH. In a letter dated September 4, 2008, ACEH concurred with Pangea's recommendations to collect three soil gas samples to

evaluate potential contaminant volatilization to indoor air, and installing one to two offsite monitoring wells to help define the extent of the plume. Additionally, ACEH requested that one to two more offsite monitoring wells be installed if necessary to characterize the vertical extent of contaminants. Pangea plans to implement the approved Workplan with the additional wells requested by ACEH in the near future, contingent upon weather, access and client authorization.

Upcoming Monitoring

Due to apparent plume stability based on data spanning 10 years, and due to the upcoming approved offsite well installation, Pangea plans to delay the next monitoring event until completion of the new groundwater monitoring wells. This next monitoring will therefore likely occur in the late fourth quarter of 2008 or in the first quarter of 2009, depending on the well installation schedule.

During the next monitoring event, Pangea will remove well caps one day prior to conducting monitoring to allow water levels to equilibrate, and all site monitoring wells will be gauged for depth to water and inspected for SPH. Groundwater samples will be collected from each well and analyzed for TPHg, BTEX and MTBE. Pangea will summarize groundwater monitoring activities and results in a groundwater monitoring report following completion of each future groundwater monitoring event.

ATTACHMENTS

Figure 1 – Site Vicinity Map
Figure 2 – Groundwater Elevation and Hydrocarbon Concentration Map

Table 1 – Groundwater Elevation and Analytical Data

Appendix A – Groundwater Monitoring Field Data Sheets
Appendix B – Laboratory Analytical Report

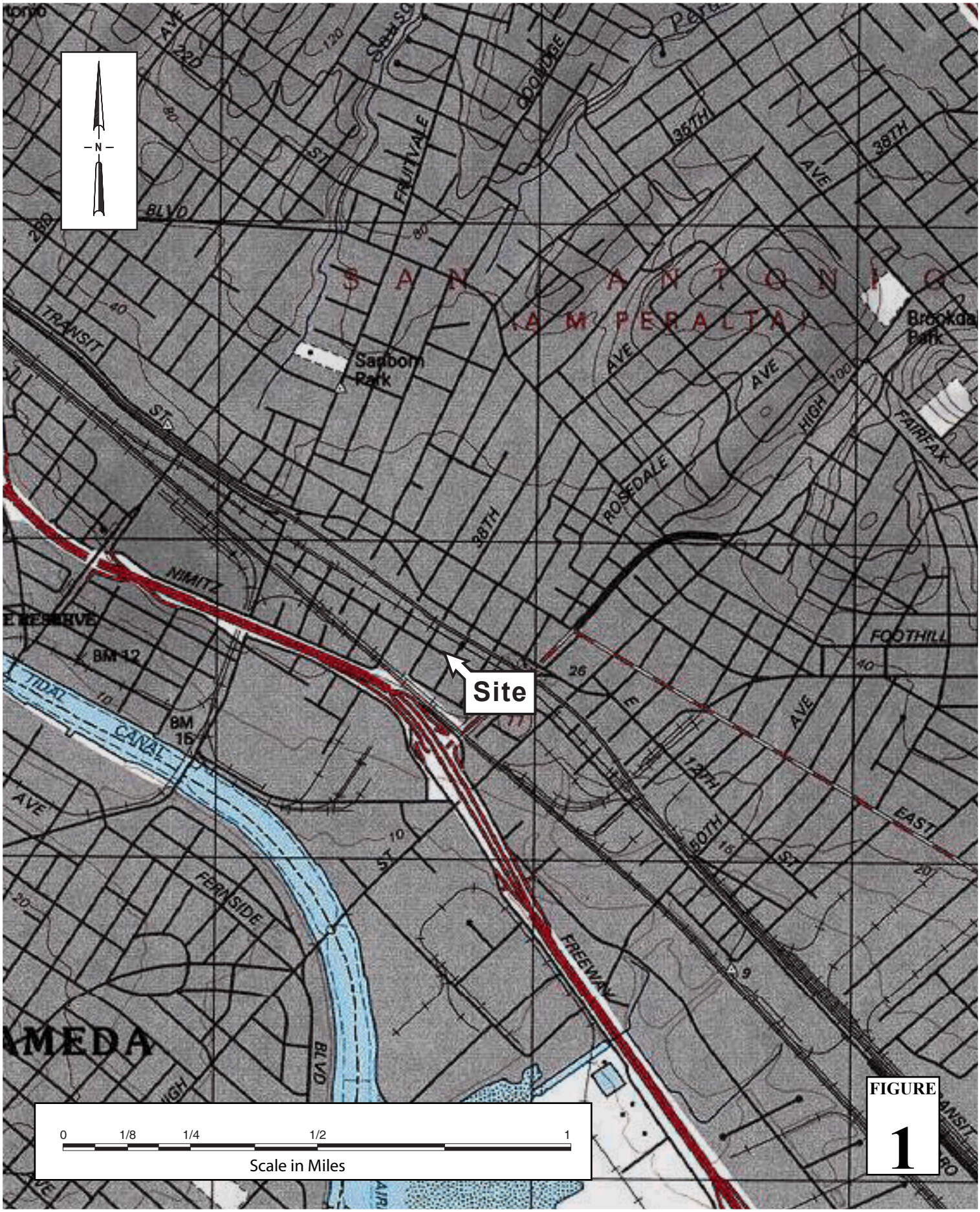

FIGURE 1

3820 San Leandro Street
Oakland, California

PANGEA

Vicinity Map

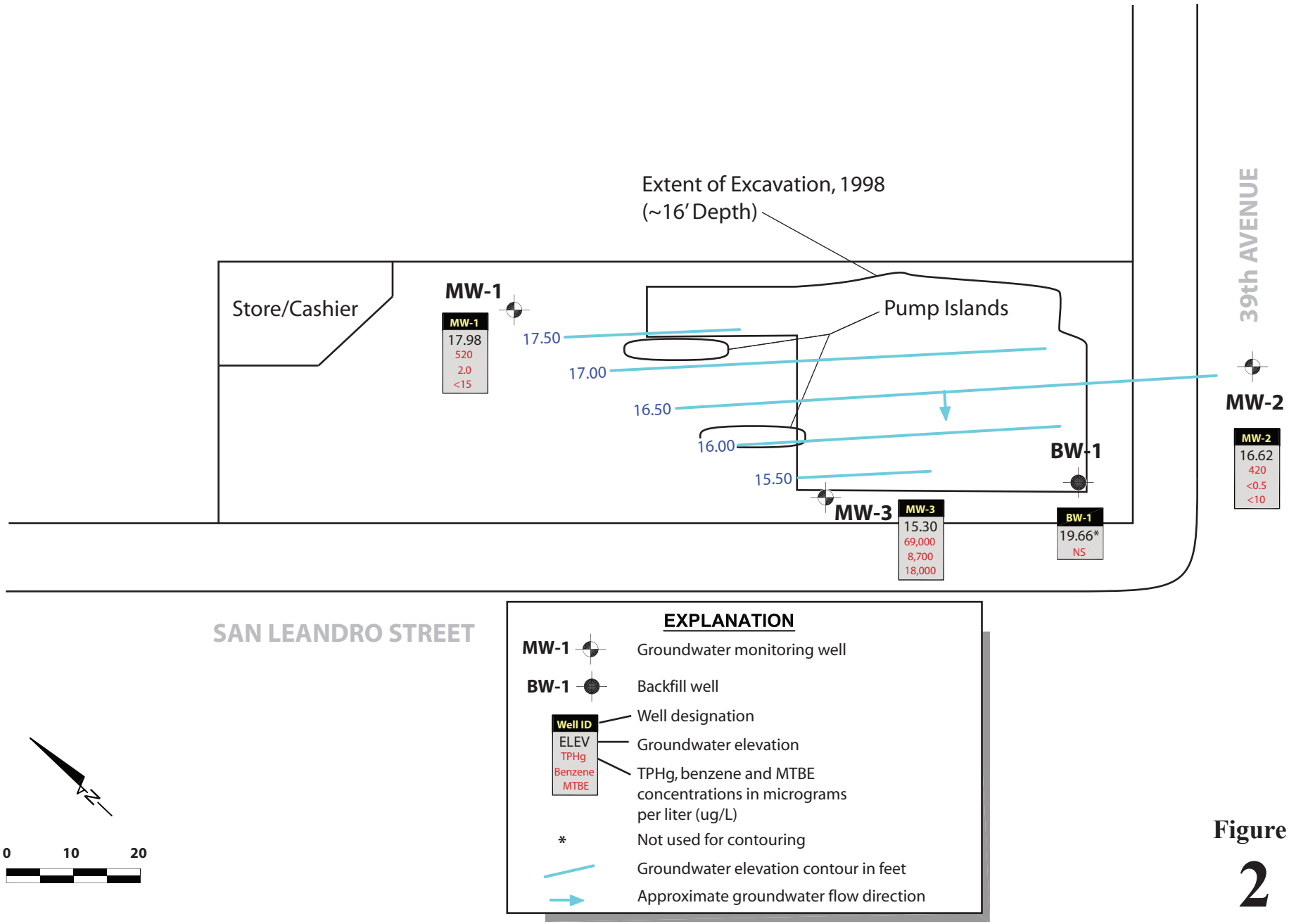

Figure 2

Guy's Service Station
3820 San Leandro Street
Oakland, California

PANGEA

Groundwater Elevation and Hydrocarbon Concentration Map
September 18, 2008

Pangea

Table 1. Groundwater Analytical Data: Petroleum Hydrocarbons - Guy's Gas Station, 3820 San Leandro Street, Oakland, California

Well ID *TOC Elev* *(ft)*	Date Sampled	Groundwater Elevation (ft)	Depth to Water (ft)	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Groundwater Elevation Change (ft)
				←			µg/L			→	
Monitoring Wells											
BW-1	7/2/1998	--	--	<50	1,300	300	3.5	<0.5	2.8	580	--
(26.00)	5/7/2008	17.87	8.13	--	1,000	53	5.5	<0.5	1.1	<60	--
	9/18/2008	**19.66**	**6.34**	--	--	--	--	--	--	--	**1.79**
MW-1	7/6/1998	19.77	7.77	<100	4,100	36	53	<5.0	20	80	--
(27.54)	9/10/2000	--	--	1,800	1,000	4.8	<0.50	6.2	1.2	<5.0	--
	4/10/2001	20.20	7.34	--	1,100	12	7.7	<2.5	<2.5	73	--
	7/17/2001	18.54	9.00	320	920	6.2	1.1	<0.50	<0.50	49	-1.66
	1/15/2003	20.60	6.94	86	360	5.5	<0.50	4.3	1.3	19	--
	4/17/2003	20.53	7.01	<50	<50	<0.50	<0.50	<0.50	<1.0	11	-0.07
	7/17/2003	18.83	8.71	95	380	19	<0.50	3.7	1.5	5.6	-1.70
	11/21/2003	17.93	9.61	160	600	4.7	<0.50	8.8	2	4.3	-0.90
	3/23/2004	20.23	7.31	120	140	1.3	<0.50	1.2	<1.0	11	2.30
	6/9/2004	18.89	8.65	84	570	1.6	<0.50	1.5	<1.0	11	-1.34
	5/7/2008	19.63	7.91	--	<50	<0.5	<0.5	<0.5	<0.5	7.5	--
	9/18/2008	**17.98**	**9.56**	--	**520**	**2.0**	**8.5**	**0.98**	**<0.5**	**<15**	**-1.65**
MW-2	7/6/1998	17.82	8.15	<100	6,400	190	14	13	12	210	--
(25.97)	9/10/2000	--	--	270	760	19	<0.50	<0.50	<0.50	110	--
	4/10/2001	18.65	7.32	--	320	3.6	1.1	1.2	0.79	<5.0	--
	7/17/2001	17.01	8.96	68	440	6.0	<0.50	6.2	<0.50	<5.0	-1.64
	1/15/2003	18.72	7.25	250	750	13	<0.50	<0.50	<0.50	78	--
	4/17/2003	18.54	7.43	120	180	<0.50	<0.50	<0.50	<1.0	8.1	-0.18
	7/17/2003	17.08	8.89	400	640	10	<0.50	<0.50	<1.0	27	-1.46
	11/21/2003	16.56	9.41	1,100	980	2.2	0.62	<0.50	1.1	54	-0.52
	3/23/2004	18.38	7.59	350	660	0.81	<0.50	<0.50	<1.0	7.7	1.82
	6/9/2004	17.22	8.75	1,300	1,000	8.9	0.55	<0.50	<1.0	28	-1.16
	5/7/2008	17.75	8.22	--	270	1.7	3.6	<0.5	0.77	<5.0	--
	9/18/2008	**16.62**	**9.35**	--	**420**	**<0.5**	**7.8**	**<0.5**	**1.0**	**<10**	**-1.13**
MW-3	7/6/1998	18.10	8.42	<100	36,000	6,700	72	6.2	530	13,000	--
(26.52)	9/10/2000	--	--	4,200	20,000	9,200	70	710	79	6,400	--
	4/10/2001	18.79	7.73	--	15,000	4,500	27	320	140	8,800	--
	7/17/2001	18.10	8.42	8,000	28,000	7,000	<50	270	75	15,000	-0.69
	1/15/2003	18.92	7.60	11,000	40,000	10,000	110	680	210	20,000	--
	4/17/2003	18.45	8.07	3,200	39,000	11,000	<100	870	<200	34,000	-0.47
	7/17/2003	17.45	9.07	5,100	58,000	16,000	<250	850	<500	28,000	-1.00
	11/21/2003	16.79	9.73	7,500	80,000	15,000	<200	1,300	<400	27,000	-0.66
	3/23/2004	18.67	7.85	12,000	41,000	12,000	130	1,100	<200	27,000	1.88
	6/9/2004	17.52	9.00	13,000	50,000	16,000	<250	1,200	<500	32,000	-1.15
	5/7/2008	18.02	8.50	--	35,000	8,300	74	140	28	20,000	--
	9/18/2008	**15.30**	**11.22**	--	**69,000**	**8,700**	**230**	**140**	**<25**	**18,000**	**-2.72**
Grab Groundwater Sampling											
B9-W	8/6/2003	--	--	8,600	27,000	3,100	210	1,600	780	96	--
B10-W	8/6/2003	--	--	840,000	130,000	15,000	<250	5,200	5,100	40,000	--
B13-W	8/6/2003	--	--	1,700	4,100	25	<2.5	21	<5.0	28	--
B16-W	8/6/2003	--	--	18,000,000	180,000	99	<50	<50	<100	7,000	--

Abbreviations:

µg/L = Micrograms per liter [commonly referred to as parts per billion (ppb)].

TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8260B.

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8260B on and prior to 6/9/2004, and by EPA Method 8015Cm thereafter.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B on and prior to 6/9/2004, and by EPA Method 8021B thereafter.

MTBE = Methyl tert butyl ether by EPA Method 8260B on and prior to 6/9/2004, and by EPA Method 8021B thereafter.

Groundwater Elevation (GWE) Change calculated by subtracting GWE from previous quarter GWE.

APPENDIX A

Groundwater Monitoring Field Data Sheets

Pangea
ENVIRONMENTAL SERVICES, INC.

Well Gauging Data Sheet

Project.Task #: 1260.001.216				Project Name: Engineer - Oakland			
Address: 3820 San Leandro St., Oakland, CA						Date: 9/18/2008	
Name: Bryce Taylor				Signature:			
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
MW-1	2	1215	—	—	9.56	19.85	N TOC
MW-2	2	1220	—	—	9.35	19.50	↓
MW-3	2	1225	—	—	11.22	19.45	↓
BW-1	4	1230	—	—	6.34	12.44	↓

Comments: *well caps removed 15 min prior to well gauging

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-1

Project.Task #: 1260.001.216	Project Name:Engineer - Oakland
Address: 3820 San Leandro St., Oakland, CA	
Date: 9/18/2008	Weather : Sunny
Well Diameter: 2 "	Volume/ft. 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | 2" = 0.16 | 4" = 0.65 | radius^2 * 0.163
Total Depth (TD): 19.85	Depth to Product: —
Depth to Water (DTW): 9.56	Product Thickness: —
Water Column Height: 10.29	1 Casing Volume: 1.65 gallons
Reference Point: NTOC	3 Casing Volumes: 4.95 gallons
Purging Device: ~~Disposable Bailer~~	
Sampling Device: Disposable Bailer	TDS

Time	Temp ©	pH	Cond (µs)	~~NTU~~	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1240	22.8	6.86	2131	1730		102	1.85	
1242	22.7	7.07	685	518.7		-9	3.5	
1245	22.7	7.09	681	515.0		-8	5.25	

Comments:

Sample ID: MW-1	Sample Time: 1250
Laboratory: McCampbell	Sample Date: 9/18/2008
Containers/Preservative: 3 HCl Voas	
Analyzed for: TPHg, BTEX and MTBE by 8015Cm/8021B	
Sampler Name: Bryce Taylor	Signature: B

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-2

Project.Task #: 1260.001.216	Project Name:Engineer - Oakland
Address: 3820 San Leandro St., Oakland, CA	
Date: 9/18/2008	Weather : Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04 ~~0.04~~ 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius^2 * 0.163
Total Depth (TD): 19.50	Depth to Product: —
Depth to Water (DTW): 9.35	Product Thickness: —
Water Column Height: 10.15	1 Casing Volume: 1.62 gallons
Reference Point: NTOC	3 Casing Volumes: 4.86 gallons
Purging Device: Disposable Bailer	
Sampling Device: Disposable Bailer	TDS

Time	Temp ©	pH	Cond (µs)	~~NTU~~	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1255	22.8	6.89	734.7	558.4		-41	1.75	
1257	22.2	6.98	731.1	556.0		-86	3.5	
1300	21.9	6.98	733.5	558.3		-104	5.25	

Comments: Silty, turbid

Sample ID: MW-2	Sample Time: 1305
Laboratory: McCampbell	Sample Date: 9/18/2008
Containers/Preservative: 3 HCl Voas	
Analyzed for: TPHg, BTEX and MTBE by 8015Cm/8021B	
Sampler Name: Bryce Taylor	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-3

Project.Task #: 1260.001.216	Project Name:Engineer - Oakland
Address: 3820 San Leandro St., Oakland, CA	
Date: 9/18/2008	Weather : Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.47; radius^2 * 0.163
Total Depth (TD): 19.45	Depth to Product: —
Depth to Water (DTW): 11.22	Product Thickness: —
Water Column Height: 8.23	1 Casing Volume: 1.32 gallons
Reference Point: WTOC	3 Casing Volumes: 3.96 gallons
Purging Device: Disposable Bailer	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	~~NTU~~ TDS	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
1310	23.0	6.01	1304	1018		-58	1.5	
1312	22.4	6.80	1362	1067		-72	3.0	
1315	23.0	6.84	1372	1077		-86	4.5	

Comments: Sheen
well cap under pressure

Sample ID: MW-3	Sample Time: 1320
Laboratory: McCampbell	Sample Date: 9/18/2008
Containers/Preservative: 3 HCl Voas	
Analyzed for: TPHg, BTEX and MTBE by 8015Cm/8021B	
Sampler Name: Bryce Taylor	Signature:

APPENDIX B

Laboratory Analytical Report

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: # 1260.001;Engineer-Oakland	Date Sampled: 09/18/08
		Date Received: 09/18/08
	Client Contact: Morgan Gillies	Date Reported: 09/25/08
	Client P.O.:	Date Completed: 09/24/08

WorkOrder: 0809576

September 25, 2008

Dear Morgan:

Enclosed within are:

1) The results of the **3** analyzed samples from your project: **# 1260.001;Engineer- Oakland,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

0809576

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

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: Morgan Gillies Bill To: Pangea

Company: Pangea Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612

E-Mail: mgillies@pangeaenv.com

Tele: (510) 836-3702 Fax: (510) 836-3709

Project #: 1260.001 Project Name: Engineer - Oakland

Project Location: 3820 San Leandro St., Oakland, CA

Sampler Signature:

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	Other	Other	Comments
MW-1	3820	9-18	1250	3	voa	X					X	X			X																			Filter Samples for Metals analysis: Yes / No
MW-2	San Leandro	↓	1305	3	voa	X					X	X			X																			
MW-3	↓	↓	1320	3	voa	X					X	X			X																			

Relinquished By:	Date:	Time:	Received By:
	9/18/10		
Relinquished By:	Date:	Time:	Received By:
	9/18/10	1415	K. BURKS
Relinquished By:	Date:	Time:	Received By:

ICE/t° 10.2

GOOD CONDITION ✓

HEAD SPACE ABSENT ✓

DECHLORINATED IN LAB

APPROPRIATE CONTAINERS ✓

PRESERVED IN LAB

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0809576 **ClientCode: PEO**

☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX (510) 836-3709

Email: mgillies@pangeaenv.com
cc:
PO:
ProjectNo: # 1260.001;Engineer- Oakland

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **09/18/2008**
Date Printed: **09/18/2008**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0809576-001	MW-1	Water	9/18/2008 12:50	☐	A	A										
0809576-002	MW-2	Water	9/18/2008 13:05	☐	A											
0809576-003	MW-3	Water	9/18/2008 13:20	☐	A											

Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Kimberly Burks

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **9/18/2008 7:35:35 PM**

Project Name: **# 1260.001;Engineer- Oakland**
Checklist completed and reviewed by: Kimberly Burks

WorkOrder N°: **0809576** Matrix Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 6.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

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Pangea Environmental Svcs., Inc.	Client Project ID: # 1260.001;Engineer-Oakland	Date Sampled: 09/18/08
		Date Received: 09/18/08
1710 Franklin Street, Ste. 200	Client Contact: Morgan Gillies	Date Extracted: 09/20/08-09/23/08
Oakland, CA 94612	Client P.O.:	Date Analyzed 09/20/08-09/23/08

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

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0809576

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	520,d1	ND<15	2.0	8.5	0.98	ND	1	95
002A	MW-2	W	420,d9	ND<10	ND	7.8	ND	1.0	1	113
003A	MW-3	W	69,000,d1,b6	18,000	8700	230	140	ND<25	50	100

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	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:

b6) lighter than water immiscible sheen/product is present
d1) weakly modified or unmodified gasoline is significant
d9) no recognizable pattern

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 38347 WorkOrder 0809576

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0809578-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	91.1	92.3	1.24	98.7	90.3	8.81	70 - 130	20	70 - 130	20
MTBE	ND	10	102	106	4.67	99.8	95.5	4.48	70 - 130	20	70 - 130	20
Benzene	ND	10	96.6	96.2	0.440	101	97.9	3.31	70 - 130	20	70 - 130	20
Toluene	ND	10	87.2	86.9	0.303	92.5	88.7	4.23	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	97.5	98.1	0.628	99.8	99.4	0.430	70 - 130	20	70 - 130	20
Xylenes	ND	30	90.2	94.1	4.21	98.2	95.6	2.72	70 - 130	20	70 - 130	20
%SS:	96	10	97	99	1.35	106	99	6.98	70 - 130	20	70 - 130	20

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

BATCH 38347 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0809576-001A	09/18/08 12:50 PM	09/20/08	09/20/08 12:56 PM	0809576-002A	09/18/08 1:05 PM	09/23/08	09/23/08 7:13 PM
0809576-003A	09/18/08 1:20 PM	09/22/08	09/22/08 3:44 PM				

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the 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 = matrix interference and/or 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, or inconsistency in sample containers.