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July 22, 2009

Mr. Jerry Wickham

Alameda County Environmental Health Department
Division of Environmental Protection
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Subject: Transmittal of Semiannual Groundwater Monitoring Report, May 2009 Sampling Event, Pacific Gas and Electric Company, Oakland General Construction Yard, 4930 Coliseum Way, Oakland, California.

Dear Mr. Wickham:

Please find enclosed the *Semiannual Groundwater Monitoring Report, November 2008 Sampling Event, Pacific Gas and Electric Company, Oakland General Construction Yard, 4930 Coliseum Way, Oakland, California*, dated January 6th 2009. PG&E has retained ENTRIX, Inc., and Geomatrix Consultants, Inc. to perform groundwater monitoring and other technical studies at the subject site. The attached report was prepared by Innovative Technical Solutions, Inc. with review by Geomatrix on behalf of PG&E.

Please contact Erin Zavarin of Geomatrix at **(510) 663-4203** with any questions or comments pertaining to this report. For any other questions or requests regarding this site, please contact me at **(925) 415-6381**.

Sincerely yours,

Anne Conner

Sr Remediation Project Manager
Pacific Gas and Electric Company

SEMIANNUAL GROUNDWATER MONITORING REPORT

May 2009 Sampling Event

**Pacific Gas and Electric Company
Oakland General Construction Yard
4930 Coliseum Way
Oakland, California**

Prepared For:

Pacific Gas and Electric Company
3401 Crow Canyon Road
San Ramon, CA 94583

Prepared By:

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Walnut Creek, CA 94598

July 2009

ITSI Project No: 07037.0043



SEMIANNUAL GROUNDWATER MONITORING REPORT

May 2009 Sampling Event

**Pacific Gas and Electric Company
Oakland General Construction Yard
4930 Coliseum Way
Oakland, California**

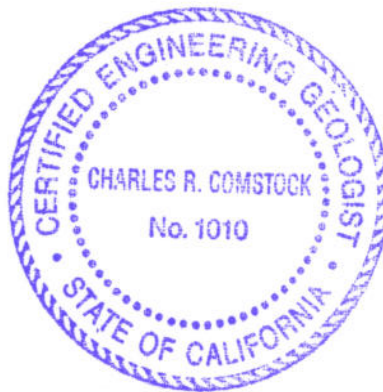
This report was prepared by the staff of Innovative Technical Solutions, Inc., under the supervision of the Geologist(s) and/or Engineer(s) whose seal(s) and signature(s) appear hereon.

The findings, recommendations, specifications, or professional opinions are presented within the limits described by the client, in accordance with generally accepted professional engineering and geologic practice. No warranty is expressed or implied.

Prepared By:



Charles Comstock, P.G., C.E.G.
Senior Geologist



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July 2009

ITSI Project No. 07037.0043

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ACRONYMS AND ABBREVIATIONS

AST	above-ground storage tank
bgs	below ground surface
EPA	U.S. Environmental Protection Agency
ITSI	Innovative Technical Solutions, Inc.
µg/l	micrograms per liter
MS/MSD	matrix spike and matrix spike duplicate
MTBE	methyl tertiary butyl ether
PG&E	Pacific Gas and Electric Company
TPHd	total petroleum hydrocarbons quantified as diesel
TPHg	total petroleum hydrocarbons quantified as gasoline
TPHmo	total petroleum hydrocarbons quantified as motor oil
UST	underground storage tank
VOC(s)	volatile organic compound(s)

1.0 INTRODUCTION

This report presents the results of semiannual groundwater monitoring completed on May 26, 2009, at the Pacific Gas and Electric Company (PG&E) General Construction Yard located at 4930 Coliseum Way in Oakland, California (the site, Figure 1). The groundwater monitoring program includes the following activities: (1) measuring groundwater elevations; (2) collecting groundwater samples from monitoring wells on site; and (3) performing laboratory analyses of the samples. The program objective is to monitor the distribution of select fuel-related compounds, volatile organic compounds (VOCs), and dissolved lead in shallow groundwater beneath the site. The following sections summarize the site description, site background, groundwater monitoring activities, and analytical results of samples collected on May 26, 2009. Previous analytical results are summarized in Appendix A.

2.0 SITE DESCRIPTION

The site consists of approximately 4 acres and is operated as a storage yard for equipment and vehicles (Figure 2). The surrounding area is primarily commercial and light industrial. The site is bounded by Coliseum Way to the south, 50th Avenue to the southeast, and commercial properties to the north (Figure 1).

3.0 SITE HISTORY

The following summarizes previous environmental activities associated with the site:

- **February 1987** - Soil borings were advanced and soil and groundwater samples were collected in the vicinity of the former waste oil UST cluster and the diesel UST (PG&E, 1987a).
- **December 1987** - Samples of the contents of five USTs were collected and analyzed (the four USTs in the former waste oil UST cluster and the former diesel UST [PG&E, 1987b]).
- **January 1988** - Five underground storage tanks (USTs) and associated piping located in the northern and eastern portions of the site were removed (Figure 2). Four of the former USTs were located in a cluster in the northern portion of the site (former UST cluster). Two of these USTs reportedly contained heavy oil and two contained mineral spirits (PG&E, 1988). The fifth former UST was located near the west corner of the yard and reportedly contained diesel fuel.
- **March and April 1988** –Groundwater monitoring wells OW-1 through OW-4 installed. In addition, soil borings were advanced in the vicinities of the former waste oil UST cluster and the former diesel UST.
- **May 1990** - One natural gas, above ground storage tank (AST) was removed from the central portion of the site (Figure 2). Following demolition of the former natural gas AST, paint chips were reported to have been observed in shallow soil in the vicinity of the former natural gas AST (CSS, 2005).
- **April 1991**—Groundwater monitoring well OW-5 was installed along the northeast property line. A groundwater sample was collected from well OW-5 on April 17, 1991.
- **November and December 1991** - Approximately 2,000 cubic yards of soil were excavated to a depth of approximately 4 to 9 feet below ground surface (bgs) as a remedial action for the petroleum hydrocarbons identified in the soil in the vicinity of the former UST cluster. Groundwater monitoring wells OW-6 and OW-7 were installed, and well OW-3 was abandoned. The concentrations of total petroleum hydrocarbons quantified as diesel (TPHd) and oil and grease in the soil samples collected along the site boundaries during soil excavation activities were greater than soil cleanup target levels, while concentrations of TPHd and oil and grease in each of the remaining confirmatory samples were less than the cleanup target levels. Oil was visible in the soils in the northeast wall of the excavation along the property line, and a pipe that contained a similar petroleum product was also exposed in the northeastern wall of the excavation. The conclusions of the February 1992 *Site Remediation and Closure Report, Former Tank Cluster Area* prepared by Earth Technology Corporation suggested that off-site sources of petroleum hydrocarbons may exist in both the northeast and northwest directions (ETC, 1992).
- **December 1991** – Installation of groundwater monitoring wells OW-6 and OW-7.



- **September and October 1992** – An asphaltic concrete cap was constructed on lead-affected surface soil in the vicinity of the former natural gas AST. Lead, believed to have originated from lead-based paint chips generated from sandblasting of the former natural gas AST, was found in soil samples collected from this area.
- **February 1993** – Groundwater monitoring well OW-8 was installed in the southern area of the yard near the location of the former natural gas AST to monitor lead concentrations in the groundwater.
- **July 1994** – Groundwater sampling frequency reduced from quarterly to a semiannual basis.
- **January through March 2008** - A soil and groundwater investigation was conducted to further define TPHd, TPHmo, and chlorobenzenes impact to groundwater in the northern portion of the site; further assess the potential for chlorobenzenes to be in shallow soil in the northern portion of the site; assess the presence of PAHs, PCBs, and metals in soil in the vicinity of the former waste oil UST cluster; and further assess the potential presence of TPHd and TPHmo in soil in the vicinity of the former diesel UST and waste oil UST.

4.0 GROUNDWATER MONITORING ACTIVITIES

Blaine Tech Services, Inc. performed the groundwater-monitoring event on May 26, 2009. Groundwater sampling was performed using low-flow purging and sampling methods in accordance with the Low-Flow Purging and Sampling Protocol (Appendix B). Depth to groundwater measurements were collected from OW-1, OW-2, OW-4, OW-5, OW-6, OW-7, and OW-8, and were recorded in the Groundwater Purging and Sampling Logs (Appendix C). The groundwater elevation measurements were used to prepare a groundwater elevation map to determine the direction and magnitude of the groundwater gradient. Purge water generated during the groundwater monitoring activities was temporarily stored on site in 55-gallon steel drums pending disposal.

Groundwater samples were collected from OW-1, OW-2, OW-4, OW-5, OW-6, OW-7, and OW-8 in laboratory supplied containers. The samples were shipped on ice to Creek Environmental Laboratories, Inc., of San Luis Obispo, California, a State of California certified laboratory, for analysis under chain-of-custody protocol. Groundwater samples collected from site monitoring wells were analyzed for petroleum constituents and dissolved lead as outlined below.

- Wells OW-1 and OW-4 through OW-7: total petroleum hydrocarbons quantified as gasoline (TPHg) using U. S. Environmental Protection Agency (EPA) Method 8015B
- Wells OW-1, OW-2, and OW-4 through OW-8: TPHd and total petroleum hydrocarbons quantified as motor oil using EPA Method 8015B following silica gel cleanup
- Wells OW-2, OW-5, and OW-8: dissolved lead using EPA Method 6010B
- Wells OW-1 and OW-4 through OW-7: VOCs using EPA Method 8260B

Appendix D includes the laboratory analytical reports and chain-of-custody documentation. All analyses were performed within the holding times specified by the EPA. None of the tested analytes were detected in the field blank or laboratory reagent blank. The surrogate recoveries were within the laboratory acceptance limits. With the exception of the TPHd matrix spike performed following silica gel cleanup, recoveries of matrix spike/matrix spike duplicates (MS/MSDs) were within the laboratory acceptance limits. The recovery for the TPHd MS sample was slightly below the lower QC limit due to matrix effects. The data was reported on

the basis of acceptable recovery of the laboratory control sample and the MSD result (Appendix D). The relative percent differences of MS/MSD results were within the laboratory acceptance limits.

5.0 GROUNDWATER MONITORING RESULTS

Groundwater level measurements collected during the May 26, 2009 monitoring event indicate that depth to water ranged from 3.11 to 5.65 feet below the top of casing. Based on these groundwater level measurements, the predominant groundwater flow direction was towards the south with an approximate hydraulic gradient of 0.004 ft/ft. Table 1 summarizes the depth to water measurements and groundwater elevation data. Figure 3 shows the groundwater elevation map.

Laboratory analytical results for the groundwater samples collected from the seven monitoring wells sampled during the May 26, 2009 monitoring event indicate the following:

- TPHg was not detected above the reporting limit of 50 micrograms per liter ($\mu\text{g/l}$) in any sample collected from the five wells sampled at the site.
- TPHd after silica gel cleanup was not detected above the reporting limit of 50 $\mu\text{g/l}$ in samples collected from the seven wells sampled at the site.
- TPHmo after silica gel cleanup was not detected above the laboratory reporting limit of 100 $\mu\text{g/l}$ in samples collected from the seven wells sampled at the site.
- Dissolved lead was not detected above the laboratory reporting limit of 20 $\mu\text{g/l}$ in any of the three samples collected at the site.
- MTBE was not detected above the laboratory reporting limit of 0.5 $\mu\text{g/l}$ in any of the five samples collected at the site. Benzene was detected in only one of the five samples (OW-5) at a concentration of 1.6 $\mu\text{g/l}$.
- VOCs were detected in samples collected from wells OW-1, OW-5, OW-6, and OW-7. The highest concentrations of VOCs were found in the sample collected from well OW-7, located in the northern (upgradient) portion of the property.
- DIPE was detected in wells OW-5, OW-6, and OW-7 at concentrations of 0.7 $\mu\text{g/L}$, 3.6 $\mu\text{g/L}$, and 0.6 $\mu\text{g/L}$, respectively.

Table 2 and Figure 4 present the laboratory analytical results for the May 26, 2009 sampling event.

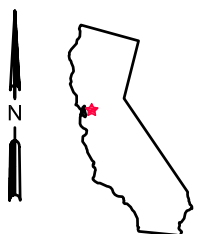
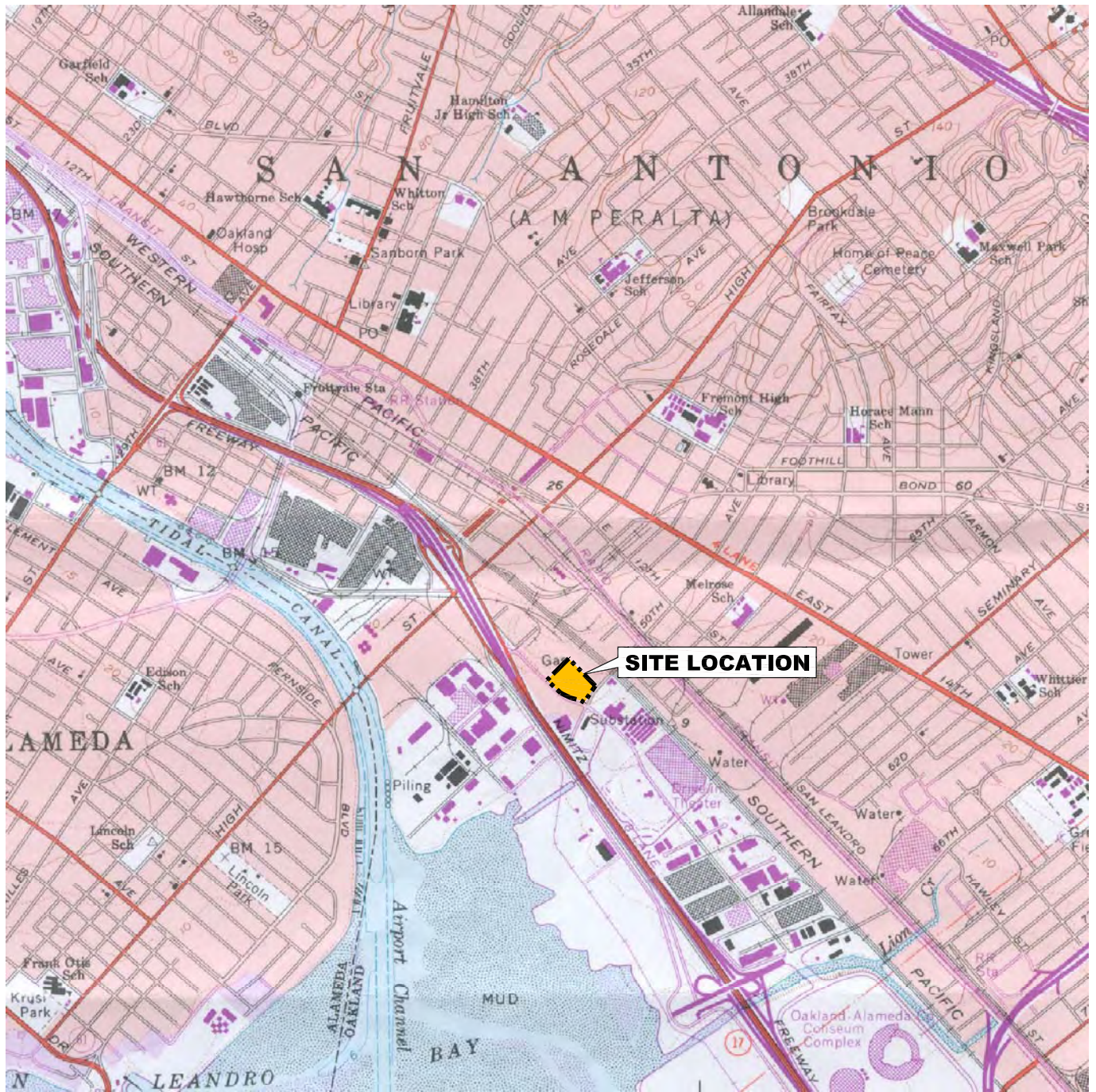
6.0 CONCLUSIONS

The direction of groundwater flow is generally consistent with the results of previous monitoring events, while groundwater elevations are generally lower. Overall, the analytical results of the May 26, 2009 groundwater monitoring event are consistent with the results of previous groundwater monitoring events.

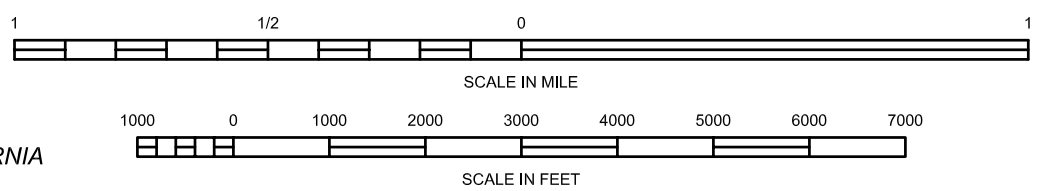
7.0 REFERENCES

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- Geomatrix Consultants, Inc., 2008, Additional Investigation Report for 4930 Coliseum Way, Oakland, California, April 18,
- Innovative Technical Solutions, Inc., 2008, May 2008 Sampling Event for 4930 Coliseum Way, Oakland, California, July 8.
- Pacific Gas and Electric Company (PG&E), 1987, Underground Tanks Investigation, PG&E General Construction Yard, 4930 Coliseum Way, Oakland, California, July.
- PG&E, 1988, Underground Tanks Investigation, PG&E General Construction Yard, 4930 Coliseum Way, Oakland, California, July.
- PG&E, 1992, Summary of Extent Verification Samples and Submitted of Cap Construction Plan for 4930 Coliseum Way, Oakland, California, September 28. PG&E, 1993, Completion of Lead Contamination Cap, 4930 Coliseum Way, Oakland, California, April 12.

FIGURES



CALIFORNIA

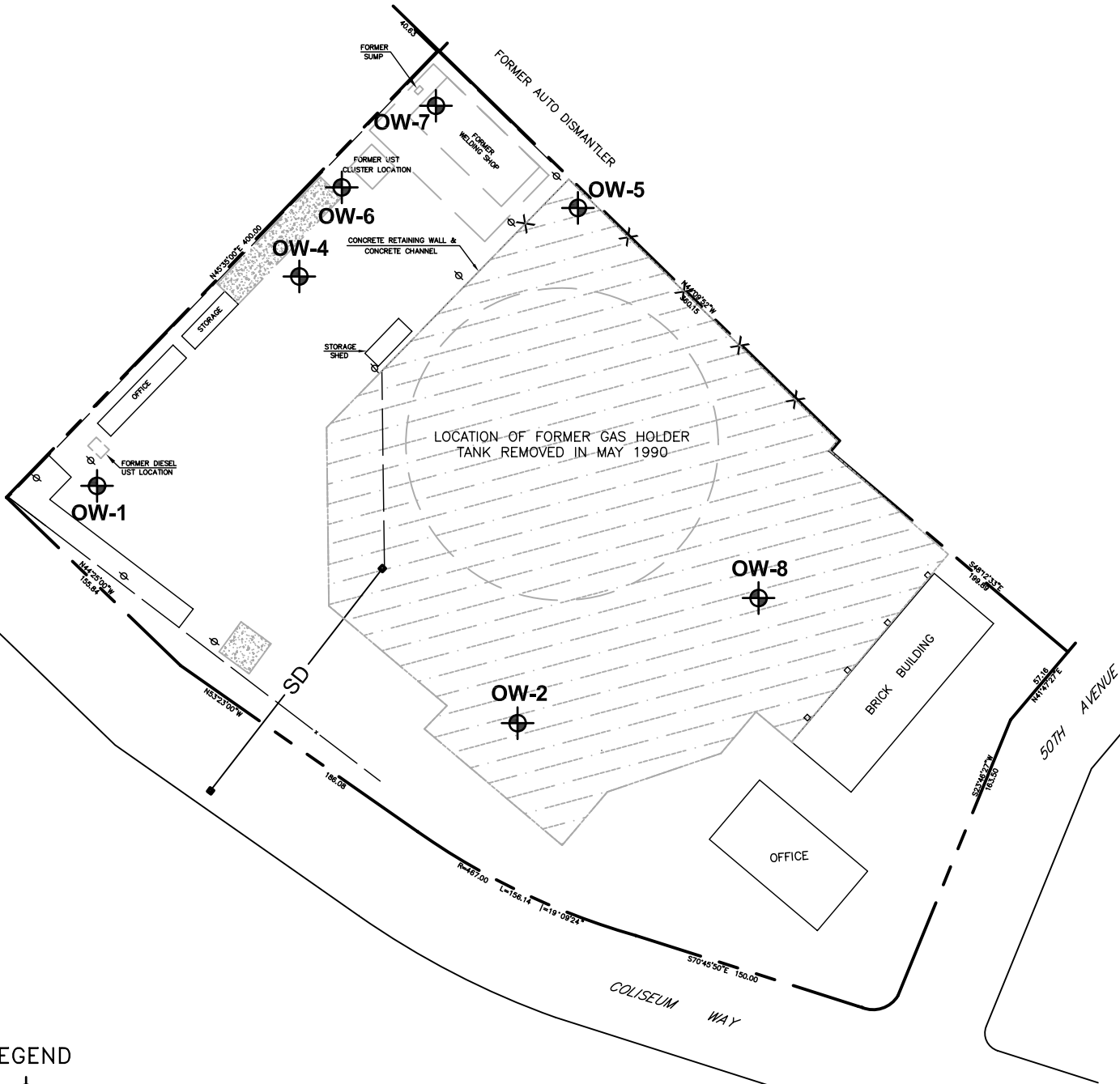


REFERENCE: USGS 7.5 MINUTE QUADRANGLE;
OAKLAND EAST, CALIFORNIA
PHOTOREVISED 1981


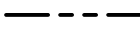






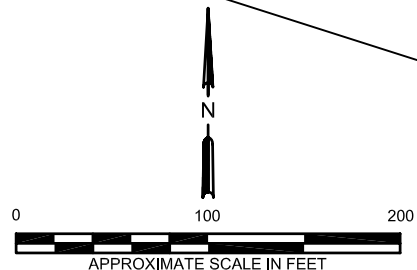
Pacific Gas and Electric
Oakland General Construction Yard
Oakland, California

FIGURE 1
Site Vicinity Map



LEGEND

-  GROUNDWATER MONITORING WELL
-  PROPERTY LINE
-  SD STORM DRAIN
-  EXISTING FENCE
-  EXISTING UTILITY POLE
-  EXTEND OF ASPHALTIC CONCRETE CAP

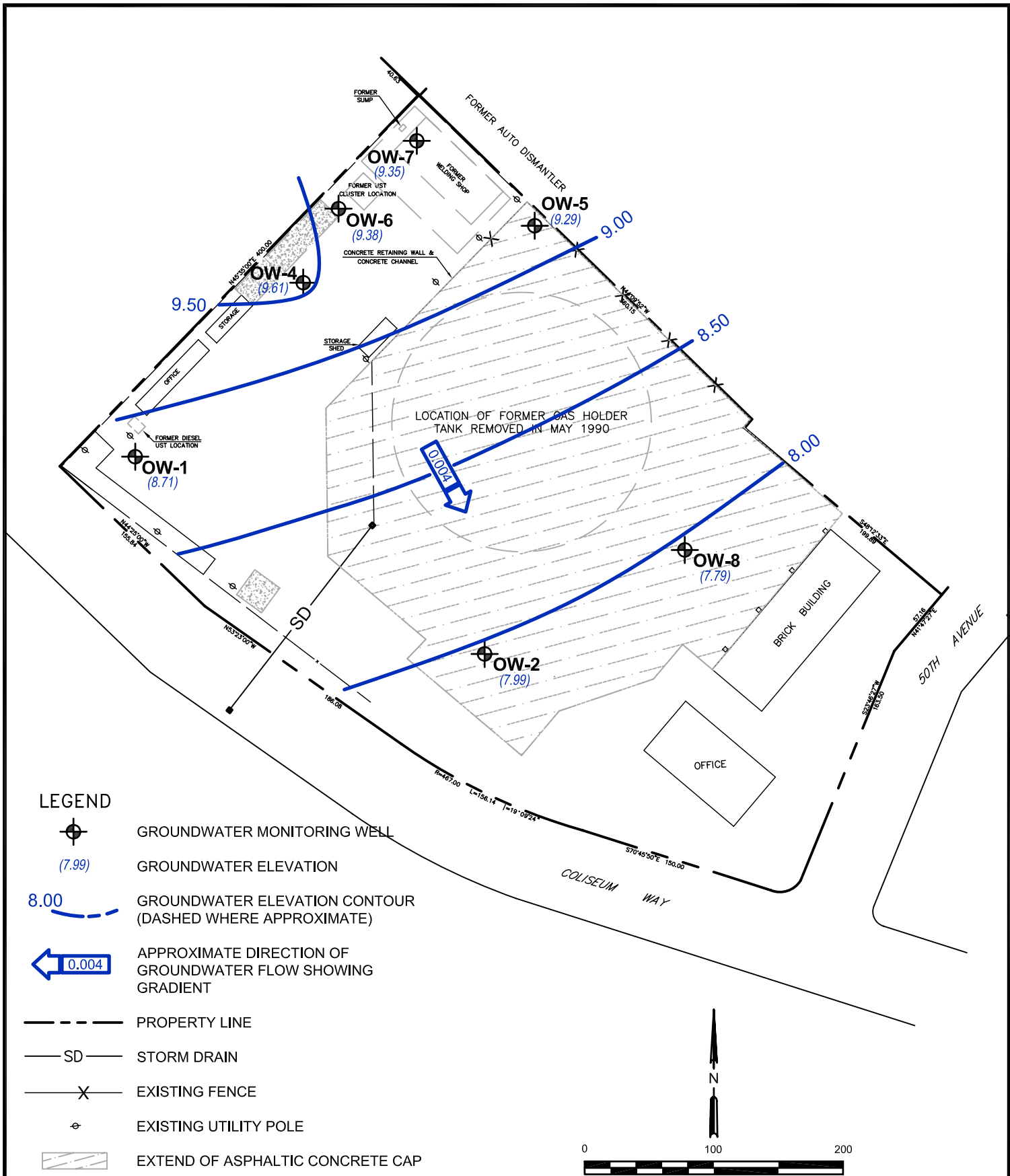


REFERENCE: BASE MAP BY CSS ENVIROMENTAL SERVICES, INC.
 FIGURE 4.1 BY ES DATED 08/2005
 JOB #6118; 01/1999



Pacific Gas and Electric
Oakland General Construction Yard
 Oakland, California

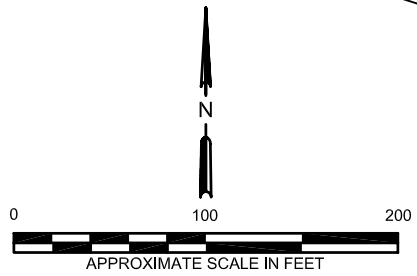
FIGURE 2
 Site Plan



LEGEND

- GROUNDWATER MONITORING WELL
- (7.99)

 GROUNDWATER ELEVATION
- 8.00 GROUNDWATER ELEVATION CONTOUR (DASHED WHERE APPROXIMATE)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW SHOWING GRADIENT
- PROPERTY LINE
- SD STORM DRAIN
- EXISTING FENCE
- EXISTING UTILITY POLE
- EXTEND OF ASPHALTIC CONCRETE CAP



REFERENCE: BASE MAP BY CSS ENVIROMENTAL SERVICES, INC.
 FIGURE 4.1 BY ES DATED 08/2005
 JOB #6118; 01/1999

FILENAME:



Pacific Gas and Electric
Oakland General Construction Yard
 Oakland, California

FIGURE 3
 Groundwater Elevation
 Contours
 (May 26, 2009)

OW-1	5/26/09
TPHg	<50
TPHd	<50*
TPHmo	<100*
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
MTBE	<0.5
CB	3.5
1,2-DCB	2.4
1,3-DCB	22
1,4-DCB	58
1,1-DCA	9.2
1,1-DCE	10
1,2,4-TCB	0.7
VOCs	ND

OW-4	05/26/09
TPHg	<50
TPHd	<50*
TPHmo	<100*
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
MTBE	<0.5
Other VOCs	ND

OW-6	05/26/09
TPHg	<50
TPHd	<50*
TPHmo	<100*
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
MTBE	<0.5
CB	1.7
DIPE	3.6
1,3-DCB	7.1
1,4-DCB	19
1,1-DCA	7.5
1,1-DCE	6.9
VC	<0.5
Other VOCs	ND

OW-5	05/26/09
TPHg	<50
TPHd	<50*
TPHmo	<100*
Dissolved Lead	<20
Benzene	1.6
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
MTBE	<0.5
DIPE	0.7
ISP	0.5
1,3-DCB	1.3
1,4-DCB	8.3
1,1-DCA	2.0
1,1-DCE	1.0
Other VOCs	ND

OW-7	05/26/09
TPHg	<50
TPHd	<50*
TPHmo	<100*
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
MTBE	<0.5
DIPE	0.6
CB	48
1,2-DCB	18
1,3-DCB	120
1,4-DCB	340
1,1-DCA	7.2
1,1-DCE	7.4
1,2-DCA	<0.5
1,2,4-TCB	45
VC	<0.5
Other VOCs	ND

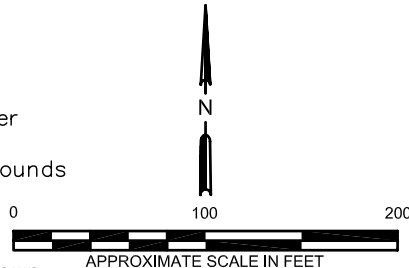
OW-8	05/26/09
TPHg	--
TPHd	<50*
TPHmo	<100*
Dissolved Lead	<20

OW-2	05/26/09
TPHg	--
TPHd	<50*
TPHmo	<100*
Dissolved Lead	<20

LEGEND

- OW-1** MONITORING WELL
- PROPERTY LINE
- SD STORM DRAIN
- EXISTING CHAIN LINK FENCE
- EXISTING UTILITY POLE
- EXTENT OF ASPHALTIC CONCRETE CAP
- SILICON GEL CLEANUP METHOD RESULT

- TPHg Total petroleum hydrocarbons as gasoline
- TPHd Total petroleum hydrocarbons as diesel
- CB Chlorobenzene
- DCB Dichlorobenzene
- DCA Dichloroethane
- DCE Dichloroethene
- MTBE Methyl tert-butyl ether
- TCB Trichlorobenzene
- VOCs Volatile organic compounds
- DIPE Di-isopropyl Ether
- ISP Isopropylbenzene
- Not analyzed
- Bold Detected at value Shown



REFERENCE: BASE MAP BY CSS ENVIRONMENTAL SERVICES, INC.
 FIGURE 4.1 BY ES DATED 08/2005
 JOB #6118; 01/1999

ALL RESULTS REPORTED IN MICROGRAMS/LITER (µg/l)

FILENAME:



Pacific Gas and Electric
 Oakland General Construction Yard
 Oakland, California

FIGURE 4
 Groundwater Analytical
 Results
 (May 26, 2009)

TABLES

TABLE 1
Summary of Groundwater Elevation Data
Pacific Gas and Electric Company
Oakland General Construction Yard
4930 Coliseum Way, Oakland, CA

Well Number	Sample Date	TOC Elevation (feet MSL)	Depth to Groundwater (feet bgs)	Groundwater Elevation (feet above MSL)
OW-1	5/26/2009	11.82	3.11	8.71
OW-2	5/26/2009	11.24	3.25	7.99
OW-4	5/26/2009	12.82	3.21	9.61
OW-5	5/26/2009	13.24	3.95	9.29
OW-6	5/26/2009	13.61	4.23	9.38
OW-7	5/26/2009	15.00	5.65	9.35
OW-8	5/26/2009	11.19	3.40	7.79

Notes:

TOC = top of casing

MSL = Mean Sea Level

bgs = below ground surface

TOC elevation data were referenced from Figure 4.2-Historical Groundwater Elevations, (Semi-Annual Groundwater Monitoring Report, September 2, 2005, CSS Environmental Services, Inc.).

Table 2 Summary of Groundwater Analytical Results (May 26, 2009)

Pacific Gas and Electric Oakland General Construction Yard
Oakland, California

Sample Name	Sample Date	Total Petroleum Hydrocarbons Method 8015M			Dissolved Lead Method 6010B	Volatile Organic Compounds-Method 8260B																			Other VOCs	
		TPHg µg/L	TPHd µg/L	TPHmo µg/L		Benzene µg/L	Toluene µg/L	Ethyl- benzene µg/L	Xylenes µg/L	Isopropyl- benzene µg/L	Naphthalene µg/L	MTBE µg/L	1,2,3- TCB µg/L	1,2,4- TCB µg/L	1,3,5-TMB µg/L	1,2-DCA µg/L	1,2-DCB µg/L	1,3-DCB µg/L	1,4-DCB µg/L	CB µg/L	1,1,1- TCA µg/L	1,1-DCA µg/L	1,1-DCE µg/L	DIPE µg/L		VC µg/L
OW-1	05/26/09	<50	<50*	<100*	--	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	0.7	<0.5	<0.5	2.4	22	58	3.5	<0.5	9.2	10.0	--	<0.5	ND
OW-2	05/26/09	--	<50*	<100*	<20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-4	05/26/09	<50	<50*	<100*	--	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	ND
OW-5	05/26/09	<50	<50*	<100*	<20	1.6	<0.5	<0.5	<0.5	0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	8.3	<0.5	<0.5	2.0	1.0	0.7	<0.5	ND	
OW-6	05/26/09	<50	<50*	<100*	--	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	7.1	19	1.7	<0.5	7.5	6.9	3.6	<0.5	ND	
OW-7	05/26/09	<50	<50*	<100*	--	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	18	120	340	48	<0.5	7.2	7.4	0.6	<0.5	ND
OW-8	05/26/09	--	<50*	<100*	<20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FIELD BLANK	05/26/09	--	--	--	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND

Notes:

µg/L = Micrograms per liter.

< = Not detected at or above the practical quantitation limit.

-- = Not analyzed

ND = Not detected above laboratory reporting limits. See laboratory analytical report for individual reporting limits (Appendix C).

J = Estimated result. Result is less than the laboratory practical quantitation limit.

MTBE = Methyl tertiary-butyl ether

CB = Chlorobenzene

1,2-DCB = 1,2-Dichlorobenzene

1,3-DCB = 1,3-Dichlorobenzene

1,4-DCB = 1,4-Dichlorobenzene

1,2-DCA = 1,2-Dichloroethane

1,1-DCA = 1,1-Dichloroethane

1,1-DCE = 1,1-Dichloroethene

1,1,1-TCA = 1,1,1-Trichloroethane

1,2,3-TCB = 1,2,3-Trichlorobenzene

1,2,4-TCB = 1,2,4-Trichlorobenzene

DIPE = Diisopropyl Ether

TCE = Trichloroethene

1,2,4-TMB = 1,2,4-Trimethylbenzene

1,3,5-TMB = 1,3,5-Trimethylbenzene

VC = Vinyl Chloride

* = TPHd/TPHmo analyzed using silica gel cleanup

APPENDIX A

Historical Groundwater Analytical Results



Table A1 Summary of Historical Groundwater Analytical Results for TPH, Dissolved Lead, and PAHs December 2005 to Present
Pacific Gas and Electric Oakland General Construction Yard
Oakland, California

Sample Name	Sample Date	Total Petroleum Hydrocarbons Method 8015M			Dissolved Lead Method 6010B µg/l	Polynuclear Aromatic Hydrocarbons-Method 8270C - SIM										
		TPH _g µg/l	TPH _d µg/l	TPH _{mo} µg/l		2-Methyl Naphthalene µg/L	Acenaphthene µg/L	Acenaphthylene µg/L	Anthracene µg/L	Fluoranthene µg/L	Fluorene µg/L	Naphthalene µg/L	Phenanthrene µg/L	Pyrene µg/L	Other PAHs µg/L	
OW-1	12/20/05	53 ¹	390 ²	470J	--	--	--	--	--	--	--	--	--	--	--	--
OW-1	12/20/06	<50	200	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-1	04/12/07	<50	110	200	<4	--	--	--	--	--	--	--	--	--	--	--
OW-1	11/06/07	80	140/<50*	<100/<100*	<8	--	--	--	--	--	--	--	--	--	--	--
OW-1	05/06/08	<50	260/<50*	200/<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-1	11/04/08	<50	150/90*	200/<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-1	05/26/09	<50	<50*	<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-2	12/20/05	<20	200 ²	610	<3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	ND
OW-2	12/20/06	--	--	--	<20	--	--	--	--	--	--	--	--	--	--	--
OW-2	04/12/07	<50	120	300	<4	--	--	--	--	--	--	--	--	--	--	--
OW-2	11/06/07	--	210/<50*	<100/<100*	<8	--	--	--	--	--	--	--	--	--	--	--
OW-2	05/06/08	--	350/<50*	400/<100*	<4	--	--	--	--	--	--	--	--	--	--	--
OW-2	11/04/08	--	260/70*	400/140*	<4	--	--	--	--	--	--	--	--	--	--	--
OW-2	05/26/09	--	<50*	<100*	<20	--	--	--	--	--	--	--	--	--	--	--
OW-4	11/06/07	<50	310/<50*	100/<100*	<8	--	--	--	--	--	--	--	--	--	--	--
OW-4	05/06/08	<50	640/<50*	700/<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-4	11/04/08	<50	100/90*	200/<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-4	05/26/09	<50	<50*	<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-5	12/20/05	33 ³	300 ²	610	<3	0.96	0.31	0.26	0.24	0.70	0.67	13	0.13J	1.4	ND	ND
OW-5	12/20/06	90	300	--	<20	--	--	--	--	--	--	--	--	--	--	--
OW-5	04/12/07	<50	180	500	<4	--	--	--	--	--	--	--	--	--	--	--
OW-5	11/06/07	50	360/<50*	200/<100*	<8	--	--	--	--	--	--	--	--	--	--	--
OW-5	05/06/08	<50	610/<50*	600/<100*	<4	--	--	--	--	--	--	--	--	--	--	--
OW-5	11/04/08	<50	240/190*	300/<100*	<4	--	--	--	--	--	--	--	--	--	--	--
OW-5	05/26/09	<50	<50*	<100*	<20	--	--	--	--	--	--	--	--	--	--	--
OW-6	12/20/05	<20	440 ²	760	--	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	ND
OW-6	12/20/06	<50	<100	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-6	04/12/07	<50	160	400	<4	--	--	--	--	--	--	--	--	--	--	--
OW-6	11/06/07	<50	220/<50*	100/<100*	<8	--	--	--	--	--	--	--	--	--	--	--
OW-6	05/06/08	50	460/<50*	400/<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-6	11/04/08	<50	240/110*	300/<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-6	05/26/09	<50	<50*	<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-7	12/20/05	330 ¹	510 ^{2,4}	860	--	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	ND
OW-7	12/20/06	<50	400	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-7	04/12/07	<50	210	400	<4	--	--	--	--	--	--	--	--	--	--	--
OW-7	11/06/07	250	400/<50*	200/<100*	<8	--	--	--	--	--	--	--	--	--	--	--
OW-7	05/06/08	560	610/<50*	600/<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-7	11/04/08	<50	320/130*	300/<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-7	05/26/09	<50	<50*	<100*	--	--	--	--	--	--	--	--	--	--	--	--
OW-8	12/20/05	<20	250 ²	690	<3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	ND
OW-8	12/20/06	--	--	--	<20	--	--	--	--	--	--	--	--	--	--	--
OW-8	04/12/07	<50	150	400	<4	--	--	--	--	--	--	--	--	--	--	--
OW-8	11/06/07	--	280/<50*	100/<100*	<8	--	--	--	--	--	--	--	--	--	--	--
OW-8	05/06/08	--	390/<50*	400/<100*	<4	--	--	--	--	--	--	--	--	--	--	--
OW-8	11/04/08	--	230/100*	300/<100*	<4	--	--	--	--	--	--	--	--	--	--	--
OW-8	05/26/09	--	<50*	<100*	<20	--	--	--	--	--	--	--	--	--	--	--
FIELD BLANK	12/20/05	<20	<50	<500	<3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	ND
FIELD BLANK	12/20/06	--	--	--	<20	--	--	--	--	--	--	--	--	--	--	--



Table A1 Summary of Historical Groundwater Analytical Results for TPH, Dissolved Lead, and PAHs December 2005 to Present
 Pacific Gas and Electric Oakland General Construction Yard
 Oakland, California

Sample Name	Sample Date	Total Petroleum Hydrocarbons Method 8015M			Dissolved Lead Method 6010B µg/l	Polynuclear Aromatic Hydrocarbons-Method 8270C - SIM									
		TPHg µg/l	TPHd µg/l	TPHmo µg/l		2-Methyl Naphthalene µg/L	Acenaphthene µg/L	Acenaphthylene µg/L	Anthracene µg/L	Fluoranthene µg/L	Fluorene µg/L	Naphthalene µg/L	Phenanthrene µg/L	Pyrene µg/L	Other PAHs µg/L
FIELD BLANK	04/12/07	--	--	--	<4	--	--	--	--	--	--	--	--	--	--
FIELD BLANK	11/06/07	--	--	--	<8	--	--	--	--	--	--	--	--	--	--
FIELD BLANK	05/06/08	--	--	--	<4	--	--	--	--	--	--	--	--	--	--
FIELD BLANK	11/04/08	--	--	--	<4	--	--	--	--	--	--	--	--	--	--
FIELD BLANK	05/26/09	--	--	--	<20	--	--	--	--	--	--	--	--	--	--

Notes:

OW-4 could not be sampled because a shipping container is located on the well.

TPH = Total petroleum hydrocarbons

TPHg = Total petroleum hydrocarbons quantified as gasoline

TPHd = Total petroleum hydrocarbons quantified as diesel

TPHmo = Total petroleum hydrocarbons quantified as motor oil

PAH = Polynuclear aromatic hydrocarbons

µg/l = Micrograms per liter.

< = Not detected at or above the practical quantitation limit.

-- = Not analyzed

ND = Not detected

J = Estimated result. Result is less than the practical quantitation limit.

(1) = The laboratory notes that the chromatogram is mainly a dominant peak(s) which is not indicative of petroleum hydrocarbons.

(2) = The laboratory notes that the chromatogram is mainly higher boiling hydrocarbons such as asphaltene, waste oil, motor oil, weathered diesel, and hydraulic fluid.

(3) = The laboratory notes that the chromatogram includes higher boiling hydrocarbons such as diesel

(4) = The laboratory notes that the chromatogram contains a recognizable contaminant peak(s) that has been removed from quantitation.

Table A2 Summary of Historical Groundwater Analytical Results for VOCs December 2005 to Present
Pacific Gas and Electric Oakland General Construction Yard
Oakland, California

		Volatile Organic Compounds-Method 8260B																				Other VOCs	
Sample Name	Sample Date	Benzene µg/l	Toluene µg/l	Ethyl- benzene µg/l	Xylenes µg/l	1,2,4-TMB µg/l	1,3,5-TMB µg/l	4-Isopropyl- benzene µg/l	Naph- thalene µg/l	MTBE µg/l	1,2,3-TCB µg/l	1,2,4-TCB µg/l	1,2-DCB µg/l	1,3-DCB µg/l	1,4-DCB µg/l	CB µg/l	1,1,1-TCA µg/l	TCE µg/l	1,1-DCA µg/l	1,1-DCE µg/l	DIPE µg/l	VC µg/l	Other VOCs µg/l
OW-1	12/20/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	0.96	<0.5	<0.5	4.6	37	110	8.8	0.66	<0.5	7.6	8.3	<0.5	<0.5	ND
OW-1	12/20/06	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-1	04/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	1.0	<0.5	1.6	1.8	19	64	4.6	0.8	<0.5	10	11	<0.5	<0.5	ND
OW-1	11/06/07	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	<5	1.0	<0.5	1.6	2.2	21	68	4.2	<0.5	<0.5	5.1	<0.5	6.0	ND
OW-1	05/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	1.1	1.7	15	45	2.9	<0.5	<0.5	4.5	6.8	<0.5	<0.5	ND
OW-1	11/04/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	0.8	<0.5	1.8	3.3	25	42	4.1	<0.5	<0.5	7.3	8.0	--	<0.5	ND
OW-1	05/26/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	0.7	2.4	22	58	3.5	<0.5	<0.5	9.2	10.0	--	<0.5	ND
OW-2	12/20/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	ND
OW-2	12/20/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-2	04/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
OW-2	11/06/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-2	05/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-2	11/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-2	05/26/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-4	11/06/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
OW-4	05/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
OW-4	11/04/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
OW-4	05/26/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
OW-5	12/20/05	4.4	<0.5	<0.5	0.56	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5	1.0	3.9	0.63	<0.5	0.33J	2.2	0.49J	<0.5	0.6	ND
OW-5	12/20/06	0.7	<0.5	<0.5	<0.5	3.2	1.9	0.8	50	<0.5	<0.5	<0.5	<0.5	1.0	4.3	<0.5	<0.5	<0.5	2.2	0.6	<0.5	<0.5	ND
OW-5	04/12/07	4.7	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	5.3	<0.5	<0.5	<0.5	<0.5	0.8	5.0	<0.5	<0.5	<0.5	1.6	0.6	<0.5	<0.5	ND
OW-5	11/06/07	6.8	<0.5	<0.5	<0.5	1.2	1.4	<0.5	1.6	32	<0.5	<0.5	<0.5	<0.5	0.8	3.9	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	ND
OW-5	05/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	1.3	8.4	<0.5	<0.5	<0.5	2.8	1.0	<0.5	<0.5	ND
OW-5	11/04/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	0.6	3.8	<0.5	<0.5	<0.5	1.6	0.7	--	<0.5	1.5 ^(a)
OW-5	05/26/09	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	8.3	<0.5	<0.5	<0.5	2.0	1.0	0.7	<0.5	0.5 ^(b)
OW-6	12/20/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	0.53	<0.5	<0.5	1.4	8.6	25	5.8	<0.5	<0.5	7.0	3.1	<0.5	<0.5	ND
OW-6	12/20/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	1.2	11	44	3.4	<0.5	<0.5	8.1	4	<0.5	<0.5	ND
OW-6	04/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	0.6	6.6	22	8.1	<0.5	<0.5	12.0	9.6	<0.5	<0.5	ND
OW-6	11/06/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	0.6	8.1	28	3.2	<0.5	<0.5	8.4	5.0	<0.5	5.2	ND
OW-6	05/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	1.3	11	30	12	<0.5	<0.5	15	18.0	0.9	0.9	(2)
OW-6	11/04/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	0.9	11	34	4.6	<0.5	<0.5	9	5.6	--	0.9	(2)
OW-6	05/26/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.1	19	1.7	<0.5	<0.5	<0.5	7.5	6.9	3.6	<0.5	ND
OW-7	12/20/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	0.26J	<0.5	<0.5	26	190	490	84	<0.5	0.53	7.0	6.3	<0.5	0.39J	ND
OW-7	12/20/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.8	<0.5	0.8	25	21	120	330	51	<0.5	<0.5	3.6	3.1	<0.5	<0.5	ND
OW-7	04/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	32	16	130	460	70	<0.5	<0.5	6.5	6.8	<0.5	<0.5	(1)
OW-7	11/06/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	22	12	56	200	40	<0.5	<0.5	5.5	3.3	<0.5	ND
OW-7	05/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	34	21	170	820	76	<0.5	<0.5	10	14.0	0.6	0.6	ND
OW-7	11/04/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	50	37	190	620	77	<0.5	<0.5	11	13.0	--	0.5	ND
OW-7	05/26/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	45	18	120	340	48	<0.5	<0.5	7.2	7.4	0.6	<0.5	ND
OW-8	12/20/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	<0.5	ND
OW-8	12/20/06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-8	04/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
OW-8	11/06/07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-8	05/06/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-8	11/04/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OW-8	05/26/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FIELD BLANK	12/20/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	ND
FIELD BLANK	12/20/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
FIELD BLANK	04/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND

Table A2 Summary of Historical Groundwater Analytical Results for VOCs December 2005 to Present
 Pacific Gas and Electric Oakland General Construction Yard
 Oakland, California

		Volatile Organic Compounds-Method 8260B																					
Sample Name	Sample Date	Benzene µg/l	Toluene µg/l	Ethyl- benzene µg/l	Xylenes µg/l	1,2,4-TMB µg/l	1,3,5-TMB µg/l	4-Isopropyl- benzene µg/l	Naph- thalene µg/l	MTBE µg/l	1,2,3-TCB µg/l	1,2,4-TCB µg/l	1,2-DCB µg/l	1,3-DCB µg/l	1,4-DCB µg/l	CB µg/l	1,1,1-TCA µg/l	TCE µg/l	1,1-DCA µg/l	1,1-DCE µg/l	DIPE µg/l	VC µg/l	Other VOCs µg/l
FIELD BLANK	11/06/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
FIELD BLANK	05/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
FIELD BLANK	11/04/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
FIELD BLANK	05/26/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND

Notes:

OW-4 could not be sampled because a shipping container is located on the well.

µg/l = Micrograms per liter.

< = Not detected at or above the practical quantitation limit.

-- = Not analyzed

ND = Not detected above laboratory reporting limits. See laboratory analytical report for individual reporting limits (Appendix C).

J = Estimated result. Result is less than the laboratory practical quantitation limit.

MTBE = Methyl tertiary-butyl ether

CB = Chlorobenzene

1,2-DCB = 1,2-Dichlorobenzene

1,3-DCB = 1,3-Dichlorobenzene

1,4-DCB = 1,4-Dichlorobenzene

DIPE = Diisopropyl Ether

1,1-DCA = 1,1-Dichloroethane

1,1-DCE = 1,1-Dichloroethene

1,1,1-TCA = 1,1,1-Trichloroethane

1,2,3-TCB = 1,2,3-Trichlorobenzene

1,2,4-TCB = 1,2,4-Trichlorobenzene

TCE = Trichloroethene

1,2,4-TMB = 1,2,4-Trimethylbenzene

1,3,5-TMB = 1,3,5-Trimethylbenzene

VC = Vinyl Chloride

(1) = 1,2-Dichloroethane was detected at 0.5 µg/l

(2) = 1,2-Dichloroethane was detected at 0.5

(a) = Isopropylbenzene was detected at 1.5 ug/L

(b) = Isopropylbenzene was detected at 0.5 ug/L

APPENDIX B

Field Procedures for Low-Flow Purging and Sampling



FIELD PROCEDURES FOR LOW-FLOW PURGING AND SAMPLING

The following sections describe field procedures followed during groundwater monitoring at the site.

EQUIPMENT CALIBRATION

At the beginning of each sampling day, water quality meters for pH, specific electrical conductance (SEC), dissolved oxygen (DO), oxidation reduction potential (ORP), and turbidity are calibrated. Calibration data are recorded on the first Well Sampling Record. A CHEMetrics, or other appropriate, field test kit is used if there is a problem with DO meter calibration.

DOWNHOLE PARAMETER AND GROUNDWATER LEVEL MEASUREMENTS

After opening the wells and allowing time for equilibration to atmospheric conditions, and prior to purging and sampling activities, a complete round of downhole parameter and depth to groundwater measurements are collected from all monitoring wells. Downhole DO and ORP are measured first using a Horiba U-22, or other appropriate, water quality meter. Depth to water is then measured using an electric water level sounder to the nearest 0.01 foot from the top of casing.

FREE PRODUCT MEASUREMENT

The wells are inspected for free product, and if free product is observed, the depths to top and bottom of free product is measured using an interface probe to the nearest 0.01 foot from the top of casing.

SAMPLING ORDER

To minimize potential cross-contamination between wells, the wells are sampled in reverse order of target analyte concentration as measured during the previous sampling event.

GROUNDWATER PURGING AND SAMPLING

Groundwater sampling is performed following EPA low-flow purging and sampling procedures¹. A minimum of three equipment volumes are purged at each well using an electric pump. Typical pump types may include peristaltic, 2-inch stainless steel submersible and/or bladder pumps.

Dedicated tubing and, where necessary, submersible pumps are used to minimize disturbance. When dedicated equipment cannot be used, sufficient time is allowed after equipment installation to allow groundwater conditions to return to equilibrium. The pump inlet is placed in the center of the screened interval. Each well is purged at a flow rate of approximately 200 milliliters per minute (ml/min); flow rate is not to exceed 500 ml/min at any time during purging or sampling. Drawdown in the well is not to exceed 0.3 ft. During purging, temperature, pH, SEC, turbidity, DO, and ORP are monitored using a Horbia U-22, or other appropriate, water quality meter approximately every one equipment volume purged, or every 3 to 5 minutes. Each well is purged until the field parameters are relatively stable for three successive readings. Three successive readings should be within:

- 0.1 for pH
- 3% for SEC
- 10% for temperature
- 10 mV for ORP if practical
- 10% for DO if practical
- 10% for turbidity if practical

If applicable, the ferrous ion concentration is measured using a CHEMetrics, or other appropriate, test kit during the last reading of the field parameters. Immediately after purging, a groundwater sample is collected directly through the pump discharge tubing. Depth to water after sample collection is measured and recorded on the Well Sampling Record.

EQUIPMENT CLEANING

All downhole equipment is cleaned with an Alconox-water solution and double-rinsed with deionized water before use at each well and at the end of each sampling day.

WASTE WATER CONTAINMENT

Waste water including purged groundwater and equipment cleaning water is contained in labeled, DOT-approved, 55-gallon steel drums, or other appropriate containers, and placed at a designated on-site location for future offsite disposal or recycling.

¹ Puls, R.W. and Barcelona, M.J., 1996, Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedure, U.S. Environmental Protection Agency, Office of Research and Development, Publication #EPA/540/5-95/504.

APPENDIX C

Groundwater Purging and Sampling Logs



SPH or Purge Water Drum Log

Client: Geomatrix
 Site Address: 4930 Coliseum Way Oakland

STATUS OF DRUM(S) UPON ARRIVAL							
Date	12-20-06	4-12-07	11/6/07	05/06/08	11/4/08	5/26/09	
Number of drum(s) empty:							
Number of drum(s) 1/4 full:							1
Number of drum(s) 1/2 full:			1	1			
Number of drum(s) 3/4 full:	1						
Number of drum(s) full:			2	0			
Total drum(s) on site:	1	0	3	1	0		2
Are the drum(s) properly labeled?	y		y	y	-		y
Drum ID & Contents:			purge water	purge water	-		purge water
If any drum(s) are partially or totally filled, what is the first use date:			12/06	0	-		11/4/08

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purge water or DI Water.
- If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.
- All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE							
Date	12-20-06	4-12-07		05/06/08	11/4/08	5/26/09	
Number of drums empty:							1
Number of drum(s) 1/4 full:					1		
Number of drum(s) 1/2 full:	1	1	2	1			1
Number of drum(s) 3/4 full:	1		1				
Number of drum(s) full:			2				
Total drum(s) on site:	2	2	3	1	1		2
Are the drum(s) properly labeled?	y	y	y	y	y		y
Drum ID & Contents:		purge water	→	→	→		Purge 1420

LOCATION OF DRUM(S)
 Describe location of drum(s): Near Material Room
30 gal inside 55 gal drum 11/4/08

FINAL STATUS							
Number of new drum(s) left on site this event	2 (1.55 gal) 2 (1.30 gal)	2 (1.55 gal) 2 (1.30 gal)	0	1	1*		0
Date of inspection:	12-20-06	4-12-07	11/6/07	05/06/08	11/4/08		5/26/09
Drum(s) labelled properly:	y	y	y	y	y		y
Logged by BTS Field Tech:	DW	04	CF	MD	PC		JD
Office reviewed by:	PC	M	PC	PC	M		PC

WELL GAUGING DATA

Project # 090526-101 Date 5/26/09 Client AMEC Geomatrix

Site 4930 Coliseum Way Oakland CA.

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes	
OW-1	0949	2	NO SPIT	Detected			3.11	18.09		SPHU 1	
OW-2	1015	2		↓			3.25	20.29		SPH ✓ 5	
OW-4	1002	2					3.21	19.52		SPH ✓ 2	
OW-5	1005 1010	2					4.23 ^{3.95}	19.05		SPHU 3	
OW-6	1010	2					4.23	17.24		SPHU 4	
OW-7	1025	2					5.65	18.20		SPHU 7	
OW-8	1020	2			↓			3.40	17.93		SPHU 6

WELLHEAD INSPECTION CHECKLIST

Date 5/26/09 Client AMEC Geomatrix
 Site Address 4930 Coliseum Way Oakland CA
 Job Number 0910526 - JOL Technician SD

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
OW-1	X							
OW-2	X							
OW-4	X							
OW-5	X							
OW-6	X							
OW-7	X							
OW-8	X							

Stand pipe

NOTES: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 090526-501	Client: Geo Matrix
Sampler: JO	Start Date: 5/26/09
Well I.D.: OW-1	Well Diameter: (2) 3 4 6 8
Total Well Depth: 16.09	Depth to Water Pre: 3.11 Post: 3.18
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: ysi 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other

Flow Rate: 200ml/min Start 11 Pump Depth: 10.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Observations	DTU
1100	21.02	6.94	912	7	1.51	188	—	clear	311
1103	21.00	6.85	914	7	2.50	127	600	clear	312
1106	21.10	6.83	913	6	2.17	97.6	1200	clear	314
1109	21.15	6.83	913	5	2.07	91.4	1800	clear	317
1112	21.17	6.83	913	5	2.02	88.7	2400	clear	318
1115	21.16	6.84	912	6	2.01	83.9	3000	clear	318

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1120	Sampling Date: 5/26/09
Sample I.D.: OW-1-052009	Laboratory: Creek Laboratory
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See CCR
Equipment Blank I.D.: @	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 090526-561	Client: Geo Matrix
Sampler: 50	Start Date: 5/26/09
Well I.D.: OW-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 20.27	Depth to Water Pre: 3.25 Post: 3.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: ysi 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other

Flow Rate: 2.05 m L/min Pump Depth: 10.5

Time	Temp. (°C or °F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Observations
1355	22.84	7.56	2766	6	0.79	-64.1	—	clear 3.2
1358	22.80	7.58	2763	5	1.07	-50	600	↓ 3.2 3.26 3.3 3.36 3.38
1401	22.78	7.58	2761	5	1.10	-50.3	1200	
1404	22.77	7.57	2762	4	1.11	-50.1	1800	
1407	22.75	7.58	2763	5	1.13	-49.7	2400	
1410	22.73	7.58	2763	4	1.13	-48.6	3000	

Did well dewater? Yes No

Amount actually evacuated: 3000 mL

Sampling Time: 1415 Sampling Date: 5/26/09

Sample I.D.: OW-2-052009 Laboratory: Creek Laboratory

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COE

Equipment Blank I.D.: @ Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 090526-501	Client: Geo Matrix
Sampler: 50	Start Date: 5/26/09
Well I.D.: OW-4	Well Diameter: (2) 3 4 6 8
Total Well Depth: 17.52	Depth to Water Pre: 3.21 Post: 3.29
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: ysi 556

Purge Method: 2" Grundfos Pump ~~Peristaltic Pump~~ Bladder Pump
 Sampling Method: Dedicated Tubing (New Tubing) Other _____
 Flow Rate: 200 mL/min Pump Depth: 15'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Observations	DW
1150	20.82	7.02	1406	76	1.80	61	—	particulates	3.2
1153	20.62	6.93	1430	68	1.76	9.4	600	↓	3.2
1156	20.67	6.90	1432	66	1.73	-2.5	1200		3.31
1159	20.79	6.89	1434	67	1.70	-5.5	1800		3.2
1202	20.84	6.88	1437	61	1.70	-4.0	2400		3.2
1205	20.91	6.88	1440	62	1.67	-3.9	3000		3.2

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 3000 mL
Sampling Time: 1210	Sampling Date: 5/26/09
Sample I.D.: OW-4-052009	Laboratory: Creek Laboratory
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COE
Equipment Blank I.D.: @	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 090526-501	Client: Geo Motivity
Sampler: JO	Start Date: 5/26/09
Well I.D.: OW-5	Well Diameter: (2) 3 4 6 8
Total Well Depth: 19.09	Depth to Water Pre: 3.95 Post: 4.01
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: ysi 556

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
 Sampling Method: Dedicated Tubing (New Tubing) Other _____

Flow Rate: 200 mL/min Pump Depth: 11.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Observations
1225	20.05	7.26	867	12	1.14	2.1	—	clear
1228	20.05	7.20	867	11	1.27	-25.3	600	↓
1231	20.12	7.17	867	10	1.23	-37.1	1200	
1234	20.17	7.13	866	10	1.21	-39.4	1800	
1237	20.19	7.09	867	7	1.17	-41.6	2400	
1240	20.23	7.08	866	8	1.13	-44.3	3000	

Did well dewater? Yes No Amount actually evacuated: 3000 mL

Sampling Time: 1245 Sampling Date: 5/26/09

Sample I.D.: OW-5-052009 Laboratory: Creek Laboratory

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COE

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 090526-501	Client: Geo Matrix
Sampler: SO	Start Date: 5/26/09
Well I.D.: OW-6	Well Diameter: (2) 3 4 6 8
Total Well Depth: 17.24	Depth to Water Pre: 4.23 Post: 4.33
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
 Sampling Method: Dedicated Tubing (New Tubing) Other _____
 Flow Rate: 200ml/min Pump Depth: 12'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Observations	
1315	19.68	7.81	1141	127	1.36	-19.2	—	particulates	4.2
1318	19.66	7.99	1142	133	1.34	-27.1	600	↓	4.2
1321	19.88	8.47	1147	137	1.29	-33.7	1200		4.2
1324	19.89	8.49	1142	135	1.28	-39.8	1800		4.3
1327	19.90	8.50	1145	137	1.27	-39.9	24000		4.3
1330	19.91	8.51	1145	136	1.24	-43.5	30000		4.3

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 30000
Sampling Time: 13 35	Sampling Date: 5/26/09
Sample I.D.: OW-6-052009	Laboratory: Creek Laboratory
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COE
Equipment Blank I.D.: @	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 0905126-57	Client: Greenboro
Sampler: SD	Start Date: 5/26/09
Well I.D.: OW-7	Well Diameter: (2) 3 4 6 8
Total Well Depth: 18.20	Depth to Water Pre: 5.65 Post: 5.71
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump
 Sampling Method: Dedicated Tubing

Peristaltic Pump
 Bladder Pump
 New Tubing
 Other

Flow Rate: 200 mL/min Pump Depth: 125

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Observations
1500	21.98	7.58	957	5	0.39	-36.0	—	Clear
1503	21.98	7.56	955	4	0.38	-48.1	600	
1506	22.07	7.54	756	4	0.37	-47.3	1200	
1509	27.18	7.48	946	5	0.39	-44.6	1800	
1512	27.17	7.47	744	4	0.38	-45.1	2400	
1515	27.20	7.45	943	4	0.39	-46.1	3000	

Did well dewater? Yes No Amount actually evacuated: 3000

Sampling Time: 1520 Sampling Date: 5/26/09

Sample I.D.: OW-7-052009 Laboratory: Creele Laboratory

Analyzed for: TPH-G BTEX MTBE TPH-D Other: see WOC

Equipment Blank I.D.: EB 1525 @ Time 1525 Duplicate I.D.: WS ASD

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>090526-fcl</u>	Client: <u>GeoMatrix</u>
Sampler: <u>50</u>	Start Date: <u>5/26/09</u>
Well I.D.: <u>ow-8</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth: <u>17.93</u>	Depth to Water Pre: <u>3.40</u> Post: <u>3.50</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____

Flow Rate: 200ml/min Pump Depth: 13

Time	Temp. (°C or °F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Observations	
1425	21.78	7.30	1249	4	1.79	-10.1	—	clear	3.46
1428	21.99	7.24	1252	3	1.76	-11.7	600		3.42
1431	22.12	7.23	1257	3	1.71	-12.3	1200		3.45
1434	22.17	7.21	1255	2	1.67	-15.7	1800		3.46
1437	22.18	7.21	1256	3	1.65	18.9	2400		3.49
1440	22.17	7.20	1256	3	1.4	21.3	3000		3.51

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>3000 ml</u>
Sampling Time: <u>1445</u>	Sampling Date: <u>5/26/09</u>
Sample I.D.: <u>OW-8-052009</u>	Laboratory: <u>Creek Laboratory</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>see cc</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

APPENDIX D

Laboratory Analytical Reports and Chain-of-Custody Documentation



BLAINE

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

TECH SERVICES, INC.

CONDUCT ANALYSIS TO DETECT

LAB Creek 02770 DHS # _____
ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
 EPA RWQCB REGION _____
 LIA
 OTHER

CHAIN OF CUSTODY
BTS # 090526-501
CLIENT AMEC Geomatrix
SITE PG&E
4930 Coliseum Way
Oakland, CA

SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H ₂ O	CONTAINERS TOTAL
-------------	------	------	--	---------------------

SAMPLE I.D.	DATE	TIME	MATRIX S=SOIL W=H ₂ O	CONTAINERS TOTAL	C = COMPOSITE ALL CONTAINERS	VOCs (8260B)	TPH-D & TPHMO (8015m) (Silica gel cleanup required prior to analyzing)	TPH-Mono Chlor (8015m)	TPH-Gas (8015M)	Diss. Lead (6010) Field Filtered	MS/MSD	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
OW-1-052009	5/26/09	1120	W	7		X	X	X	X			6x VV/HCl 40mL 1x AG/UMP 1L P/HAD3 250			8133
OW-2-052009		1415		2			X	X		X					8134
OW-4-052009		1210		7		X	X	X	X			6x HCl/VV/40mL 1x AG/UMP 1L			8135
OW-5-052009		1245		8		X	X	X	X	X		6x VV/HCl P/HAD3 250 1x AG/UMP 1L			8136
OW-6-052009		1335		7		X	X	X	X			6x VV/HCl 40mL 1x AG/UMP 1L			8137
OW-7-052009		1520		12		X	X	X	X		X	6x VV/HCl 3x AG/UMP 1L			8138
OW-8-052009		1445		2			X	X		X		AG/UMP 1L P/250/HAD3			8139
PB-1-052009		1525		4		X				X		3x VV/HCl P/HAD3 250			8140
															8141

SPECIAL INSTRUCTIONS 2.5
Invoice to : AMEC Geomatrix
Report to : AMEC Geomatrix Attn: Yemia Hashimoto
cc: ITSI Attn: Kim Tom
Project: PG&E Coliseum Way

SAMPLING COMPLETED DATE 5/26/09 TIME 1525 SAMPLING PERFORMED BY S. Ortiz RESULTS NEEDED NO LATER THAN Standard TAT

RELEASED BY [Signature] DATE 5/26/09 TIME 1730 RECEIVED BY [Signature] DATE 5/27/09 TIME 11:45

RELEASED BY _____ DATE _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

SHIPPED VIA FedEx DATE SENT 5/26/09 TIME SENT 1730 COOLER # _____



Date: June 10, 2009

CASE NARRATIVE Q2770

Client: AMEC Geomatrix
Project: PG&E Oakland Coliseum Way
Sample(s): 09-C8133 to 09-C8140
Sampled: 05/26/09

Received: 05/27/09

Aqueous samples 09-C8133 to 09-C8140 were received at the laboratory at 2.5 °C. All samples were intact and there was no anomaly in sample receipt.

BTEX was analyzed by PAT/GC/MS method (EPA 5030B/8260B). TPH-gasoline was analyzed by PAT/GC/FID method (EPA 5030B/8015M). TPH-diesel was extracted with liquid-liquid extraction method (EPA 3510C), treated with silica gel (EPA 3630C), and analyzed by GC/FID (EPA 8015M). Dissolved Lead on the field-filtered samples was analyzed directly by ICP-AES method (EPA 6010B).

All samples were extracted and analyzed within holding time. All analytical quality control parameters were within acceptable limits except for the following remarks:

- MS recovery for silica gel treated TPH-diesel on sample 09-C8138 (OW-7-052009) was below QC limits due to matrix effects. The matrix effect was confirmed by the MSD result, which was similarly low in recovery although it was within QC limits. The TPH-diesel SGT results for this batch were reported on the basis of acceptable CCV and LCS results.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Yemia Hashimoto
AMEC Geomatrix
2101 Webster St., 12th Floor
Oakland, CA 94612

Log Number: 09-C8133
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-1 052009	S. Ortiz	05/26/09@11:20		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
TPH as Diesel, SGT	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Motor Oil, SGT	Not Detected	0.1	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Gasoline	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/08/09		9299
Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Toluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
m,p-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
o-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methyl t-Butyl Ether (MTBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Amyl Methyl Ether (TAME)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butyl Alcohol (TBA)	Not Detected	2	1	ug/L	EPA 8260	06/04/09		9235
Diisopropyl Ether (DIPE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethyl t-Butyl Ether (ETBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chlorobenzene	3.5	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichlorobenzene	2.4	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichlorobenzene	22	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,4-Dichlorobenzene	58	5	10	ug/L	EPA 8260	06/05/09		9244
1,2-Dichloroethane (EDC)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromoethane (EDB)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromodichloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromoform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
n-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
sec-Butyl Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Carbon Tetrachloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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Yemia Hashimoto
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2101 Webster St., 12th Floor
Oakland, CA 94612

Log Number: 09-C8133
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-1 052009	S. Ortiz	05/26/09@11:20		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
2-Chloroethylvinyl ether	Not Detected	20	1	ug/L	EPA 8260	06/04/09		9235
Chloroform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromo-3-Chloropropane	Not Detected	1	1	ug/L	EPA 8260	06/04/09		9235
Dibromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dibromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dichlorodifluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethane	9.2	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethene	10	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Hexachlorobutadiene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Isopropylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Isopropyltoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methylene Chloride	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
Naphthalene	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
n-Propylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Styrene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Tetrachloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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2101 Webster St., 12th Floor
Oakland, CA 94612

Log Number: 09-C8133
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-1 052009	S. Ortiz	05/26/09@11:20		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
1,2,3-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trichlorobenzene	0.7	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichlorofluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,3-Trichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3,5-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Vinyl Chloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Log Number: 09-C8134
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-2 052009	S. Ortiz	05/26/09@14:15		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	0.02	1	mg/L	EPA 6010	05/29/09		9087
TPH as Diesel, SGT	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Motor Oil, SGT	Not Detected	0.1	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Log Number: 09-C8135
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-4 052009	S. Ortiz	05/26/09@12:10		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
TPH as Diesel, SGT	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Motor Oil, SGT	Not Detected	0.1	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Gasoline	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/08/09		9299
Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Toluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
m,p-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
o-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methyl t-Butyl Ether (MTBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Amyl Methyl Ether (TAME)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butyl Alcohol (TBA)	Not Detected	2	1	ug/L	EPA 8260	06/04/09		9235
Diisopropyl Ether (DIPE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethyl t-Butyl Ether (ETBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,4-Dichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloroethane (EDC)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromoethane (EDB)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromodichloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromoform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
n-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
sec-Butyl Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Carbon Tetrachloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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2101 Webster St., 12th Floor
Oakland, CA 94612

Log Number: 09-C8135
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-4 052009	S. Ortiz	05/26/09@12:10		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
2-Chloroethylvinyl ether	Not Detected	20	1	ug/L	EPA 8260	06/04/09		9235
Chloroform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromo-3-Chloropropane	Not Detected	1	1	ug/L	EPA 8260	06/04/09		9235
Dibromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dibromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dichlorodifluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Hexachlorobutadiene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Isopropylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Isopropyltoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methylene Chloride	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
Naphthalene	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
n-Propylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Styrene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Tetrachloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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2101 Webster St., 12th Floor
Oakland, CA 94612

Log Number: 09-C8135
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-4 052009	S. Ortiz	05/26/09@12:10		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
1,2,3-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichlorofluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,3-Trichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3,5-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Vinyl Chloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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2101 Webster St., 12th Floor
Oakland, CA 94612

Log Number: 09-C8136
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-5 052009	S. Ortiz	05/26/09@12:45		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	0.02	1	mg/L	EPA 6010	05/29/09		9087
TPH as Diesel, SGT	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Motor Oil, SGT	Not Detected	0.1	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Gasoline	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/08/09		9299
Benzene	1.6	0.5	1	ug/L	EPA 8260	06/04/09		9235
Toluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
m,p-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
o-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methyl t-Butyl Ether (MTBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Amyl Methyl Ether (TAME)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butyl Alcohol (TBA)	Not Detected	2	1	ug/L	EPA 8260	06/04/09		9235
Diisopropyl Ether (DIPE)	0.7	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethyl t-Butyl Ether (ETBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichlorobenzene	1.3	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,4-Dichlorobenzene	8.3	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloroethane (EDC)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromoethane (EDB)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromodichloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromoform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
n-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
sec-Butyl Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Carbon Tetrachloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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Page 9

Yemia Hashimoto
AMEC Geomatrix
2101 Webster St., 12th Floor
Oakland, CA 94612

Log Number: 09-C8136
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix					
OW-5 052009	S. Ortiz	05/26/09@12:45	Aqueous					
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Chloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2-Chloroethylvinyl ether	Not Detected	20	1	ug/L	EPA 8260	06/04/09		9235
Chloroform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromo-3-Chloropropane	Not Detected	1	1	ug/L	EPA 8260	06/04/09		9235
Dibromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dibromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dichlorodifluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethane	2.0	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethene	1.0	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Hexachlorobutadiene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Isopropylbenzene	0.5	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Isopropyltoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methylene Chloride	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
Naphthalene	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
n-Propylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Styrene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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Oakland, CA 94612

Log Number: 09-C8136
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-5 052009	S. Ortiz	05/26/09@12:45		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Tetrachloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,3-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichlorofluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,3-Trichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3,5-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Vinyl Chloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Log Number: 09-C8137
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Project: PG&E Oakland Coliseum Way
Received: 05/27/09
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REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-6 052009	S. Ortiz	05/26/09@13:35		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
TPH as Diesel, SGT	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Motor Oil, SGT	Not Detected	0.1	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Gasoline	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/08/09		9299
Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Toluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
m,p-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
o-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methyl t-Butyl Ether (MTBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Amyl Methyl Ether (TAME)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butyl Alcohol (TBA)	Not Detected	2	1	ug/L	EPA 8260	06/04/09		9235
Diisopropyl Ether (DIPE)	3.6	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethyl t-Butyl Ether (ETBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chlorobenzene	1.7	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichlorobenzene	7.1	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,4-Dichlorobenzene	19	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloroethane (EDC)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromoethane (EDB)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromodichloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromoform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
n-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
sec-Butyl Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Carbon Tetrachloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-6 052009	S. Ortiz	05/26/09@13:35		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
2-Chloroethylvinyl ether	Not Detected	20	1	ug/L	EPA 8260	06/04/09		9235
Chloroform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromo-3-Chloropropane	Not Detected	1	1	ug/L	EPA 8260	06/04/09		9235
Dibromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dibromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dichlorodifluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethane	7.5	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethene	6.9	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Hexachlorobutadiene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Isopropylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Isopropyltoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methylene Chloride	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
Naphthalene	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
n-Propylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Styrene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Tetrachloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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Log Number: 09-C8137
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Project: PG&E Oakland Coliseum Way
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REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-6 052009	S. Ortiz	05/26/09@13:35		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
1,2,3-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichlorofluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,3-Trichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3,5-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Vinyl Chloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



CREEK ENVIRONMENTAL LABORATORIES, INC.

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Log Number: 09-C8138
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-7 052009	S. Ortiz	05/26/09@15:20		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
TPH as Diesel, SGT	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Motor Oil, SGT	Not Detected	0.1	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Gasoline	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/08/09		9299
Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Toluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
m,p-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
o-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methyl t-Butyl Ether (MTBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Amyl Methyl Ether (TAME)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butyl Alcohol (TBA)	Not Detected	2	1	ug/L	EPA 8260	06/04/09		9235
Diisopropyl Ether (DIPE)	0.6	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethyl t-Butyl Ether (ETBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chlorobenzene	48	5	10	ug/L	EPA 8260	06/05/09		9244
1,2-Dichlorobenzene	18	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichlorobenzene	120	5	10	ug/L	EPA 8260	06/05/09		9244
1,4-Dichlorobenzene	340	5	10	ug/L	EPA 8260	06/05/09		9244
1,2-Dichloroethane (EDC)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromoethane (EDB)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromodichloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromoform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
n-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
sec-Butyl Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Carbon Tetrachloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time	Matrix
OW-7 052009	S. Ortiz	05/26/09@15:20	Aqueous

Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
2-Chloroethylvinyl ether	Not Detected	20	1	ug/L	EPA 8260	06/04/09		9235
Chloroform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromo-3-Chloropropane	Not Detected	1	1	ug/L	EPA 8260	06/04/09		9235
Dibromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dibromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dichlorodifluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethane	7.2	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethene	7.4	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Hexachlorobutadiene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Isopropylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Isopropyltoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methylene Chloride	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
Naphthalene	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
n-Propylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Styrene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Tetrachloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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Yemia Hashimoto
AMEC Geomatrix
2101 Webster St., 12th Floor
Oakland, CA 94612

Log Number: 09-C8138
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-7 052009	S. Ortiz	05/26/09@15:20		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
1,2,3-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trichlorobenzene	45	5	10	ug/L	EPA 8260	06/05/09		9244
1,1,1-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichlorofluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,3-Trichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3,5-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Vinyl Chloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

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Lab Director, Michael Ng



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Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
OW-8 052009	S. Ortiz	05/26/09@14:45		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	0.02	1	mg/L	EPA 6010	05/29/09		9087
TPH as Diesel, SGT	Not Detected	0.05	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287
TPH as Motor Oil, SGT	Not Detected	0.1	1	mg/L	EPA 8015/LUFT	06/05/09	06/02/09	9287

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
FB-1 052009	S. Ortiz	05/26/09@15:25		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Lead, Dissolved	Not Detected	0.02	1	mg/L	EPA 6010	05/29/09		9087
Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Toluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
m,p-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
o-Xylene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methyl t-Butyl Ether (MTBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Amyl Methyl Ether (TAME)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butyl Alcohol (TBA)	Not Detected	2	1	ug/L	EPA 8260	06/04/09		9235
Diisopropyl Ether (DIPE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Ethyl t-Butyl Ether (ETBE)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,4-Dichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloroethane (EDC)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromoethane (EDB)	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromodichloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromoform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Bromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
n-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
sec-Butyl Benzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
t-Butylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Carbon Tetrachloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Chloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2-Chloroethylvinyl ether	Not Detected	20	1	ug/L	EPA 8260	06/04/09		9235
Chloroform	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time			Matrix			
FB-1 052009	S. Ortiz	05/26/09@15:25			Aqueous			
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
Chloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Chlorotoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dibromo-3-Chloropropane	Not Detected	1	1	ug/L	EPA 8260	06/04/09		9235
Dibromochloromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dibromomethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Dichlorodifluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,2-Dichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
2,2-Dichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
cis-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
trans-1,3-Dichloropropene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Hexachlorobutadiene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Isopropylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
4-Isopropyltoluene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Methylene Chloride	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
Naphthalene	Not Detected	5	1	ug/L	EPA 8260	06/04/09		9235
n-Propylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Styrene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,1,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2,2-Tetrachloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Tetrachloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,3-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trichlorobenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235



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Log Number: 09-C8140
Order: Q2770
Project: PG&E Oakland Coliseum Way
Received: 05/27/09
Printed: 06/10/09

REPORT OF ANALYTICAL RESULTS

Sample Description	Sampled By	Sampled Date @ Time		Matrix				
FB-1 052009	S. Ortiz	05/26/09@15:25		Aqueous				
Analyte	Result	DLR	Dilution Factor	Units	Method	Date Analyzed	Date Prepared	Batch
1,1,1-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,1,2-Trichloroethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichloroethene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Trichlorofluoromethane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,3-Trichloropropane	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,2,4-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
1,3,5-Trimethylbenzene	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235
Vinyl Chloride	Not Detected	0.5	1	ug/L	EPA 8260	06/04/09		9235

DLR = Detection Limit for Reporting. Results of "Not Detected" are below DLR.

CREEK ENVIRONMENTAL LABORATORIES

Lab Director, Michael Ng



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Quality Control Results

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Order No.: Q2770

Laboratory Reagent Blank

Analyte	Method	Results	Units	Batch
Lead, Dissolved	EPA 6010	< 0.02	mg/L	9087
TPH as Diesel, SGT	EPA 8015/LUFT	< 0.05	mg/L	9287
TPH as Motor Oil, SGT	EPA 8015/LUFT	< 0.1	mg/L	9287
TPH as Gasoline	EPA 8015/LUFT	< 0.05	mg/L	9299
Benzene	EPA 8260	< 0.5	ug/L	9235
Toluene	EPA 8260	< 0.5	ug/L	9235
Ethylbenzene	EPA 8260	< 0.5	ug/L	9235
m,p-Xylene	EPA 8260	< 0.5	ug/L	9235
o-Xylene	EPA 8260	< 0.5	ug/L	9235
Methyl t-Butyl Ether (MTBE)	EPA 8260	< 0.5	ug/L	9235
t-Amyl Methyl Ether (TAME)	EPA 8260	< 0.5	ug/L	9235
t-Butyl Alcohol (TBA)	EPA 8260	< 2	ug/L	9235
Diisopropyl Ether (DIPE)	EPA 8260	< 0.5	ug/L	9235
Ethyl t-Butyl Ether (ETBE)	EPA 8260	< 0.5	ug/L	9235
Chlorobenzene	EPA 8260	< 0.5	ug/L	9235
Chlorobenzene	EPA 8260	< 0.5	ug/L	9244
1,2-Dichlorobenzene	EPA 8260	< 0.5	ug/L	9235
1,3-Dichlorobenzene	EPA 8260	< 0.5	ug/L	9235
1,3-Dichlorobenzene	EPA 8260	< 0.5	ug/L	9244
1,4-Dichlorobenzene	EPA 8260	< 0.5	ug/L	9235
1,4-Dichlorobenzene	EPA 8260	< 0.5	ug/L	9244
1,2-Dichloroethane (EDC)	EPA 8260	< 0.5	ug/L	9235
1,2-Dibromoethane (EDB)	EPA 8260	< 0.5	ug/L	9235
Bromobenzene	EPA 8260	< 0.5	ug/L	9235
Bromochloromethane	EPA 8260	< 0.5	ug/L	9235
Bromodichloromethane	EPA 8260	< 0.5	ug/L	9235
Bromoform	EPA 8260	< 0.5	ug/L	9235
Bromomethane	EPA 8260	< 0.5	ug/L	9235
n-Butylbenzene	EPA 8260	< 0.5	ug/L	9235
sec-Butyl Benzene	EPA 8260	< 0.5	ug/L	9235
t-Butylbenzene	EPA 8260	< 0.5	ug/L	9235
Carbon Tetrachloride	EPA 8260	< 0.5	ug/L	9235
Chloroethane	EPA 8260	< 0.5	ug/L	9235
2-Chloroethylvinyl ether	EPA 8260	< 20	ug/L	9235
Chloroform	EPA 8260	< 0.5	ug/L	9235
Chloromethane	EPA 8260	< 0.5	ug/L	9235
2-Chlorotoluene	EPA 8260	< 0.5	ug/L	9235
4-Chlorotoluene	EPA 8260	< 0.5	ug/L	9235
1,2-Dibromo-3-Chloropropane	EPA 8260	< 1	ug/L	9235
Dibromochloromethane	EPA 8260	< 0.5	ug/L	9235
Dibromomethane	EPA 8260	< 0.5	ug/L	9235
Dichlorodifluoromethane	EPA 8260	< 0.5	ug/L	9235
1,1-Dichloroethane	EPA 8260	< 0.5	ug/L	9235
1,1-Dichloroethene	EPA 8260	< 0.5	ug/L	9235
cis-1,2-Dichloroethene	EPA 8260	< 0.5	ug/L	9235



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Quality Control Results

Page 22

Order No.: Q2770

Laboratory Reagent Blank (continued)

Analyte	Method	Result	Units	Batch
trans-1,2-Dichloethene	EPA 8260	< 0.5	ug/L	9235
1,2-Dichloropropane	EPA 8260	< 0.5	ug/L	9235
1,3-Dichloropropane	EPA 8260	< 0.5	ug/L	9235
2,2-Dichloropropane	EPA 8260	< 0.5	ug/L	9235
1,1-Dichloropropene	EPA 8260	< 0.5	ug/L	9235
cis-1,3-Dichloropropene	EPA 8260	< 0.5	ug/L	9235
trans-1,3-Dichloropropene	EPA 8260	< 0.5	ug/L	9235
Hexachlorobutadiene	EPA 8260	< 0.5	ug/L	9235
Isopropylbenzene	EPA 8260	< 0.5	ug/L	9235
4-Isopropyltoluene	EPA 8260	< 0.5	ug/L	9235
Methylene Chloride	EPA 8260	< 5	ug/L	9235
Naphthalene	EPA 8260	< 5	ug/L	9235
n-Propylbenzene	EPA 8260	< 0.5	ug/L	9235
Styrene	EPA 8260	< 0.5	ug/L	9235
1,1,1,2-Tetrachloroethane	EPA 8260	< 0.5	ug/L	9235
1,1,2,2-Tetrachloroethane	EPA 8260	< 0.5	ug/L	9235
Tetrachloroethene	EPA 8260	< 0.5	ug/L	9235
1,2,3-Trichlorobenzene	EPA 8260	< 0.5	ug/L	9235
1,2,4-Trichlorobenzene	EPA 8260	< 0.5	ug/L	9235
1,2,4-Trichlorobenzene	EPA 8260	< 0.5	ug/L	9244
1,1,1-Trichloroethane	EPA 8260	< 0.5	ug/L	9235
1,1,2-Trichloroethane	EPA 8260	< 0.5	ug/L	9235
Trichloroethene	EPA 8260	< 0.5	ug/L	9235
Trichlorofluoromethane	EPA 8260	< 0.5	ug/L	9235
1,2,3-Trichloropropane	EPA 8260	< 0.5	ug/L	9235
1,2,4-Trimethylbenzene	EPA 8260	< 0.5	ug/L	9235
1,3,5-Trimethylbenzene	EPA 8260	< 0.5	ug/L	9235
Vinyl Chloride	EPA 8260	< 0.5	ug/L	9235

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
Lead, Dissolved	EPA 6010	96%	1.0	mg/L	75 - 125	9087
TPH as Diesel, SGT	EPA 8015/LUFT	62%	5.0	mg/L	50 - 150	9287
TPH as Gasoline	EPA 8015/LUFT	117%	0.1	mg/L	60 - 140	9299
Benzene	EPA 8260	106%	10	ug/L	80 - 120	9235
Toluene	EPA 8260	107%	10	ug/L	80 - 120	9235
Ethylbenzene	EPA 8260	104%	10	ug/L	80 - 120	9235
m,p-Xylene	EPA 8260	104%	20	ug/L	80 - 120	9235
o-Xylene	EPA 8260	102%	10	ug/L	80 - 120	9235
Methyl t-Butyl Ether (MTBE)	EPA 8260	100%	10	ug/L	70 - 130	9235
Chlorobenzene	EPA 8260	111%	10	ug/L	81 - 115	9244
1,2-Dichlorobenzene	EPA 8260	106%	10	ug/L	80 - 120	9235



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Quality Control Results

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Order No.: Q2770

Laboratory Known Analysis (LCS)

Analyte	Method	Recovery	Spike Amount	Units	Recovery Limits	Batch
1,3-Dichlorobenzene	EPA 8260	113%	10	ug/L	80 - 120	9244
1,4-Dichlorobenzene	EPA 8260	110%	10	ug/L	80 - 120	9244
1,1-Dichloroethane	EPA 8260	100%	10	ug/L	75 - 130	9235
1,1-Dichloroethene	EPA 8260	104%	10	ug/L	63 - 129	9235
1,2,4-Trichlorobenzene	EPA 8260	115%	10	ug/L	50 - 150	9244

Matrix Spike/Matrix Spike Duplicates

Analyte	Method	MS	MSD	Matrix		Spike	Units	Recovery Limits	RPD	Batch
		Rec.	Rec.	RPD	Sample	Amount			Limit	
TPH as Diesel, SGT	EPA 8015/LUFT	46%	52%	12	09-C8138	5.0	mg/L	50 - 150	30	9287
TPH as Gasoline	EPA 8015/LUFT	104%	102%	2	09-C8109	0.5	mg/L	60 - 140	30	9299
Benzene	EPA 8260	107%	102%	5	09-C8138	10	ug/L	80 - 120	20	9235
Toluene	EPA 8260	105%	102%	3	09-C8138	10	ug/L	80 - 120	20	9235
Ethylbenzene	EPA 8260	108%	104%	4	09-C8138	10	ug/L	80 - 120	20	9235
m,p-Xylene	EPA 8260	106%	101%	5	09-C8138	20	ug/L	80 - 120	20	9235
o-Xylene	EPA 8260	106%	102%	4	09-C8138	10	ug/L	80 - 120	20	9235
Methyl t-Butyl Ether (MTBE)	EPA 8260	100%	103%	3	09-C8138	10	ug/L	70 - 130	30	9235
Chlorobenzene	EPA 8260	96%	104%	8	09-C8126	10	ug/L	74 - 131	20	9244
1,2-Dichlorobenzene	EPA 8260	99%	106%	2	09-C8138	10	ug/L	80 - 120	20	9235
1,3-Dichlorobenzene	EPA 8260	98%	106%	8	09-C8126	10	ug/L	80 - 120	20	9244
1,4-Dichlorobenzene	EPA 8260	97%	105%	8	09-C8126	10	ug/L	80 - 120	20	9244
1,1-Dichloroethane	EPA 8260	91%	104%	8	09-C8138	10	ug/L	75 - 130	20	9235
1,1-Dichloroethene	EPA 8260	102%	106%	2	09-C8138	10	ug/L	59 - 145	20	9235
1,2,4-Trichlorobenzene	EPA 8260	97%	105%	8	09-C8126	10	ug/L	50 - 150	30	9244

Sample Duplicate

Analyte	Method	Sample ID	Sample	Sample	RPD	Units	RPD Limit	Batch
			Value	Duplicate				
Lead, Dissolved	EPA 6010	09-C7852	< 0.02	< 0.02	0	mg/L	20.	9087



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Surrogate Report

Sample Number	Batch	Method	Surrogate	% Recovery	QC Limits
09-C8133	9244	EPA 8260	Dibromofluoromethane	101.	81-123
09-C8133	9244	EPA 8260	Toluene-d8	99.	78-116
09-C8133	9244	EPA 8260	4-BFB	94.	60-116
09-C8133	9299	EPA 8015M/LUFT GRO	a,a,a-Trifluorotoluene	107.	50-150
09-C8133	9244	EPA 8260	1,2-Dichloroethane-d4	99.	70-130
09-C8133	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	66.	50-150
09-C8134	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	79.	50-150
09-C8135	9235	EPA 8260	Dibromofluoromethane	99.	81-123
09-C8135	9235	EPA 8260	Toluene-d8	98.	78-116
09-C8135	9235	EPA 8260	4-BFB	97.	60-116
09-C8135	9299	EPA 8015M/LUFT GRO	a,a,a-Trifluorotoluene	109.	50-150
09-C8135	9235	EPA 8260	1,2-Dichloroethane-d4	107.	70-130
09-C8135	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	69.	50-150
09-C8136	9235	EPA 8260	Dibromofluoromethane	103.	81-123
09-C8136	9235	EPA 8260	Toluene-d8	99.	78-116
09-C8136	9235	EPA 8260	4-BFB	101.	60-116
09-C8136	9299	EPA 8015M/LUFT GRO	a,a,a-Trifluorotoluene	108.	50-150
09-C8136	9235	EPA 8260	1,2-Dichloroethane-d4	111.	70-130
09-C8136	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	68.	50-150
09-C8137	9235	EPA 8260	Dibromofluoromethane	102.	81-123
09-C8137	9235	EPA 8260	Toluene-d8	98.	78-116
09-C8137	9235	EPA 8260	4-BFB	95.	60-116
09-C8137	9299	EPA 8015M/LUFT GRO	a,a,a-Trifluorotoluene	109.	50-150
09-C8137	9235	EPA 8260	1,2-Dichloroethane-d4	111.	70-130
09-C8137	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	70.	50-150
09-C8138	9244	EPA 8260	Dibromofluoromethane	100.	81-123
09-C8138	9244	EPA 8260	Toluene-d8	97.	78-116
09-C8138	9244	EPA 8260	4-BFB	95.	60-116
09-C8138	9299	EPA 8015M/LUFT GRO	a,a,a-Trifluorotoluene	109.	50-150
09-C8138	9244	EPA 8260	1,2-Dichloroethane-d4	99.	70-130
09-C8138	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	66.	50-150
09-C8139	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	74.	50-150
09-C8140	9235	EPA 8260	Dibromofluoromethane	102.	81-123
09-C8140	9235	EPA 8260	Toluene-d8	98.	78-116
09-C8140	9235	EPA 8260	4-BFB	100.	60-116
09-C8140	9235	EPA 8260	1,2-Dichloroethane-d4	108.	70-130
blank	9235	EPA 8260	Dibromofluoromethane	99.	81-123
blank	9244	EPA 8260	Dibromofluoromethane	101.	81-123
LCS	9235	EPA 8260	Dibromofluoromethane	97.	81-123
LCS	9244	EPA 8260	Dibromofluoromethane	100.	81-123
09-C8138 MS	9235	EPA 8260	Dibromofluoromethane	104.	81-123
09-C8138 MSD	9235	EPA 8260	Dibromofluoromethane	98.	81-123
blank	9235	EPA 8260	Toluene-d8	100.	78-116
blank	9244	EPA 8260	Toluene-d8	99.	78-116
LCS	9235	EPA 8260	Toluene-d8	100.	78-116
LCS	9244	EPA 8260	Toluene-d8	99.	78-116



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Surrogate Report

Sample Number	Batch	Method	Surrogate	% Recovery	QC Limits
09-C8138 MS	9235	EPA 8260	Toluene-d8	102.	78-116
09-C8138 MSD	9235	EPA 8260	Toluene-d8	102.	78-116
blank	9235	EPA 8260	4-BFB	97.	60-116
blank	9244	EPA 8260	4-BFB	97.	60-116
LCS	9235	EPA 8260	4-BFB	97.	60-116
LCS	9244	EPA 8260	4-BFB	102.	60-116
09-C8138 MS	9235	EPA 8260	4-BFB	112.	60-116
09-C8138 MSD	9235	EPA 8260	4-BFB	113.	60-116
blank	9299	EPA 8015M/LUFT GRO	a,a,a-Trifluorotoluene	104.	50-150
LCS	9299	EPA 8015M/LUFT GRO	a,a,a-Trifluorotoluene	103.	50-150
09-C8109 MS	9299	EPA 8015M/LUFT GRO	a,a,a-Trifluorotoluene	104.	50-150
09-C8109 MSD	9299	EPA 8015M/LUFT GRO	a,a,a-Trifluorotoluene	104.	50-150
blank	9235	EPA 8260	1,2-Dichloroethane-d4	101.	70-130
blank	9244	EPA 8260	1,2-Dichloroethane-d4	98.	70-130
LCS	9235	EPA 8260	1,2-Dichloroethane-d4	94.	70-130
LCS	9244	EPA 8260	1,2-Dichloroethane-d4	99.	70-130
09-C8138 MS	9235	EPA 8260	1,2-Dichloroethane-d4	104.	70-130
09-C8138 MSD	9235	EPA 8260	1,2-Dichloroethane-d4	112.	70-130
blank	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	77.	50-150
LCS	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	82.	50-150
09-C8138 MS	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	62.	50-150
09-C8138 MSD	9287	EPA 8015M/LUFT DRO	Hexacosane.Silica Gel	67.	50-150