



RECEIVED

1:35 pm, Aug 10, 2009

Alameda County
Environmental Health

June 29, 2009

Mr. Paresh Khatri
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: GROUNDWATER MONITORING & SAMPLING REPORT CERTIFICATION
Brandywine Realty Trust Facility
2100 Franklin Street
Oakland, CA

Dear Mr. Khatri:

RGA Environmental, Inc. has prepared the following document:

- Groundwater Monitoring and Sampling Report (May 7, 2009 Sampling Event) dated June 29, 2009 (document 0387.R8).

I declare under penalty of perjury that the contents and conclusions in the document are true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact me at (510) 457-9770.

Sincerely,

Brandywine Realty Trust

Donald Rogers
General Manager

Attachment



June 29, 2009
Report 0387.R8
BRT21257

Mr. Donald Rogers
Brandywine Realty Trust
2101 Webster Street, Suite 1600
Oakland, CA 94612

SUBJECT: GROUNDWATER MONITORING AND SAMPLING REPORT
(May 7, 2009 Sampling Event)
County File # RO 2984
Brandywine Realty Trust
2100-2150 Franklin Street
Oakland, CA

Dear Mr. Rogers:

RGA Environmental, Inc. (RGA) is pleased to present this report documenting the monitoring and sampling of monitoring wells MW1 and MW2 at the subject site. This work was performed in accordance with a request from Alameda County Department of Environmental Health (ACDEH) dated April 16, 2009. The wells were purged and sampled on May 7, 2009. A Site Location Map (Figure 1) and a Site Vicinity Map Detail (Figure 2) are attached with this report.

BACKGROUND

A detailed discussion of the site background is provided in RGA's Subsurface Investigation Report (B23 through B33), dated February 2, 2009 (document 0387.R6). A total of two groundwater monitoring wells were installed at the site at the time of construction of the existing building. The wells are presently located in the floor of the subsurface parking structure. The tops of the wells are approximately 12 feet below the surface of the sidewalk that is located adjacent to the building.

FIELD ACTIVITIES

On May 7, 2009 groundwater monitoring wells MW1 and MW2 were monitored and sampled by RGA personnel. The wells were monitored for depth to water and the presence of free product or sheen. Depth to water was measured to the nearest 0.01 foot using an electric water level indicator. The presence of free product or sheen was evaluated using a transparent bailer. No free product, petroleum hydrocarbon sheen, or

odors were observed on the water from either of the two wells. The depth to water measurements are presented in Table 1.

Prior to sampling, the wells were purged of a minimum of three casing volumes of water. During purging operations, the field parameters of electrical conductivity, temperature, and pH were monitored. Once a minimum of three casing volumes had been purged, water samples were collected using a new unused disposable polypropylene bailer. The water samples were transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials and to one-liter amber glass bottles containing hydrochloric acid preservative which were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to ensure that no air bubbles were present.

The sample containers were then transferred to a cooler with ice, and later were transported to McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a State-Certified hazardous waste testing laboratory. Chain of custody documentation accompanied the samples to the laboratory. Records of the field parameters measured during well purging are attached with this report.

Water generated during purging and sampling of the wells was stored in a drum at the subject site pending characterization and disposal.

A total of one drum of groundwater was removed from the subject site on May 8, 2009 as non-hazardous waste. The drum of groundwater was removed by Clearwater Environmental, Inc. of Union City, California, and was transported to the Alviso Independent Oil facility in Alviso, California using non-hazardous waste manifest number 7592. A copy of the manifest is attached with this report.

HYDROGEOLOGY

Water levels in wells MW1 and MW2 were monitored on May 7, 2009. The measured depth to water in wells MW1 and MW2 (as measured from the top of the PVC well pipe) were 3.89 and 4.11 feet, respectively. Depth to water level measurements, including historic measurements, are presented in Table 1. It is not possible to calculate the groundwater flow direction at the site with only two wells.

Based on site vicinity topography buried paleo stream channels appear to be present to the east and south of the subject site. Groundwater flow in the vicinity of the subject site is suspected to be primarily controlled by the buried paleo stream channel deposits. However, based on the highly variable coarse-grained nature of subsurface materials in the vicinity of the subject site, groundwater flow in the vicinity of the site is not considered to be exclusively confined to the paleo channel deposits.

Groundwater flow at the subject site is considered to generally follow the topography and paleo-channel deposits, initially moving southwestward from the subject site and eventually moving eastward towards Lake Merritt as the paleo-channel deposits assume an easterly trend approximately 500 feet south of the subject site.

LABORATORY ANALYSIS

The groundwater samples collected from groundwater wells MW1 and MW2 at the subject site were analyzed for Total Petroleum Hydrocarbons as Bunker Oil (TPH-BO) and Total Petroleum Hydrocarbons as Diesel (TPH-D) using EPA Method 3510C in conjunction with EPA Method 8015B, for Total Petroleum Hydrocarbons as Gasoline (TPH-G), methyl tertiary-butyl ether (MTBE), benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 5030B in conjunction with EPA Method 8021B and modified EPA Method 8015B, fuel oxygenates and lead scavengers using EPA Method 5030B in conjunction with modified EPA Method 8260B, and for Polycyclic Aromatic Hydrocarbons (PAHs) using EPA Method 3510C in conjunction with EPA Method 8270C.

None of the analytes were detected in either of the wells. The laboratory analytical results are summarized in Table 2. Copies of the laboratory analytical reports and chain of custody documentation are attached with this report.

DISCUSSION AND RECOMMENDATIONS

Based on the sample results RGA recommends that no further sampling of the wells be performed.

DISTRIBUTION

A copy of this report will be uploaded to the Alameda County ftp website and to GeoTracker.

LIMITATIONS

This report was prepared solely for the use of Brandywine Realty Trust. The content and conclusions provided by RGA Environmental, Inc. in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgement based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

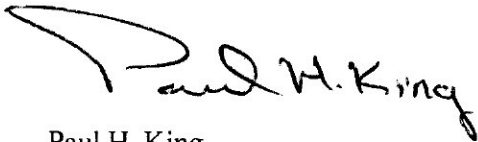
This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a

June 29, 2009
Report 0387.R8

similar nature. RGA Environmental, Inc. is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgement based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions, please do not hesitate to contact us at (510) 547-7771.

Sincerely,
RGA Environmental, Inc.



Paul H. King
Professional Geologist #5901
Expires: 12/31/09



Kenneth Pilgrim
Project Manager

Attachments:

- Table 1 – Summary of Measured Depth to Groundwater in Wells
- Table 2 – Summary of Monitoring Well Groundwater Sample Laboratory Analytical Results
- Figure 1 - Site Location Map
- Figure 2 - Site Vicinity Map Detail
- Groundwater Monitoring/Well Purging Data Sheets
- Non-Hazardous Waste Manifest
- Laboratory Reports and Chain of Custody Documentation

PHK/sjc
0387.R8

TABLES

Table 1
Summary of Measured Depth to Groundwater in Wells

<u>Well No</u>	<u>Date</u>	<u>Top of Casing Elevation (ft)</u> *	<u>Depth To Water (ft)</u>	<u>Water Table Elevation (ft)</u>
MW1	5/7/2009	Not Surveyed	3.89	Not Surveyed
	2/20/2007		6.42	Not Surveyed
	8/15/2006		8.50 **	Not Surveyed
MW2	5/7/2009	Not Surveyed	4.11	Not Surveyed
	1/30/2007		9.33***	Not Surveyed
	8/15/2006		8.50 **	Not Surveyed

NOTES:

* = Not surveyed.

** = Initial water level measurement in monitoring well borehole.

*** = Prior to well development.

Summary of Monitoring Well Groundwater Sample Analytical Results

Well ID	SampleDate	TPH-G	TPH-D	TPH-BO	MTBE	BTEX*	Other VOCs **	PAHs
MW1	5/7/2009	ND<50	ND<50	ND<100	ND<5.0	ND<0.5	All ND<0.5, except TBA ND<2.0	ND<0.5
MW2	5/7/2009	ND<50	ND<50	ND<100	ND<5.0	ND<0.5	All ND<0.5, except TBA ND<2.0	ND<0.5
<u>Notes:</u>								
TPH-G = Total Petroleum Hydrocarbons as Gasoline.								
TPH-D = Total Petroleum Hydrocarbons as Diesel.								
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.								
MTBE = Methyl Tertiary Butyl Ether.								
BTEX* = benzene, toluene, ethylbenzene, & xylenes by EPA Method 8021B.								
Other VOCs** = Volatile Organic Compounds; including BTEX using EPA Method 8260B.								
PAHs = Polyaromatic Hydrocarbons.								

FIGURES

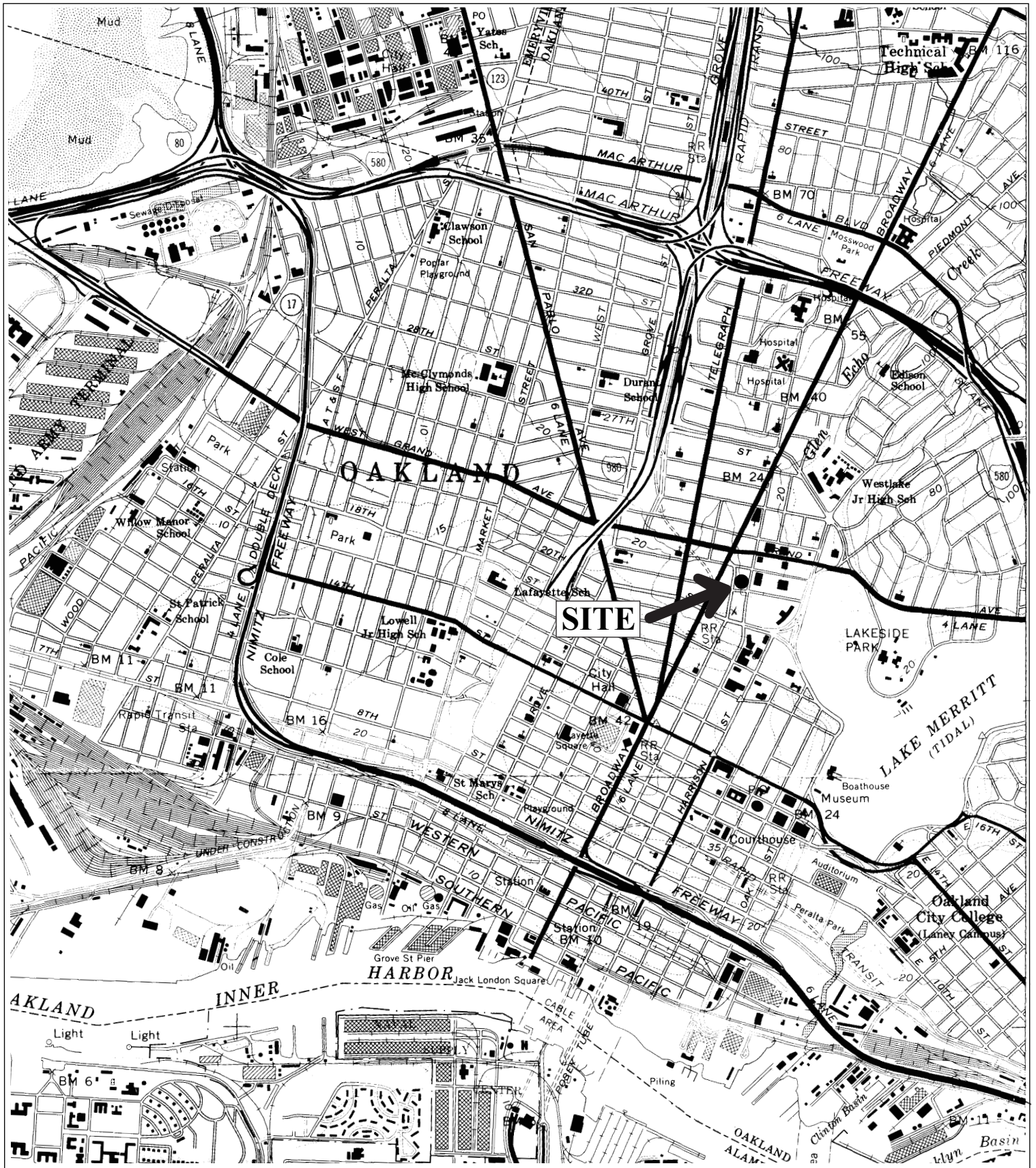
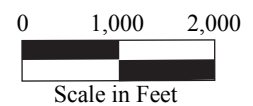


Figure 1
 Site Location Map
 2100 Franklin Street
 Oakland, California



Base Map from:
 U.S. Geological Survey
 Oakland West, Calif.
 7.5 Minute Quadrangle
 Photorevised 1980

RGA Environmental, Inc.
 1466 66th Street
 Emeryville, CA 94608



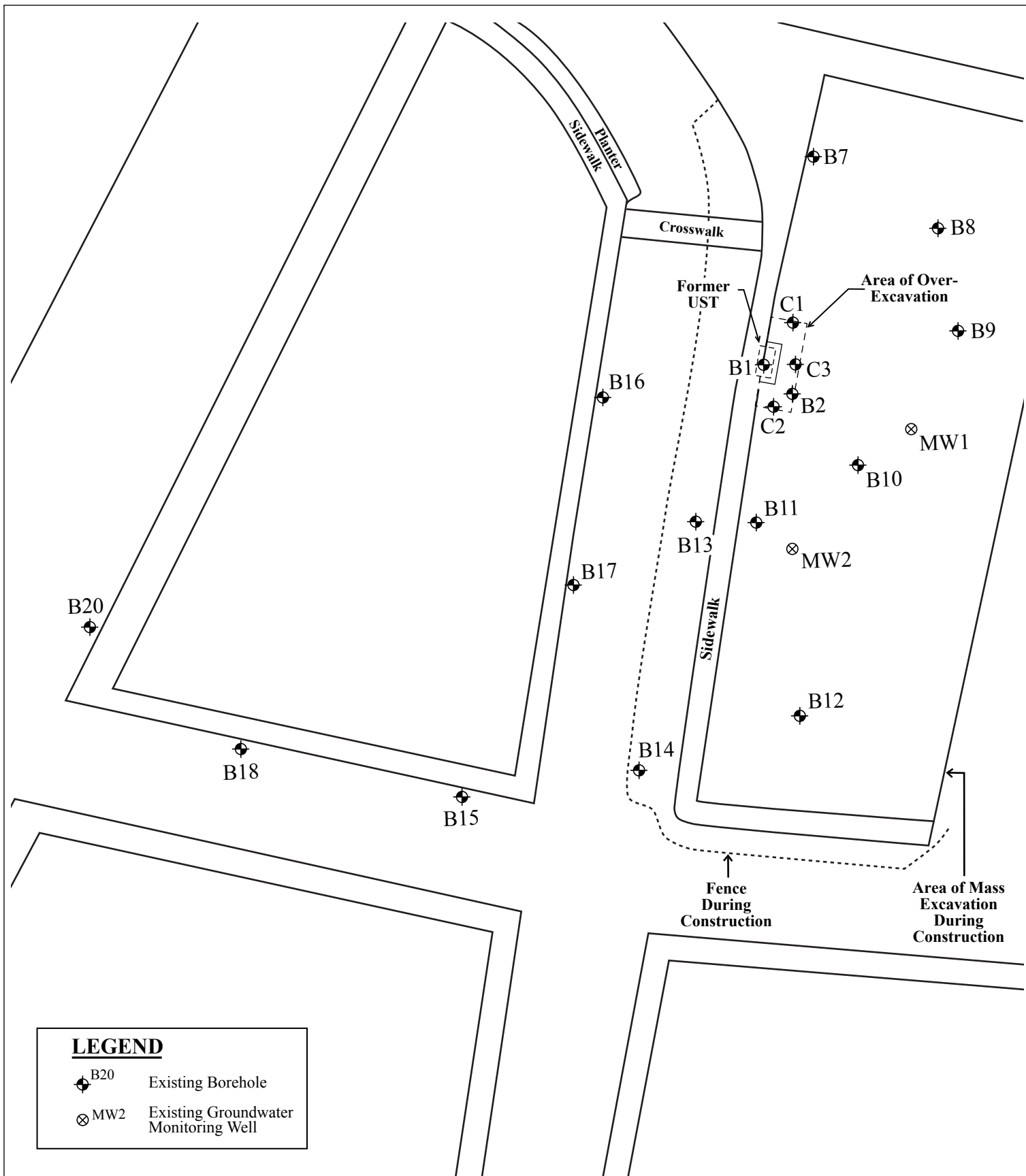


Figure 2
 Site Vicinity Map Detail Showing Borehole and Well Locations
 2100 Franklin Street
 Oakland, California



Base Map from
 Google Earth, dated June 2007

RGA Environmental, Inc.
 1466 66th Street
 Emeryville, CA 94608



**GROUNDWATER MONITORING/
WELL PURGING DATA SHEETS**

RGA ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name BRT / 2100 Franklins St., Oakland

Well No. MW1

Job No. 0387

Date 5/7/09

TOC to Water (ft.) 3.89

Sheen NO

Well Depth (ft.) 13.0

Free Product Thickness Ø

Well Diameter 2" (0.16)

Sample Collection Method _____

Gal./Casing Vol. 1.5

Disposable bather

3.0 x 1.5 = 4.5

TIME	GAL. PURGED	pH	TEMPERATURE °C	ELECTRICAL CONDUCTIVITY µs/cm
1105	0.5	5.34	18.6	450
1107	1.0	5.32	18.2	446
1109	1.5	5.41	18.1	455
1110	2.0	5.48	18.1	457
1112	2.5	5.56	18.0	455
1113	3.0	5.59	18.0	455
1115	3.5	5.63	18.0	450
1116	4.0	5.68	18.1	450
1117	4.5	5.70	18.0	451
1118	5.0	5.74	18.0	446

NOTES: No sheen or odor
Sample time => 1130hrs

RGA ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name BRT/2100 Franklin St., Oakland Well No. MW2
 Job No. 0387 Date 5/7/09
 TOC to Water (ft.) 4.11 Sheen No
 Well Depth (ft.) 12.4 Free Product Thickness Ø
 Well Diameter 2" (0.16) Sample Collection Method _____
 Gal./Casing Vol. 1.4 3rd = 4.2 Disposable bailer

TIME	GAL. PURGED	DH	TEMPERATURE °C	ELECTRICAL CONDUCTIVITY µs/cm
1156	0.4	6.01	17.9	617
1158	0.9	6.00	17.9	615
1200	1.4	6.10	17.9	610
1202	1.8	6.11	17.8	612
1203	2.3	6.14	17.9	614
1204	2.8	6.18	17.9	616
1205	3.2	6.21	17.9	612
1206	3.7	6.21	17.9	617
1208	4.2	6.22	17.9	619
1209	4.7	6.30	17.9	619

NOTES: No Sheen & No odor -
sample time = 12:15 hrs

NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

2. Page 1 of 1

3. Document Number

7592

4. Generator's Name and Mailing Address

21 Franklin Towers
2100 Franklin Street
Oakland, CA 94612

Generator's Phone

5. Transporter Company Name

6.

US EPA ID Number

7. Transporter Phone

CLEARWATER ENVIRONMENTAL

CAR000007013

(510) 476-1740

8. Designated Facility Name and Site Address

9.

US EPA ID Number

10. Facility's Phone

ALVISO INDEPENDENT OIL
5002 ARCHER STREET
ALVISO, CA 95002

CAL000161743

(510) 476-1740

11. Waste Shipping Name and Description

12. Containers

13. Total Quantity

14. Unit Wt/Vol

a. Non-Hazardous waste - Liquid

001 dr

20

G

b.

15. Special Handling Instructions and Additional Information

Wear PPE
Emergency Contact
(510) 476-1740
Attn: Kirk Hayward

Handling Codes for Wastes Listed Above

11a.

11b.

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to state or federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

[Signature] on behalf of
Donald Rogers

Signature

Month Day Year
5 8 09

17. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name

William Clark

Signature

[Signature]

Month Day Year
05 08 09

18. Discrepancy Indication Space

19. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 18.

Printed/Typed Name

Charles Seaton

Signature

[Signature]

Month Day Year
5 11 09

GENERATOR

TRANSPORTER

FACILITY

**LABORATORY REPORTS AND CHAIN OF
CUSTODY DOCUMENTATION**



McC Campbell Analytical, Inc.

"When Quality Counts"

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

RGA Environmental 1466 66th Street Emeryville, CA 94608	Client Project ID: #BRT21257/0387	Date Sampled: 05/07/09
		Date Received: 05/07/09
	Client Contact: Steven Carmack	Date Reported: 05/13/09
	Client P.O.:	Date Completed: 05/13/09

WorkOrder: 0905143

May 13, 2009

Dear Steven:

Enclosed within are:

- 1) The results of the **2** analyzed samples from your project: **#BRT21257/0387**,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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

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

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.



RGA Environmental, Inc.
 1466 - 66th St
 Emeryville, CA 94608
 510-658-4363
 510-834-0152 fax
 paul.king@rgaenv.com

0905143

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: BRT 21257/0387				PROJECT NAME: 2100 Franklin St., Oakland				NUMBER OF CONTAINERS	ANALYSIS(ES): TPH/Mult. (6,4,80) MBTEX Fuel Oxyso Pb Scavenger PAH's by 8270 br 82608				PRESERVATIVE	REMARKS			
SAMPLED BY: (PRINTED AND SIGNATURE) Steve Carmack <i>[Signature]</i>																	
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION													
MW1	5/7/09	1130	H ₂ O					11	X	X	X	X	ICE	Normal Turnaround Time			
MW2	↓	1215	↓					11	X	X	X	X	↓	↓ ↓ ↓ ↓			
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>								DATE	TIME	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>				TOTAL NO. OF SAMPLES (THIS SHIPMENT)	2	LABORATORY:	
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>								DATE	TIME	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>				TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	22	McCampbell Analytical	
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>								DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)				LABORATORY CONTACT:	Angela Rydelius	LABORATORY PHONE NUMBER:	(877) 252-9262
Results and billing to: RGA Environmental, Inc. paul.king@rgaenv.com								REMARKS:				Vocs + ambers w/ blue stickers preserved w/ HCL					

ICE / t: *VCS 235*
 GOOD CONDITION APPROPRIATE CONTAINERS
 HEAD SPACE ABSENT PRESERVED IN LAB
 DECHLORINATED IN LAB PRESERVED IN LAB
 PRESERVATION: VCAS O & G METALS OTHER

+ billing also to
 peacock
 andrea.peacock@rgaenv.com

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0905143

ClientCode: RGAE

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Steven Carmack
RGA Environmental
1466 66th Street
Emeryville, CA 94608
(510) 547-7771 FAX (510) 547-1983

Email: paul.king@rgaenv.com; pdking0000@a
cc:
PO:
ProjectNo: #BRT21257/0387

Bill to:

Andrea Peacock
RGA Environmental
1466 66th Street
Emeryville, CA 94608
invoices@rgaenv.com

Requested TAT: 5 days

Date Received: 05/07/2009

Date Printed: 05/07/2009

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0905143-001	MW1	Water	5/7/2009 11:30	<input type="checkbox"/>	C	A	B										
0905143-002	MW2	Water	5/7/2009 12:15	<input type="checkbox"/>	C	A	B										

Test Legend:

1	8270D-PNA_W	2	G-MBTEX_W	3	MBTEXOXY-8260B_W	4		5	
6		7		8		9		10	
11		12							

The following SampleIDs: 001A, 002A contain testgroup.

Prepared by: Samantha Arbuckle

Comments:

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



Sample Receipt Checklist

Client Name: **RGA Environmental**

Date and Time Received: **05/07/09 7:04:01 PM**

Project Name: **#BRT21257/0387**

Checklist completed and reviewed by: **Samantha Arbuckle**

WorkOrder N°: **0905143** Matrix Water

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No
- Container/Temp Blank temperature Cooler Temp: 2.3°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
- Sample labels checked for correct preservation? Yes No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes No NA
- Samples Received on Ice? Yes No

(Ice Type: WET ICE)

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

Client contacted:

Date contacted:

Contacted by:

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

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

RGA Environmental 1466 66th Street Emeryville, CA 94608	Client Project ID: #BRT21257/0387	Date Sampled: 05/07/09
		Date Received: 05/07/09
	Client Contact: Steven Carmack	Date Extracted: 05/07/09
	Client P.O.:	Date Analyzed 05/09/09

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Extraction Method: SW3510C

Analytical Method: SW8270C

Work Order: 0905143

Lab ID	0905143-001C	0905143-002C			Reporting Limit for DF =1	
Client ID	MW1	MW2				
Matrix	W	W				
DF	1	1				

Compound	Concentration				ug/kg	µg/L
	Acenaphthene	ND	ND			NA
Acenaphthylene	ND	ND			NA	0.5
Anthracene	ND	ND			NA	0.5
Benzo(a)anthracene	ND	ND			NA	0.5
Benzo(a)pyrene	ND	ND			NA	0.5
Benzo(b)fluoranthene	ND	ND			NA	0.5
Benzo(k)fluoranthene	ND	ND			NA	0.5
Benzo(g,h,i)perylene	ND	ND			NA	0.5
Chrysene	ND	ND			NA	0.5
Dibenzo(a,h)anthracene	ND	ND			NA	0.5
Fluoranthene	ND	ND			NA	0.5
Fluorene	ND	ND			NA	0.5
Indeno (1,2,3-cd) pyrene	ND	ND			NA	0.5
1-Methylnaphthalene	ND	ND			NA	0.5
2-Methylnaphthalene	ND	ND			NA	0.5
Naphthalene	ND	ND			NA	0.5
Phenanthrene	ND	ND			NA	0.5
Pyrene	ND	ND			NA	0.5

Surrogate Recoveries (%)

%SS1	83	84		
%SS2	77	78		

Comments				
-----------------	--	--	--	--

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

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

#) surrogate diluted out of range; &) low or no surrogate due to matrix interference.



McC Campbell Analytical, Inc.

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

RGA Environmental 1466 66th Street Emeryville, CA 94608	Client Project ID: #BRT21257/0387	Date Sampled: 05/07/09
		Date Received: 05/07/09
	Client Contact: Steven Carmack	Date Extracted: 05/08/09
	Client P.O.:	Date Analyzed: 05/08/09

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 0905143

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	MW1	W	ND	ND	ND	ND	ND	ND	1	108	
002A	MW2	W	ND	ND	ND	ND	ND	ND	1	101	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:



McC Campbell Analytical, Inc.

"When Quality Counts"

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

RGA Environmental 1466 66th Street Emeryville, CA 94608	Client Project ID: #BRT21257/0387	Date Sampled: 05/07/09
		Date Received: 05/07/09
	Client Contact: Steven Carmack	Date Extracted: 05/07/09-05/08/09
	Client P.O.:	Date Analyzed: 05/07/09-05/08/09

Oxygenates and BTEX by GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0905143

Lab ID	0905143-001B	0905143-002B			Reporting Limit for DF =1
Client ID	MW1	MW2			
Matrix	W	W			
DF	1	1			

Compound	Concentration				ug/kg	ug/L
	tert-Amyl methyl ether (TAME)	ND	ND			NA
Benzene	ND	ND			NA	0.5
t-Butyl alcohol (TBA)	ND	ND			NA	2.0
1,2-Dibromoethane (EDB)	ND	ND			NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND			NA	0.5
Diisopropyl ether (DIPE)	ND	ND			NA	0.5
Ethylbenzene	ND	ND			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND			NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND			NA	0.5
Toluene	ND	ND			NA	0.5
Xylenes	ND	ND			NA	0.5

Surrogate Recoveries (%)

%SS1:	77	76		
%SS2:	106	108		

Comments

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

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

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.



QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 43122

WorkOrder 0905143

EPA Method SW8270C	Extraction SW3510C								Spiked Sample ID: N/A			
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Benzo(a)pyrene	N/A	10	N/A	N/A	N/A	80.2	80.8	0.664	N/A	N/A	30 - 130	30
Chrysene	N/A	10	N/A	N/A	N/A	88.1	88.4	0.415	N/A	N/A	30 - 130	30
1-Methylnaphthalene	N/A	10	N/A	N/A	N/A	101	105	3.23	N/A	N/A	30 - 130	30
2-Methylnaphthalene	N/A	10	N/A	N/A	N/A	93.8	94.6	0.793	N/A	N/A	30 - 130	30
Phenanthrene	N/A	10	N/A	N/A	N/A	90.3	90.8	0.565	N/A	N/A	30 - 130	30
Pyrene	N/A	10	N/A	N/A	N/A	87.1	87.4	0.393	N/A	N/A	30 - 130	30
%SS1:	N/A	5	N/A	N/A	N/A	81	83	2.06	N/A	N/A	30 - 130	30
%SS2:	N/A	5	N/A	N/A	N/A	76	77	1.70	N/A	N/A	30 - 130	30

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

BATCH 43122 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0905143-001C	05/07/09 11:30 AM	05/07/09	05/09/09 6:53 AM	0905143-002C	05/07/09 12:15 PM	05/07/09	05/09/09 8:09 AM

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 43091

WorkOrder 0905143

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 0905104-004A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) [£]	ND	60	108	100	7.14	98.7	94.7	4.19	70 - 130	20	70 - 130	20
MTBE	ND	10	88.2	98.8	11.4	97.2	94.5	2.82	70 - 130	20	70 - 130	20
Benzene	ND	10	99.2	96.4	2.85	105	104	0.979	70 - 130	20	70 - 130	20
Toluene	ND	10	97.2	94.4	2.93	99.7	100	0.315	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	103	102	0.680	101	104	3.18	70 - 130	20	70 - 130	20
Xylenes	ND	30	104	101	2.51	101	104	2.24	70 - 130	20	70 - 130	20
%SS:	99	10	99	101	2.15	101	100	0.926	70 - 130	20	70 - 130	20

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

BATCH 43091 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0905143-001A	05/07/09 11:30 AM	05/08/09	05/08/09 11:08 PM	0905143-002A	05/07/09 12:15 PM	05/08/09	05/08/09 11:39 PM

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 43092

WorkOrder 0905143

Analyte	Extraction SW5030B		Spiked Sample ID: 0905104-004b						Acceptance Criteria (%)			
	Sample µg/L	Spiked µg/L	MS % Rec.	MSD % Rec.	MS-MSD % RPD	LCS % Rec.	LCSD % Rec.	LCS-LCSD % RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	106	101	5.74	93.3	96	2.87	70 - 130	30	70 - 130	30
Benzene	ND	10	125	118	5.61	97.1	101	3.40	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	87.2	83.2	4.73	103	114	10.0	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	119	113	4.77	117	113	3.13	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	113	107	5.19	90.2	93	3.07	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	111	104	5.85	91.2	94.5	3.48	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	121	114	6.09	99.5	102	2.75	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	105	98.7	6.17	87.1	92.3	5.76	70 - 130	30	70 - 130	30
Toluene	ND	10	122	116	5.00	116	112	3.27	70 - 130	30	70 - 130	30
%SS1:	75	25	83	82	1.29	90	92	3.10	70 - 130	30	70 - 130	30
%SS2:	91	25	101	102	0.704	91	91	0	70 - 130	30	70 - 130	30

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

BATCH 43092 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0905143-001B	05/07/09 11:30 AM	05/07/09	05/07/09 11:31 PM	0905143-002B	05/07/09 12:15 PM	05/08/09	05/08/09 12:13 AM

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 43121

WorkOrder: 0905143

EPA Method SW8015B		Extraction SW3510C							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	104	105	1.12	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	106	106	0	N/A	N/A	70 - 130	30

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

BATCH 43121 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0905143-001A	05/07/09 11:30 AM	05/07/09	05/09/09 3:13 AM	0905143-002A	05/07/09 12:15 PM	05/07/09	05/09/09 4:21 AM

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.