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Atlantic Richfield Company (a BP affiliated company)

P.O. Box 1257 San Ramon, California 94583 Phone: (925) 275-3801 Fax: (925) 275-3815

25 October 2006

Re: Third Quarter 2006 Ground-Water Monitoring Report

Former BP Service Station #11266

1541 Park Street Alameda, California ACEH Case # RO0000318

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by:

Paul Supple

Environmental Business Manager

Third Quarter 2006 Ground-Water Monitoring Report

Former BP Service Station #11266 1541 Park Street Alameda, California

Prepared for

Mr. Paul Supple Environmental Business Manager Atlantic Richfield Company P.O. Box 1257 San Ramon, California 94583

Prepared by



1324 Mangrove Avenue, Suite 212 Chico, California 95926 (530) 566-1400 www.broadbentinc.com

25 October 2006

Project No. 06-08-658

Broadbent & Associates, Inc. 1324 Mangrove Ave., Suite 212 Chico, CA 95926 Voice (530) 566-1400 Fax (530) 566-1401



25 October 2006

Project No. 06-08-658

ROBERT H. MILLER

TEXAS

Atlantic Richfield Company P.O. Box 1257 San Ramon, California 94583 Submitted via ENFOS

Attn.: Mr. Paul Supple

Re:

Third Quarter 2006 Ground-Water Monitoring Report, Former BP Station #11266

1541 Park Street, Alameda, California; ACEH Case #RO0000318.

Dear Mr. Supple:

Provided herein is the *Third Quarter 2006 Ground-Water Monitoring Report* for Former BP Service Station #11266 (herein referred to as Station #11266) located at 1541 Park Street, Alameda, California. This report presents the results of well redevelopment, ground-water monitoring and sampling conducted at Station #11266 during the Third Quarter of 2006, performed at the request of Alameda County Environmental Health (ACEH) in their letter dated 7 July 2006.

Should you have questions regarding this submission, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

BROADBENT & ASSOCIATES, INC.

. Thomas A. Venus, P.E.

Senior Engineer

Robert H. Miller, P.G., C.HG.

Principal Hydrogeologist

Enclosures

cc: Mr. Stephen Plunkett, Alameda County Environmental Health (Submitted via ACEH ftp site)

Mr. Chris Jimmerson, Delta Environmental Consultants (electronic copy uploaded to ENFOS)

ARIZONA CALIFORNIA NEVADA

STATION #11266 GROUND-WATER MONITORING REPORT

Facility: #11266 Address: 1541Park Street, Alameda, California

Environmental Business Manager: Mr. Paul Supple

Consulting Company/Contact Person: Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus

(530)566-1400

Consultant Project No.: 06-08-658

Primary Agency/Regulatory ID No.: Alameda County Environmental Health (ACEH)

ACEH Case #RO0000624

WORK PERFORMED THIS QUARTER (Third Quarter 2006):

1. Prepared and submitted the Second Quarter 2006 Status Report. Work performed by BAI.

2. Onsite wells were rehabilitated, redeveloped, and ground-water monitoring and sampling conducted per the request of ACEH in their letter of 7 July 2006. Work performed by Blaine Tech Services for URS on 21 and 24 August 2006.

WORK PROPOSED FOR NEXT QUARTER (Fourth Quarter 2006):

- 1. Prepared and submitted this Third Quarter 2006 Ground-Water Monitoring Report (contained herein).
- 2. No field work is currently anticipated at Station #11266 during the Fourth Quarter of 2006.

QUARTERLY RESULTS SUMMARY:

Current phase of project: Reassessment Frequency of ground-water sampling: One time, per ACEH request of 7/7/2006: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 Frequency of ground-water monitoring: One time Is free product (FP) present on-site: No Current remediation techniques: NA Depth to ground water (below TOC): 7.75 ft (MW-1) to 9.61 ft (MW-3) General ground-water flow direction: South Approximate hydraulic gradient: 0.01 ft/ft

DISCUSSION:

Case closure was requested from ACEH on 21 February 2003. BP had been awaiting a response from the ACEH to the case closure request. In a letter dated 7 July 2006, ACEH requested rehabilitation, redevelopment, ground-water monitoring and sampling of the onsite monitoring wells to resume the site closure process. This letter presents a summary of well rehabilitation/redevelopment, and ground-water monitoring and sampling results.

Rehabilitation and redevelopment was performed on the six wells associated with Station #11266 on 21 August 2006 by Blaine Tech Services for URS. Wells were surged for 10 minutes with a two-inch diameter surge block prior to re-development (Oxygen Release Compound socks were removed from well MW-1 prior to surging and re-development). Following surging, wells were evacuated by positive air displacement of 10 wetted casing volumes of water from each well, ranging from 16 gallons in well MW-3 to 28 gallons from well MW-2. With the exception of well MW-4, removal of accumulated silt increased the total depths of five wells when compared to their pre-development total depths, up to 0.73 ft in well MW-6. Well development data sheets are provided within Appendix A.

Ground-water monitoring was performed on the six wells by Blaine Tech Services/URS on 24 August 2006. No difficulties or irregularities were encountered during ground-water monitoring at the Site. Measured depths to ground water ranged from 7.75 ft in MW-1 to 9.61 ft in MW-3. Calculated water level elevations ranged from 11.44 ft above mean sea level at MW-1 to 10.38 ft at MW-3. Calculated water level elevations yielded a potentiometric ground-water flow direction and gradient of 0.01 ft/ft to the south. Ground-water monitoring field data sheets are provided within Appendix A. Measured depths to ground-water and respective ground-water elevations are summarized in Table 1. Potentiometric ground-water elevation contours are presented in Drawing 1.

Ground-water sampling was performed immediately following ground-water monitoring in the six wells on 24 August 2006. No irregularities were reported during sampling activities. Samples were submitted under chain of custody documentation to Test America Analytical Testing Corporation (Morgan Hill, California), for analysis of Gasoline Range Organics (GRO, C4-12) by the LUFT GSMS Method; Diesel Range Organics (DRO, C10-C36) by EPA Method 8015B-SVOA; for Total Lead by EPA Method 200.7; for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and tert-Amyl methyl ether (TAME), tert-Butyl alcohol, Di-isopropyl ether, 1,2-Dibromomethane, 1,2-Dichloroethane, Ethanol, Ethyl tert-butyl ether, and Methyl tert-butyl ether (MTBE) by EPA Method 8260B. No irregularities were encountered during laboratory analysis of the samples, with the exception that the laboratory noted that the hydrocarbons detected by EPA Method 8015B-SVOA in samples from MW-1 and MW-3 were within the fuel range for DRO, but did not resemble the requested fuel. Ground-water sampling field data sheets and the laboratory analytical report, including chain of custody documentation, are provided in Appendix A.

Gasoline Range Organics were detected above the laboratory reporting limits in samples from three wells (MW-1, MW-2, and MW-3) up to a concentration of 1,900 micrograms per liter (μ g/L) in MW-1. DRO were detected in above the laboratory reporting limits in samples from two wells (MW-1 and MW-3), up to a concentration of 1,000 μ g/L in MW-1. Benzene was detected above the laboratory reporting limit in two wells (MW-1 and MW-2) up to a concentration of 6.4 μ g/L in MW-1. Toluene was detected above the laboratory reporting limit in two wells (MW-1 and MW-3) up to a concentration of 1.9 μ g/L in MW-1. Ethylbenzene was detected above the laboratory reporting limit in one well at a concentration of 48 μ g/L in MW-1. Total Xylenes were detected above the laboratory reporting limit in two wells (MW-1 and MW-2) up to a concentration of 41 μ g/L in MW-1. MTBE was detected above the laboratory reporting limits in three wells (MW-1, MW-2, and MW-3) up to a concentration of 47 μ g/L in MW-2. TAME was detected above the laboratory reporting limit in one well at a concentration of 2.2 μ g/L in MW-2. No other tested analytes were detected above their respective reporting limits. Laboratory analytical results are summarized in Table 1 and Table 2. Analytical results for GRO, Benzene, and MTBE are reported adjacent to their respective well on Drawing 1.

BAI concludes that the concentrations detected are consistent with the results previously reported in the request for site closure. A copy of the *Request for Site Closure*, *BP Service Station* #11266, 1541 Park Street, Alameda, California (URS Corporation, 21 February 2003) is provided as Appendix B. A copy of the GeoTracker Upload Confirmation for the data in this report is provided as Appendix C.

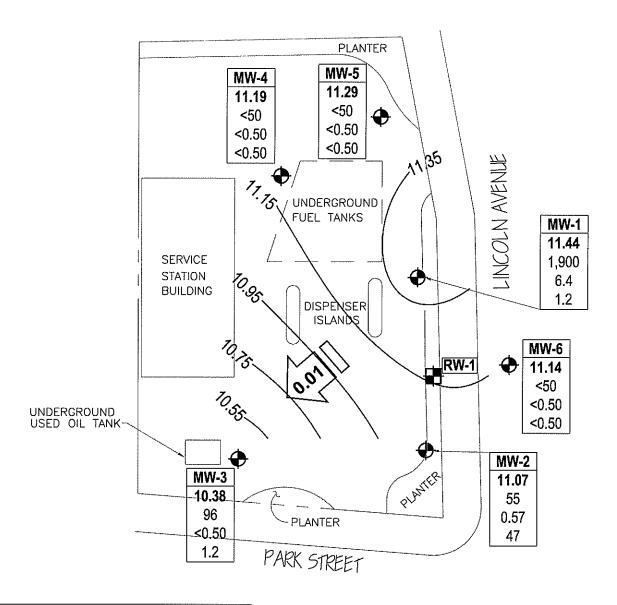
CLOSURE:

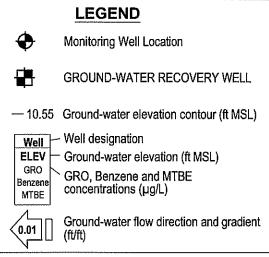
The findings presented in this report are based upon: observations of URS/Blaine Tech Services field personnel (see Appendix A), the points investigated, and results of laboratory tests performed by Test America (Morgan Hill, California). Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or implied

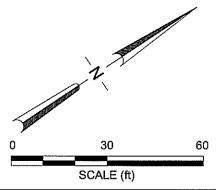
was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

ATTACHMENTS:

- Drawing 1. Ground-Water Elevation Contours and Analytical Summary Map, 24 August 2006, Former BP Service Station #11266, 1541 Park Street, Alameda, California
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #11266, 1541 Park Street, Alameda, California
- Table 2. Summary of Fuel Additives Analytical Data, Station #11266, 1541 Park Street, Alameda, California
- Appendix A. URS Ground-Water Sampling Data Package (Includes Laboratory Report and Chain of Custody Documentation, Field and Laboratory Procedures, and Field Data Sheets)
- Appendix B. Request for Site Closure, BP Service Station #11266, 1541 Park Street, Alameda, California. Prepared by URS Corporation, 21 February 2003.
- Appendix C. GeoTracker Upload Confirmation









BROADBENT & ASSOCIATES, INC.

ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California 95926 Project No. 06-08-658 Date: 10/23/06 Former BP Service Station #11266 1541 Park Street Alameda, California Ground-Water Elevation Contour and Analytical Summary Map 24 August 2006 Drawing

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses
Station #11266, 1541 Park Street, Alameda, CA

		TOC	Depth to	Water Level			Concer	ntrations in	ι (μg/L)					
Well and	nain	Elevation	Water	Elevation	GRO/	DRO/			Ethyl-	Total			DO	
Sample Date	P/NP	(feet msl)	(feet bgs)	(feet msl)	TPHg	TPHd	Benzene	Toluene	Benzene	Xylenes	MtBE	Lead	(mg/L)	Comments
MW-1														
8/24/2006	P	19.19	7.75	11.44	1,900	1,000	6.4	1.9	48	41	1.2	<100	-	
MW-2			·											
8/24/2006	₽	19.32	8.25	11.07	55	<47	0.57	<0.50	<0.50	1.0	47	<100	_	
MW-3														
8/24/2006	P	19.99	9.61	10.38	96	130	<0.50	0.52	<0.50	<0.50	1.2	<100		
MW-4														
8/24/2006	P	20.17	8.98	11.19	<50	<47	<0.50	<0.50	<0.50	<0.50	<0.50	<100	_	
MW-5														
8/24/2006	P	19.41	8.12	11.29	<50	<47	<0.50	<0.50	<0.50	<0.50	<0.50	<100	_	
MW-6														
8/24/2006	P	19.40	8.26	11.14	<50	<47	<0.50	<0.50	<0.50	<0.50	<0.50	<100		

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

Table 2. Summary of Fuel Additives Analytical Data Station #11266, 1541 Park Street, Alameda, CA

Well and				Concentrati	ons in (μg/L)				
Sample Date	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	Comments
MW-1	:								
8/24/2006	<600	<40	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-2									
8/24/2006	<300	<20	47	<0.50	<0.50	2.2	<0.50	<0.50	
MW-3									
8/24/2006	<300	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4									
8/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-5									
8/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-6									
8/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

APPENDIX A

URS GROUND-WATER SAMPLING DATA PACKAGE (INCLUDES LABORATORY REPORT AND CHAIN OF CUSTODY DOCUMENTATION, FIELD AND LABORATORY PROCEDURES, AND FIELD DATA SHEETS)



September 27, 2006

Mr. Rob Miller Broadbent & Associates, Inc. 2000 Kirman Avenue Reno, NV 89502

Groundwater Sampling Data Package

Former BP Service Station #11266 1541 Park Street Alameda, CA Field Work Performed: 08/24/06

General Information

Data Submittal Prepared/Reviewed by: Alok Kolekar

Phone Number: 510-874-3152

On-Site Supplier Representative: Blaine Tech

Scope of Work Performed: Groundwater Monitoring in accordance with 3rd Quarter 2006 protocols as identified in the Quarterly Monitoring Program Table in the Field and Laboratory Procedures

Attachment.

Variations from Work Scope: None

This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include, at a minimum, sampling procedures, field data collected, laboratory results, chain of custody documentation, and waste management activities. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations. Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Alok D. Kolekar, P.E. Project Manager

cc:

Paul Supple, Atlantic Richfield Company (RM), electronic copy uploaded to ENFOS

No. 69548

UIRS

Attachments

Field and Laboratory Procedures
Laboratory Report
Chain of Custody Documentation
Field Data Sheets
Well Gauging Data
Well Monitoring Data Sheets

FIELD & LABORATORY PROCEDURES

Sampling Procedures

The sampling procedure for each well consists first of measuring the water level and depth to bottom, and checking for the presence of free phase petroleum product (free product), using either an electronic indicator and a clear TeflonTM bailer or an oil-water interface probe. Wells not containing free product are purged approximately three casing volumes of water (or until dewatered) using a centrifugal pump, gas displacement pump, or bailer. Equipment and purging method used for the current sampling event is noted on the attached field data sheets. During purging, temperature, pH, and electrical conductivity are monitored to document that these parameters are stable prior to collecting samples. After purging, water levels are allowed to partially (approximately 80%) recover. Groundwater samples (both purge and no purge) are collected using a Teflon bailer, placed into appropriate Environmental Protection Agency- (EPA) approved containers, labeled, logged onto chain-of-custody records, and transported on ice to a California State-certified laboratory. Wells with free product are not sampled and free product is removed according to California Code of Regulation, Title 23, Div. 3, Chap. 16, Section 2655, UST Regulations.

Laboratory Procedures

The groundwater samples were analyzed for the presence of the chemicals mentioned in the chain of custody using standard EPA methods. The methods of analysis for the groundwater samples are documented in the certified analytical report. The certified analytical reports and chain-of-custody record are presented in this attachment. The analytical data provided by the laboratory approved by RM have been reviewed and verified by that laboratory.



21 September, 2006

Alok Kolekar URS Corporation [Arco] 1333 Broadway, Suite 800 Oakland, CA 94612

RE: BP Heritage #11266, Alameda, CA

Work Order: MPH0918

Enclosed are the results of analyses for samples received by the laboratory on 08/25/06 18:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race

Senior Project Manager

CA ELAP Certificate # 1210

The results in this laboratory report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPGCLN Technical Specifications, applicable Federal, State, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPGCLN. This entire report was reviewed and approved for release.





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MPH0918-01	Water	08/24/06 14:58	08/25/06 18:05
MW-2	MPH0918-02	Water	08/24/06 15:31	08/25/06 18:05
MW-3	MPH0918-03	Water	08/24/06 15:25	08/25/06 18:05
MW-4	MPH0918-04	Water	08/24/06 15:55	08/25/06 18:05
MW-5	MPH0918-05	Water	08/24/06 16:20	08/25/06 18:05
MW-6	MPH0918-06	Water	08/24/06 14:36	08/25/06 18:05
TB-11266-08242006	MPH0918-07	Water	08/24/06 00:00	08/25/06 18:05

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies. These samples were received with no custody seals.





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

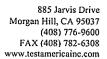
Total Purgeable Hydrocarbons by GC/MS (CA LUFT) TestAmerica - Morgan Hill, CA

				-	•				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1 (MPH0918-01) Water	Sampled: 08/24/06 14:58	Received:	08/25/06	5 18:05					
Gasoline Range Organics (C4-	C12) 1900	500	ug/l	10	6102004	09/02/06	09/02/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-	d4	93 %	60-	145	71	#	"	"	
MW-2 (MPH0918-02) Water	Sampled: 08/24/06 15:31	Received:	08/25/06	5 18:05					
Gasoline Range Organics (C4-	·C12) 55	50	ug/l	1	6102004	09/02/06	09/02/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-	d4	96 %	60-	145	"	"	n	"	
MW-3 (MPH0918-03) Water	Sampled: 08/24/06 15:25	Received:	08/25/06	18:05					
Gasoline Range Organics (C4-	C12) 96	50	ug/l	1	6102004	09/02/06	09/02/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-	d4	91 %	60-	145	п	"	"	p	
MW-4 (MPH0918-04) Water	Sampled: 08/24/06 15:55	Received:	08/25/06	18:05					
Gasoline Range Organics (C4-C	12) ND	50	ug/l	1	6102004	09/02/06	09/02/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-	d4	98 %	60-	145	n	n	r	n	
MW-5 (MPH0918-05) Water	Sampled: 08/24/06 16:20	Received:	08/25/06	18:05					
Gasoline Range Organics (C4-C	12) ND	50	ug/l	1	6102004	09/02/06	09/02/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-	d4	101 %	60-	145	"	"	n	"	
MW-6 (MPH0918-06) Water	Sampled: 08/24/06 14:36	Received:	08/25/06	18:05					
Gasoline Range Organics (C4-C	12) ND	50	ug/l	1	6102004	09/02/06	09/02/06	LUFT GCMS	

60-145

98 %

Surrogate: 1,2-Dichloroethane-d4





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B TestAmerica - Morgan Hill, CA

	Donortin-							
Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Sampled: 08/24/06 14:58	Received:	08/25/06	18:05			***************************************		
36) 1000	94	ug/l	2	6Н29002	08/29/06	09/06/06	EPA 8015B-SVOA	PJ
	73 %	30-1	15	п	"	"	n	
Sampled: 08/24/06 15:31	Received:	08/25/06	18:05					
5) ND	47	ug/l	1	6Н29002	08/29/06	09/06/06	EPA 8015B-SVOA	
	53 %	30-1	15	"	"	"	rr	
Sampled: 08/24/06 15:25	Received:	08/25/06	18:05					
36) 130	47	ug/l	1	6H29002	08/29/06	09/06/06	EPA 8015B-SVOA	PT
	107 %	30-1	15	n	n	п	"	
Sampled: 08/24/06 15:55	Received:	08/25/06	18:05					
5) ND	47	ug/l	1	6H29002	08/29/06	09/06/06	EPA 8015B-SVOA	
	68 %	30-1	15	n	"	n	и	
Sampled: 08/24/06 16:20	Received:	08/25/06	18:05					
5) ND	47	ug/l	1	6H29002	08/29/06	09/06/06	EPA 8015B-SVOA	
	70 %	30-1	15	"	11	"	n	
Sampled: 08/24/06 14:36	Received:	08/25/06	18:05					
5) ND	47	ug/l	1	6H29002	08/29/06	09/06/06	EPA 8015B-SVOA	
	71 %	30-1	15	n	n	11	"	
	Sampled: 08/24/06 14:58 36) 1000 Sampled: 08/24/06 15:31 5) ND Sampled: 08/24/06 15:25 36) 130 Sampled: 08/24/06 15:55 5) ND Sampled: 08/24/06 16:20 5) ND	Sampled: 08/24/06 14:58 Received: 36) 1000 94 73 % Sampled: 08/24/06 15:31 Received: 50 ND 47 Sampled: 08/24/06 15:25 Received: 36) 130 47 107 % Sampled: 08/24/06 15:55 Received: 50 ND 47 Sampled: 08/24/06 16:20 Received: 50 ND 47 70 % Sampled: 08/24/06 14:36 Received: 50 ND 47	Result Limit Units Sampled: 08/24/06 14:58 Received: 08/25/06 36) 1000 94 ug/l 73 % 30-1 Sampled: 08/24/06 15:31 Received: 08/25/06 50 ND 47 ug/l Sampled: 08/24/06 15:25 Received: 08/25/06 36) 130 47 ug/l Sampled: 08/24/06 15:55 Received: 08/25/06 50 ND 47 ug/l Sampled: 08/24/06 16:20 Received: 08/25/06 68 30-1 Sampled: 08/24/06 16:20 Received: 08/25/06 65 ND 47 ug/l Sampled: 08/24/06 14:36 Received: 08/25/06 65 ND 47 ug/l	Result Limit Units Dilution Sampled: 08/24/06 14:58 Received: 08/25/06 18:05 36) 1000 94 ug/l 2 73 % 30-115 Sampled: 08/24/06 15:31 Received: 08/25/06 18:05 18:05 50) ND 47 ug/l 1 53 % 30-115 Sampled: 08/25/06 18:05 130 47 ug/l 1 107 % 30-115 Received: 08/25/06 18:05 15 15 Sampled: 08/24/06 16:25 Received: 08/25/06 18:05 10 10 47 ug/l 1 <	Result Limit Units Dilution Batch	Result Limit Units Dilution Batch Prepared Sampled: 08/24/06 14:58 Received: 08/25/06 18:05 36) 1000 94 ug/l 2 6H29002 08/29/06 Sampled: 08/24/06 15:31 Received: 08/25/06 18:05 Sampled: 08/24/06 15:35 Received: 08/25/06 18:05 36) ND 47 ug/l l 6H29002 08/29/06 Sampled: 08/24/06 15:55 Received: 08/25/06 18:05 6 68 % 30-115 " Sampled: 08/24/06 16:20 Received: 08/25/06 18:05 5 ND 47 ug/l l 6H29002 08/29/06 50 ND 47 ug/l l 6H29002 08/29/06 50 ND 47 ug/l l 6H29002	Result Limit Units Dilution Batch Prepared Analyzed	Result





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

Total Metals by EPA 200 Series Methods

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MPH0918-01) Water	Sampled: 08/24/06 14:58	Received:	08/25/0	6 18:05					•
Lead MW-2 (MPH0918-02) Water	ND Sampled: 08/24/06 15:31	100 Received:	ug/l 08/25/0	6 18:05	6Н30009	08/30/06	08/30/06	EPA 200.7	
Lead MW-3 (MPH0918-03) Water	ND Sampled: 08/24/06 15:25	100 Received:	ug/l 08/25/0	1 6 18:05	6Н30009	08/30/06	08/30/06	EPA 200.7	
Lead MW-4 (MPH0918-04) Water	ND Sampled: 08/24/06 15:55	100 Received:	ug/l 08/25/0	1 6 18:05	6Н30009	08/30/06	08/30/06	EPA 200.7	
Lead MW-5 (MPH0918-05) Water	ND Sampled: 08/24/06 16:20	100 Received:	ug/l 08/25/0	1 6 18:05	6Н30009	08/30/06	08/30/06	EPA 200.7	
Lead MW-6 (MPH0918-06) Water	ND Sampled: 08/24/06 14:36	100 Received:	ug/l 08/25/0	l 6 18:05	6Н30009	08/30/06	08/30/06	EPA 200.7	
Lead	ND	100	ug/l	1	6H30009	08/30/06	08/30/06	EPA 200.7	





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

Volatile Organic Compounds by EPA Method 8260B TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1 (MPH0918-01) Water	Sampled: 08/24/06 14:58	Received:	08/25/06 1	8:05					
tert-Amyl methyl ether	ND	1.0	ug/l	2	6107006	09/07/06	09/07/06	EPA 8260B	
Benzene	6.4	1.0	II	ti	1)	rt	IJ	II.	
tert-Butyl alcohol	ND	40) i	U	tr	ü	П	II .	
Di-isopropyl ether	ND	1.0	II .	n	u	л	u	n	
1,2-Dibromoethane (EDB)	ND	1.0	11	11	II .	n	11	11	
1,2-Dichloroethane	ND	1.0	1)	ti.	It	11	**	**	
Ethanol	ND	600	11	17	u	*11	11	tf	
Ethyl tert-butyl ether	ND	1.0	**	17	11	17	п	11	
Ethylbenzene	48	1.0	**	"	и	**	lt .	Ц	
Methyl tert-butyl ether	1.2	1.0	**	н	u	fr	ч	u .	
Toluene	1.9	1.0	fr	U	11	n	II	П	
Xylenes (total)	41	1.0			11			1)	
Surrogate: Dibromofluoromethan	ne	92 %	75-13	0	#	"	"	n	
Surrogate: 1,2-Dichloroethane-d-	4	96 %	60-14	5	"	"	"	"	
Surrogate: Toluene-d8		97%	70-13	0	,,	"	"	"	
Surrogate: 4-Bromofluorobenzen	e	96 %	60-12	0	"	**	**	rt	
MW-2 (MPH0918-02) Water	Sampled: 08/24/06 15:31	Received:	08/25/06 1	8:05					
tert-Amyl methyl ether	2.2	0.50	ug/l	1	6102004	09/02/06	09/02/06	EPA 8260B	
Benzene	0.57	0.50	11	11	II	n	II	u	
tert-Butyl alcohol	ND	20	tt	н	**	U	II	11	
Di-isopropyl ether	ND	0.50	H	H	**	U	11	**	
1,2-Dibromoethane (EDB)	ND	0.50	(r	U	tf	п	11	"	
1,2-Dichloroethane	ND	0.50	u	п	II .	п	**	er	
Ethanol	ND	300	11	u	II	H	**	T†	
Ethyl tert-butyl ether	ND	0.50	i)	II .	11	11	H	u .	
Ethylbenzene	ND	0.50	11	11	и	71	11	II	
Methyl tert-butyl ether	47	0.50	U	19	11	**	II	II	
Toluene	ND	0.50	11	11	ŧ	**	u	II	
Xylenes (total)	1.0	0.50	**	H	U	**		11	
Surrogate: Dibromofluoromethan	e	94 %	<i>75-13</i>	0	n	n	H	и	
Surrogate: 1,2-Dichloroethane-d	4	96 %	60-14	5	"	*	"	rt .	
Surrogate: Toluene-d8		90 %	70-13	0	"	n	"	n	
Surrogate: 4-Bromofluorobenzen	е	90 %	60-12	0	"	"	"	n	





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

Volatile Organic Compounds by EPA Method 8260B

TestAmerica - Morgan Hill, CA

Analyic	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-3 (MPH0918-03) Water S	Sampled: 08/24/06 15:25	Received:	08/25/06	18:05					
tert-Amyl methyl ether	ND	0.50	ug/l	1	6102004	09/02/06	09/02/06	EPA 8260B	*
Benzene	ND	0.50	tt	er	17	п	11	U	
tert-Butyl alcohol	ND	20	n	ŧŧ	**	u	**	n	
Di-isopropyl ether	ND	0.50	"	IV.	H	11	**	ŧ1	
1,2-Dibromoethane (EDB)	ND	0.50	l)	"	tr	"	II .	**	
1,2-Dichloroethane	ND	0.50	11	U	U	**	u	tt	
Ethanol	ND	300	ŋ	n	ij	***	ij	U	
Ethyl tert-butyl ether	ND	0.50	11	11	U	tt	II .	н	
Ethylbenzene	ND	0.50	*	11	11	n	11	ij	
Methyl tert-butyl ether	1.2	0.50	ŧs	tr.	ij	u	**	11	
Toluene	0.52	0.50	H	10	u	u	**	n	
Xylenes (total)	ND	0.50	н	tr	**	1)	rr	**	
Surrogate: Dibromofluoromethane	g	94 %	75-1	30	"	n	п	n	
Surrogate: 1,2-Dichloroethane-d4		91 %	60-1	45	"	"	U	"	
Surrogate: Toluene-d8		98 %	70-1	30	н	n	ıı	n	
Surrogate: 4-Bromofluorobenzene	:	97%	60-1	20	n	п	#	n	
MW-4 (MPH0918-04) Water S	Sampled: 08/24/06 15:55	Received:	08/25/06	18:05					
tert-Amyl methyl ether	ND	0.50	ug/l	1	6102004	09/02/06	09/02/06	EPA 8260B	
Benzene	NID.	0.50	**	31	**	11	11	34	
	ND	0.50						**	
tert-Butyl alcohol	ND ND	20	tt	**	"	11	11	6†	
tert-Butyl alcohol Di-isopropyl ether						11	"		
•	ND	20	tt	**	n			64	
Di-isopropyl ether	ND ND	20 0.50	tt	er tr	tt 17	37	"	69 18	
Di-isopropyl ether 1,2-Dibromoethane (EDB)	ND ND ND ND ND	20 0.50 0.50	tt H H	tr tr	tt fr	37 11	"	er Ur	
Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane Ethanol Ethyl tert-butyl ether	ND ND ND ND	20 0.50 0.50 0.50	tt H H	11 11	ee 11 11	31 11 11	n n	# # # #	
Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane Ethanol Ethyl tert-butyl ether Ethylbenzene	ND ND ND ND ND ND ND	20 0.50 0.50 0.50 300	11 11 11	# # # # # # # # # # # # # # # # # # #	# # # # # # # # # # # # # # # # # # #	37 15 17 (f	11 11 11	# # # # # # # # # # # # # # # # # # #	
Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane Ethanol Ethyl tert-butyl ether	ND ND ND ND ND ND	20 0.50 0.50 0.50 300 0.50	11 11 11	11 11 11	e 17 11 11 11 11 11 11 11 11 11 11 11 11	11 11 11 11 11 11 11 11 11 11 11 11 11	11 11 11	# # # # # # # # # # # # # # # # # # #	
Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane Ethanol Ethyl tert-butyl ether Ethylbenzene	ND ND ND ND ND ND ND ND	20 0.50 0.50 0.50 300 0.50 0.50 0.50	tr fi fi fi fi fi	17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	# # # # # # # # # # # # # # # # # # #	97 90 14 00 11 10 10	1) 11 11 12 12 12 13 14 14 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	11 11 11 11 11 11	
Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane Ethanol Ethyl tert-butyl ether Ethylbenzene Methyl tert-butyl ether	ND ND ND ND ND ND ND	20 0.50 0.50 0.50 300 0.50 0.50 0.50	10 11 11 11 11	17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	# # # # # # # # # # # # # # # # # # #	17 18 17 16 11 10	1) 11 11 12 13 14 14 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	H H H H H H H H H H H H H H H H H H H	
Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane Ethanol Ethyl tert-butyl ether Ethylbenzene Methyl tert-butyl ether Toluene	ND ND ND ND ND ND ND ND ND	20 0.50 0.50 0.50 300 0.50 0.50 0.50	10 11 11 11 11 11 11 11 11 11 11 11 11 1	17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	## ## ## ## ## ## ## ## ## ## ## ## ##	97 90 14 00 11 10 10	1) 11 11 12 12 12 13 14 14 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	11 11 11 11 11 11	
Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane Ethanol Ethyl tert-butyl ether Ethylbenzene Methyl tert-butyl ether Toluene Xylenes (total)	ND N	20 0.50 0.50 0.50 300 0.50 0.50 0.50 0.50	11 11 11 11 11 11 11 11 11 11 11 11 11	"""	# # # # # # # # # # # # # # # # # # #	n n n n n n n n n n n n n n n n n n n	11 11 12 13 14 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	64 11 11 11 11 11 11 11	
Di-isopropyl ether 1,2-Dibromoethane (EDB) 1,2-Dichloroethane Ethanol Ethyl tert-butyl ether Ethylbenzene Methyl tert-butyl ether Toluene Xylenes (total) Surrogate: Dibromofluoromethane	ND N	20 0.50 0.50 0.50 300 0.50 0.50 0.50 0.50	75-1	" " " " " " " " " " " " " " " " " " "	# # # # # # # # # # # # # # # # # # #	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	00 00 00 00 00 00 00 00 00 00 00 00 00	





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

Volatile Organic Compounds by EPA Method 8260B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-5 (MPH0918-05) Water	Sampled: 08/24/06 16:20	Received:	08/25/06 1	8:05					
tert-Amyl methyl ether	ND	0.50	ug/l	1	6102004	09/02/06	09/02/06	EPA 8260B	
Benzene	ND	0.50	17	н	97	n	ii	u	
tert-Butyl alcohol	ND	20	tt	U U	Ħ	ŋ	ŋ	11	
Di-isopropyl ether	ND	0.50	IT)1	Ħ	11	II .	11	
1,2-Dibromoethane (EDB)	ND	0.50	U	11	U	***	"	"	
1,2-Dichloroethane	ND	0.50	II .	11	н	ti	**	tt.	
Ethanol	ND	300	h	11	U	**	Ħ	п	
Ethyl tert-butyl ether	ND	0.50	ti .	Er	н	IV.	D	0	
Ethylbenzene	ND	0.50	11	**	**	.,	0	II .	
Methyl tert-butyl ether	ND	0.50	n	10	**	U	П	11	
Toluene	ND	0.50	Ħ	H	Ħ	u	ij	11	
Xylenes (total)	ND	0.50	ļī	U	Ħ	11	11	**	
Surrogate: Dibromofluoromethan	ie	98 %	75-13	0	"	"	#	n	
Surrogate: 1,2-Dichloroethane-d-	4	101 %	60-14	5	"	"	"	n .	
Surrogate: Toluene-d8		88 %	70-13	0	n	"	"	"	
Surrogate: 4-Bromofluorobenzen	e	76 %	60-12	0	n	11	n	u	
MW-6 (MPH0918-06) Water	Sampled: 08/24/06 14:36	Received:	08/25/06 1	8:05					
tert-Amyl methyl ether	ND	0.50	ug/l	1	6102004	09/02/06	09/02/06	EPA 8260B	
Benzene	ND	0.50	н	n	II	*1	17	0	
tert-Butyl alcohol	ND	20	tt)1	II	77	"	U	
Di-isopropyl ether	ND	0.50	tt	11	п	**	Ħ	n	
1,2-Dibromoethane (EDB)	ND	0.50	II	11	11	It	11	11	
1,2-Dichloroethane	ND	0.50	11	**	11	(r	η	11	
Ethanol	ND	300	a a	t y	11	II .	"	**	
Ethyl tert-butyl ether	ND	0.50	11	**	**	"	ŋ	tr	
Ethylbenzene	ND	0.50	11	Iţ	, "	1)	†1	ti	
Methyl tert-butyl ether	ND	0.50	**	u	Ħ	11	12	II.	
Toluene	ND	0.50	н	"	II	31	H	II	
Xylenes (total)	ND	0.50	tt				**))	
Surrogate: Dibromofluoromethan		98 %	75-13	0	n	n .	n	"	
Surrogate: 1,2-Dichloroethane-de	4	98 %	60-14	5	n	n	"	"	
Surrogate: Toluene-d8		87 %	70-13	0	n	"	"	ř.	
Surrogate: 4-Bromofluorobenzen	e	81 %	60-12	0	v	n	"	TI .	





Project: BP Heritage #11266, Alameda, CA

Spike

Source

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

RPD

%REC

Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control TestAmerica - Morgan Hill, CA

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6102004 - EPA 5030B P/T / L	UFT GCMS									
Blank (6I02004-BLK1)				Prepared	& Analyz	ed: 09/02/	06			
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.51		n	2.50		100	60-145			
Laboratory Control Sample (6102004-B	S2)			Prepared	& Analyzo	ed: 09/02/	06			
Gasoline Range Organics (C4-C12)	465	50	ug/l	440		106	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.22		n	2.50		89	60-145			
Matrix Spike (6I02004-MS1)	Source: MP	H0906-07		Prepared	& Analyze	ed: 09/02/	06			
Gasoline Range Organics (C4-C12)	540	50	ug/l	700	ND	77	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.35		"	2.50		94	60-145			
Matrix Spike Dup (6102004-MSD1)	Source: MP	H0906-07		Prepared	& Analyze	ed: 09/02/	06			
Gasoline Range Organics (C4-C12)	549	50	ug/l	700	ND	78	75-140	2	20	
Surrogate: 1.2-Dichloroethane-d4	2.32		rr	2.50		9.3	60-145			





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

Extractable Hydrocarbons with Silica Gel cleanup by EPA 8015B - Quality Control TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6H29002 - EPA 3510C / EPA	A 8015B-SVOA									
Blank (6H29002-BLK1)				Prepared:	08/29/06	Analyzec	l: 09/06/06		•	
Diesel Range Organics (C10-C36)	ND	50	ug/l							
Surrogate: n-Octacosane	52.1		"	50.0		104	30-115			
Laboratory Control Sample (6H29002-	-BS1)			Prepared:	08/29/06	Analyzed	l: 09/06/06			
Diesel Range Organics (C10-C36)	321	50	ug/l	500		64	40-140			
Surrogate: n-Octacosane	32.6		H	50.0		65	30-115			
Laboratory Control Sample Dup (6H2	9002-BSD1)			Prepared:	08/29/06	Analyzed	l: 09/11/06			Di
Diesel Range Organics (C10-C36)	362	50	ug/l	500		72	40-140	12	35	
Surrogate: n-Octacosane	36.7		"	50.0		73	30-115			





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

Total Metals by EPA 200 Series Methods - Quality Control TestAmerica - Morgan Hill, CA

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6H30009 - EPA 3005A / EPA	200.7									
Blank (6H30009-BLK1)				Prepared	& Analyze	ed: 08/30/	06			
Lead	ND	100	ug/l							
Laboratory Control Sample (6H30009-B	S1)			Prepared	& Analyzo	ed: 08/30/	06			
Lead	954	100	ug/l	1000		95	85-115			
Matrix Spike (6H30009-MS1)	Source: M	PH0885-01		Prepared	& Analyze	ed: 08/30/0	06			
Lead	973	100	ug/l	1000	ND	97	70-130			
Matrix Spike Dup (6H30009-MSD1)	Source: M	PH0885-01		Prepared	& Analyze	ed: 08/30/0	06			
Lead	998	100	ug/l	1000	ND	100	70-130	3	20	





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009 Project Manager: Alok Kolekar

MPH0918 Reported: 09/21/06 16:02

Volatile Organic Compounds by EPA Method 8260B - Quality Control TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6I02004 - EPA 5030B P/T / EI	A 8260B	***************************************								
Blank (6102004-BLK1)				Prepared o	& Analyze	:d: 09/02/	06		-	
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	u							
tert-Butyl alcohol	ND	20	II .							
Di-isopropyl ether	ND	0.50	п							
1,2-Dibromoethane (EDB)	ND	0.50	11							
1,2-Dichloroethane	ND	0.50	**							
Ethanol	ND	300	**							
Ethyl tert-butyl ether	ND	0.50								
Ethylbenzene	ND	0.50	tt							
Methyl tert-butyl ether	ND	0.50	1)							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	U							
Surrogate: Dibromofluoromethane	2.35		"	2.50		94	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.51		"	2.50		100	60-145			
Surrogate: Toluene-d8	2.26		n	2.50		90	70-130			
Surrogate: 4-Bromofluorobenzene	2.08		#	2.50		83	60-120			
Laboratory Control Sample (6102004-BS	31)			Prepared &	& Analyze	d: 09/02/0	06			
ert-Amyl methyl ether	9.78	0.50	ug/l	10.0		98	65-135			
Benzene	10.2	0.50	lt .	10.0		102	70-125			
tert-Butyl alcohol	185	20	tt	200		92	60-135			
Di-isopropyl ether	11.2	0.50	11	10.0		112	70-130			
1,2-Dibromoethane (EDB)	9.95	0.50	II	10.0		100	80-125			
1,2-Dichloroethane	9.50	0.50	"	10.0		95	75-125			
Ethanol	192	300	U	200		96	15-150			
Ethyl tert-butyl ether	11.5	0.50	1)	10.0		115	65-130			
Ethylbenzene	10.9	0.50	11	10.0		109	70-130			
Methyl tert-butyl ether	11.3	0.50	17	10.0		113	50-140			
Toluene	9.58	0.50	17	10.0		96	70-120			
Xylenes (total)	32.5	0.50	**	30.0		108	80-125			
Surrogate: Dibromofluoromethane	2.41		"	2.50		96	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.45		"	2.50		98	60-145			
Surrogate: Toluene-d8	2.46		"	2.50		98	70-130			
Surrogate: 4-Bromofluorobenzene	2.58		"	2.50		103	60-120			





Project: BP Heritage #11266, Alameda, CA

Project Number: G07Y3-0009
Project Manager: Alok Kolekar

Spike

Source

MPH0918 Reported: 09/21/06 16:02

RPD

%REC

Volatile Organic Compounds by EPA Method 8260B - Quality Control TestAmerica - Morgan Hill, CA

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6102004 - EPA 5030B P/T / E	PA 8260B									
Matrix Spike (6I02004-MS1)	Source: MI	PH0906-07		Prepared	& Analyz	ed: 09/02/	06		_	
tert-Amyl methyl ether	9.16	0.50	ug/l	10.0	ND	92	65-135			
Benzene	9.63	0.50	"	10.0	ND	96	70-125			
ert-Butyl alcohol	189	20	71	200	ND	94	60-135			
Di-isopropyl ether	9.73	0.50	1)	10.0	ND	97	70-130			
,2-Dibromoethane (EDB)	9.88	0.50	**	10.0	ND	99	80-125			
,2-Dichloroethane	8.87	0.50	**	10.0	ND	89	75-125			
Ethanol	187	300	**	200	ND	94	15-150			
Ethyl tert-butyl ether	10.4	0.50	**	0.01	ND	104	65-130			
Ethylbenzene	10.2	0.50	11	10.0	ND	102	70-130			
Methyl tert-butyl ether	10.6	0.50	**	10.0	ND	106	50-140			
l'oluene	9.52	0.50	ęź.	10.0	ND	95	70-120			
Xylenes (total)	31.0	0.50	U	30.0	ND	103	80-125			
Gurrogate: Dibromofluoromethane	2.46		"	2.50		98	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.35		"	2.50		94	60-145			
Surrogate: Toluene-d8	2.41		n	2.50		96	70-130			
Surrogate: 4-Bromofluorobenzene	2.54		"	2.50		102	60-120			
Matrix Spike Dup (6I02004-MSD1)	Source: MF	H0906-07		Prepared	& Analyze	ed: 09/02/	06			
ert-Amyl methyl ether	9.28	0.50	ug/l	10.0	ND	93	65-135	1	25	
Benzene	10.0	0.50	"	10.0	ND	100	70-125	4	15	
ert-Butyl alcohol	191	20	**	200	ND	96	60-135	1	35	
Di-isopropyl ether	9.88	0.50	II	10.0	ND	99	70-130	2	35	
,2-Dibromoethane (EDB)	10.0	0.50	II	10.0	ND	100	80-125	1	15	
,2-Dichloroethane	8.95	0.50	lt .	10.0	ND	90	75-125	0.9	10	
Ethanol	189	300	II .	200	ND	94	15-150	1	35	
Ethyl tert-butyl ether	10.6	0.50	11	10.0	ND	106	65-130	2	35	
Ethylbenzene	10.5	0.50	н	10.0	ND	105	70-130	3	15	
Methyl tert-butyl ether	10.6	0.50	11	10.0	ND	106	50-140	0	25	
Coluene	9.74	0.50	11	10.0	ND	97	70-120	2	15	
Kylenes (total)	31.9	0.50	rŧ	30.0	ND	106	80-125	3	15	
Surrogate: Dibromofluoromethane	2.46		ı,	2.50		98	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.32		"	2.50		93	60-145			
Surrogate: Toluene-d8	2.42		"	2.50		97	70-130			
Surrogate: 4-Bromofluorobenzene	2.49		"	2.50		100	60-120			





Project: BP Heritage #11266, Alameda, CA

Spike

Source

Project Number: G07Y3-0009 Project Manager: Alok Kolekar MPH0918 Reported: 09/21/06 16:02

RPD

%REC

Volatile Organic Compounds by EPA Method 8260B - Quality Control TestAmerica - Morgan Hill, CA

		Reporting		эрікс	Source		MEC		KPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6I07006 - EPA 5030B P/T / I	EPA 8260B									
Blank (6107006-BLK1)				Prepared	& Analyze	ed: 09/07/0	06		-	
tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	tt							
tert-Butyl alcohol	ND	5.0	tt							
Di-isopropyl ether	ND	0.50	Ir							
1,2-Dibromoethane (EDB)	ND	0.50	u u							
1,2-Dichloroethane	ND	0.50	н							
Ethanol	ND	300	11							
Ethyl tert-butyl ether	ND	0.50	u Î							
Ethylbenzene	ND	0.50	11							
Methyl tert-butyl ether	ND	0.50	n							
Toluene	ND	0.50	**							
Xylenes (total)	ND	0.50	**							
Surrogate: Dibromofluoromethane	2.29		p	2.50		92	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.31		n	2.50		92	60-145			
Surrogate: Toluene-d8	2.27		n	2.50		91	70-130			
Surrogate: 4-Bromofluorobenzene	2.27		u	2.50		91	60-120			
Laboratory Control Sample (6107006-1	BS1)			Prepared	& Analyze	d: 09/07/0)6			
tert-Amyl methyl ether	10.0	0.50	ug/l	10.0		100	65-135			
Benzene	9.74	0.50	18	10.0		97	70-125			
tert-Butyl alcohol	194	20	U	200		97	60-135			
Di-isopropyl ether	10.4	0.50	11	10.0		104	70-130			
1,2-Dibromoethane (EDB)	9.72	0.50	ly	10.0		97	80-125			
1,2-Dichloroethane	10.1	0.50	U	10.0		101	75-125			
Ethanol	280	300	II	200		140	15-150			
Ethyl tert-butyl ether	10.4	0.50	н	10.0		104	65-130			
Ethylbenzene	10.4	0.50	п	10.0		104	70-130			
Methyl tert-butyl ether	10.2	0.50	11	10.0		102	50-140			
Toluene	10.3	0.50	ti	10.0		103	70-120			
Xylenes (total)	32.0	0.50	11	30.0		107	80-125			
Surrogate: Dibromofluoromethane	2.26		n	2.50		90	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.22		"	2.50		89	60-145			
Surrogate: Toluene-d8	2.29		#	2.50		92	70-130			
Surrogate: 4-Bromofluorobenzene	2.34		n	2.50		94	60-120			





Project: BP Heritage #11266, Alameda, CA

Spike

Source

Project Number: G07Y3-0009 Project Manager: Alok Kolekar

MPH0918 Reported: 09/21/06 16:02

RPD

%REC

Volatile Organic Compounds by EPA Method 8260B - Quality Control TestAmerica - Morgan Hill, CA

Reporting

		Reporting		арікс	Source		70KEC		KPD .	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6I07006 - EPA 5030B P/T / E	PA 8260B									
Matrix Spike (6I07006-MS1)	Source: M	PH1001-01		Prepared	& Analyze	ed: 09/07/	06			
tert-Amyl methyl ether	10.4	0.50	ug/l	10.0	ND	104	65-135			
Benzene	9.86	0.50	n.	10.0	ND	99	70-125			
tert-Butyl alcohol	194	20	**	200	ND	97	60-135			
Di-isopropyl ether	10.8	0.50	u	10.0	ND	108	70-130			
1,2-Dibromoethane (EDB)	10.2	0.50	tt	10.0	ND	102	80-125			
1,2-Dichloroethane	10.6	0.50	16	10.0	ND	106	75-125			
Ethanol	243	300	· ·	200	ND	122	15-150			
Ethyl tert-butyl ether	10.9	0.50	11	10.0	ND	109	65-130			
Ethylbenzene	10.3	0.50	n	10.0	ND	103	70-130			
Methyl tert-butyl ether	10.9	0.50	57	10.0	ND	109	50-140			
Toluene	10.3	0.50	H	10.0	ND	103	70-120			
Xylenes (total)	32.3	0.50	U	30.0	ND	108	80-125			
Surrogate: Dibromofluoromethane	2.31		**	2.50		92	75-130			
Surrogate: 1,2-Dichloroethane-d4	2.38		"	2.50		95	60-145			
Surrogate: Toluene-d8	2.27		rt	2.50		91	70-130			
Surrogate: 4-Bromofluorobenzene	2.31		n	2.50		92	60-120			
Matrix Spike Dup (6107006-MSD1)	Source: M	PH1001-01		Prepared a	& Analyze	d: 09/07/0	06			
tert-Amyl methyl ether	10.4	0.50	ug/l	10.0	ND	104	65-135	0	25	
Benzene	9.91	0.50	11	10.0	ND	99	70-125	0.5	15	
tert-Butyl alcohol	194	20	**	200	ND	97	60-135	0	35	
Di-isopropyl ether	10.7	0.50	rr	10.0	ND	107	70-130	0.9	35	
1,2-Dibromoethane (EDB)	10.1	0.50	**	10.0	ND	101	80-125	1	15	
1,2-Dichloroethane	10.6	0.50	tř	10.0	ND	106	75-125	0	10	
Ethanol	321	300	п	200	ND	160	15-150	28	35	LN
Ethyl tert-butyl ether	10.8	0.50	u	10.0	ND	108	65-130	0.9	35	
Ethylbenzene	10.6	0.50	n	10.0	ND	106	70-130	3	15	
Methyl tert-butyl ether	10.8	0.50	11	10.0	ND	108	50-140	0.9	25	
Toluene	10.4	0.50	**	10.0	ND	104	70-120	1	15	
Xylenes (total)	32.4	0.50	tt	30.0	ND	108	80-125	0.3	15	
Surrogate: Dibromofluoromethane	2.27		"	2.50		91	75-130			
Surrogate: 1,2-Dichloroethane-d4			rt	2.50		92	60-145			
	2.31			2.50			00 1.75			
Surrogate: Toluene-d8	2.31 2.29		n	2.50		92	70-130			





URS Corporation [Arco] Project: BP Heritage #11266, Alameda, CA MPH0918
1333 Broadway, Suite 800 Project Number: G07Y3-0009 Reported:
Oakland CA, 94612 Project Manager: Alok Kolekar 09/21/06 16:02

Notes and Definitions

SG A silica gel cleanup procedure was performed.

PT Hydrocarb. in req. fuel range, but doesn't resemble req. fuel

LM MS and/or MSD above acceptance limits. See Blank Spike(LCS).

DU Insufficient sample quantity for matrix spike/dup matrix spike

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

	bp
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Chain of Custody Record

Project Name <u>GWM</u> BP BU/GEM CO Portfolio Retail

BP Laboratory Contract Number: Atlantic Richfield Company Requested Due Date (mm/dd/yy) 14 day TAT

	1 MgC 1 01 1
On-site Time: /74-	Temp: -070"
Off-site Time: 1645	Temp: 70
Sky Conditions: C	lea-
Meteorological Events:	
Wind Speed:	Direction:

													_				ببيا									
Send To:					BP/GEM Facility N	lo.:		112	266				·					Consult	ant/Co	ntrac	tor: UR	 RS				一
Lab Name: Test America	1				BP/GEM Facility	ddres	ss:	1541	Park	St.,	Alamed	da									roadwa		ite 800			\dashv
Lab Address: 885 Jarvis Dr	•				Site ID No.			11266													d, CA 9				W-N-	
Morgan Hill, (CA 95037				Site Lat/Long:													-mail F					corp.cor	~		\dashv
					California Global II	D #:	$\overline{}$	TOE	30130	018	5 _							onsult	ant/Co	ntrac	tor Proje	ect No	COLD.COL	11		
Lab PM Lisa Race					BP/GEM PM Conta	act;					/		•			1							3152/5	10-87	4-3268	\dashv
Tele/Fax: 408-776-9600					Address:					/	7	17	1109	100	-	¹							k Koleka			-
Report Type & QC Level: 1 S	end EDF Repo	rts								1			aux												Circle one)	_
BP/GEM Account No.: 400-	6-21124				Tele/Fax:	_											——	****			ease No					ᅴ
Lab Bottle Order No:		N.	/latr	ix				I	reser	vativ	res					Rec	uest	ed Ana	lysis				-		· · · · · · · · · · · · · · · · · · ·	
Item No. Sample Descript	ion Time	Soil/Solid	Water/Liquid	Sediments Air	Laboratory No.	No. of containers		H.SO.	HNO,	HCI			GRO/BTEX (8260)	DRO (8015)	Total Lead	Ethanol (8260)	MTBE, TAME, ETBE DIPE, TBA (8260)	EDB & EDC (8260)					ample F	Comm		ıd
/1 MW-1	1438		$\langle $		اه	9				X			X	X	X	Z IS		X-					8/24/			\dashv
2 MW-2	153 i	X			υV	9				×		7	$\overleftarrow{\mathbf{x}}$	Ź	X	7	<u>~</u>	3				1-6	7-11			\dashv
13 MV-3	1525	7	7		<i>U</i> 3	g		-		X		1	\(\)	X			$\stackrel{\searrow}{\times}$	$\widehat{\mathbf{x}}$				_	\dashv	 -	·····	
14 AW-4	1555		7		oy	G		·		K		-	$\frac{1}{1}$	<u>/ </u>	X		-	$\stackrel{\prime}{\times}$					- $ -$			
15 MW-S	1620	7	7		05	G		1		X			Ź I	×	X	}	>	<u>/</u>				-	+			-
16 MW-6	1436	γ			271	a				$\hat{\chi}$	 	┪	\sim	_	X ;			$\frac{\sim}{\times}$				╢	-			- 1
7 TB-1126-68242			c	7	+7	2				兌	<u> </u>		^-	<u>/`</u>	^+							-	_		5L U	\dashv
8			+	$\dashv \dashv$			-					┈╂			\dashv	\dashv					-	-	· O.	~ (/	» C O	-
9			\dashv	\dashv			-	\vdash			<u> </u>	╁			-	-					_	+		* ** **		
10			\top									┈∦										_				
Sampler's Name: 5-Car	nacy e Tech Serve			Rel	inquished By / Affilia	tion			!		Date		Cime		Acce	nted	Bv/2	Affiliati	on			Date	P	Time		ㅓ
Sampler's Company: \$ 600	e Tech Serve	00			14/0/10	777		*			08/24/2		700100-00			4			75				134/26		500	\dashv
Shipment Date:		~~~			Si Angele	ter	NO:U	. د	100	<u> </u>	3/1/	7	124	2	~~~						~~		12/06			-
Shipment Method:	7.11-17.			- (t C		8/21/25		170	5	X	00	<u> </u>	Ī	110	4.1	m H		3/25		XS	-
Shipment Tracking No:											t	-			(<u>~`\\</u>	(/\/\\	\	x. i [4	\top	2 <u>C</u>)_	╫┈	(1000)	\dashv
Special Instructions:												!!								+					***	\dashv
Custody Seals In Place Yes	No		Т	empe	rature Blank Yes_	\ \	4o		(Cool	er Tem	per	ature	on R	lece	ipt <u>(</u>	2-1	o _{F/} Ç)	Tri	p Blank	k Yes	_XN	o		7

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: りの これ WORKORDER: りゅうこう これ ロード・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	9. 8/28/ 5 9/8		DATE REC'D AT LAB: TIME REC'D AT LAB: DATE LOGGED IN:	180	25106	4			tory Purposes? WATER YES / NO
CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE#	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERV ATIVE	рН	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s) Present / Alpsent	6] .		MW-1	(a UCAS	<u> </u>			8124	
Intact / Broken*			• 1	250m (P)	· HNO3	<u> </u>	•		
2. Chain-of-Custody Present / Absent*		<u> </u>	1	a AMRERS	. —				•
3. Traffic Reports or	· 22.		2	Same	SAME		· _		
Packing List: Present / Absent	63	<u> </u>	· - 3						
4. Airbill: Airbill / Sticker	υ <u>γ</u>	<u> </u>	-4		<u>:</u>		<u> </u>		<u> </u>
Present / Absent)	05		-5					<u>.</u>	
5. Airbill #:	64		-6						
6. Sample Labels: Present / Absent	67		TB	QUOAS.	HCC				
7. Sample IDs: Listed / Not Listed						·		·	
on Chain-of-Custody		 				·			
8. Sample Condition: Intact / Broken* /	· 		•			<u>:</u>		·	
Leaking*					, -		*****		
9. Does information on chain-of-custody,	<u> </u>	-					· - · ·		
traffic reports and sample Jabels	-								
agree? Yes / No*	·		``			<u> </u>	<u> </u>		
10. Sample received within	<u> </u>				-/	·· .		· · · · · · · · · · · · · · · · · · ·	
hold time? Yes / No*				\bigcap	1 (\				
11. Adequate sample volume						\mathcal{L}			
received? (Yes / No*			· > -		1		<u> </u>		
12. Proper preservatives used? (Yes)/ No*	· · · · · · · · · · · · · · · · · · ·		. ()						
13. Trip Blank / Temp Blank Received?		٠٠					<u> </u>		
, (circle which, if yes) Yes / No*	ļ								
14. Read Temp: 2.1			<u> </u>		<u> </u>				
Corrected Temp:			· · · · · · · · · · · · · · · · · · ·		·	·			,
ls corrected temp 4 +/-2°C? (Yes No**	**		<u></u>				·	·	
(Acceptance range for samples requiring thermal pres.)	•	_	·				······································		
**Exception (if any): METALS / DFF ON ICE		ļ				-			
or Problem COC						. · reseason	(1):06(p3:02(024)):/	STATE OF THE STATE	
	*IE CIRC	יו בים נ	CONTACT PROJECT M	ANAGER AND	ATTACH F	RECOR	D OF RES	OLUTION.	

SRL Revision 7
Replaces Rev 5 (07/13/04)

Page 1 of]

WELL GAUGING DATA

Projec	et # Obo 87	24-WC-	Date	08-24-06	Client	BP11266	
Site	(541	INK	street	Alameda			

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)		Depth to water	Depth to well bottom (ft.)	Survey Point: TOB or	Notes
MW-1	1400	2	ORC	IV.	W	ELL	4.195x	24.46		
MW-S	1416	2					8.25	Z5. O2		
MW-3	1422	2					9.61	19.49		10ck
MW-4	14[]	2					8.98	21.79		abolt none
MW-5	1405	2							\neg / \neg	gone 1507 missing
MW-3 MW-4 MW-5 MW-6	1425	2					8.26	18.93	V	<u> </u>
		,						,		
		~								

ARCO / BP WELL MONITORING DATA SHEET

BTS#:	06082	4-WC-	- B	Station #	266				
Sampler:	Will w	cov		Date: 8-24					
Well I.D	: Mw-	-(Well Diamete	`	3	4 6	8	
Total We	ell Depth:	24.4	6	Depth to Wat	er: 7.	75			
Depth to	Free Prod	uct:		Thickness of		·	feet):		
Referenc	ed to:	(EAD	Grade	D.O. Meter (i			YSI	HACH	
Purge Meth	Well Diame 1" 2" 3"		Multiplier V 0.04 0.16 0.37	Vell Diameter 4" 6"	<u>Multiplier</u> 0.65 1.47 lius ² * 0.163	ailer	131	HACE	\ \ \ \ \ \ \ \
J	D Positi Ele E	ve Air Displa ve Air Displa ctric Submers Extraction Pun	cernent sible		Disposi	able Balle tion Port			
Top of Scree	en:		If well is listed as a of screen. Otherwi	no-purge, confirm se, the well must b	n that wate	er level is	s below-th	ne top	
	1 Case Vol	ume (Gals.)	x Specified Vo.	= {	lculated V	Gals. olume			
Time	Temp (°F)	pН	Conductivity (mS or (£8)	Gals. Removed	Obser	rvations			
1445	73.6	6-9	617	2.7					
1449	731	6-7	618	5.4					
1453	727	6-6	636	8(
							······································		
Did well o	lewater?	Yes	N	Gallons actual	ly evacı	uated:)، لا		
Sampling	Time:	1458		Sampling Date		24-0			
Sample I.	D.: MU	N-1		Laboratory:	Pace	Sequoia	CA Oth	ner	
Analyzed	for: G	RO BTEX MT	BE DRO Oxy's 1.2-DC	A EDB Ethanol	Other:				
D.O. (if re	q'd):		Pre-purge:	mg/ ₁	Po	st-purge	:		mg/L
O.R.P. (if			Pre-purge:	mV	Po	st-purge	2:		mV
Blaine To	ech Servi	ices, Inc	. 1680 Rogers	Ave., San Jo	ose, CA	9511	2 (408	573-05	555

	<u> </u>	ANCO	· / Def vv E.l. [V]	TOMITORIAG	DATA SHEE		
BTS #:	11266	060820	4-66-7	Station # 11	266		
Sampler	: Will	cow		Date: 8-29	4-06		
Well I.D	11 MW	-2		Well Diamete	r: (2) 3 4	6	8
Total We	ell Depth:	25.	02	Depth to Wate	er: 825		
Depth to	Free Prod	uct:		Thickness of I	Free Product (f	eet):	· · · · · · · · · · · · · · · · · · ·
Referenc	ed to:	(PVC)	Grade	D.O. Meter (if		YSI	- CLA CYT
	Well Diam				Multiplier	131	HACH
	1"		0.04	4"	0.65		
	2" 3"		0.16	6"	1 47		ļ
D 14 d			0.37	Other radi	us ² * 0.163]
Purge Meth	_	Bailer		Sampling Method	: Bailer		
		Disposable Ba	iler		Disposable Bailer	>	
	Positi	ive Air Displa	cement		Extraction Port		
	Ele	ectric Submer	sible	Other:			
	Ŧ	Extraction Pur	np		· —————		
	Other:		r				
							
Top of Scre	en:	****	If well is listed as a	i no-purge, confirm	that water level is	below th	ie ton
			of screen. Otherwi	se, the well must be	nurged	00.017 00	и тор
		•	****		- pargou.		
	2	27	x 3	<u>_</u>	8. Gals.		
	1 Case Vol	lume (Gals.)	Specified Vo	lumes Cal	culated Volume		
	<u> </u>	i i		Can	culated volume	·	
m:	- (9m)		Conductivity				
Time	Temp (°F)	pН	(mS or (tS)	Gals. Removed	Observations		
1515	70.9	7.2	538	27	Brown		
1520	70.0	7.0	543	54	1		
	69.5	6.9	554	8.1		_,	
1000		6.1		0,1	V	<u> </u>	-
				<u> </u>			
	<u> </u>		G				
Did well		Yes	No No	Gallons actuall	y evacuated:	8.	1
Sampling	Time:	153		Sampling Date	: 8-24-0€	>	
Sample I.	D.: MW	1-2		Laboratory:	Pace & equoia 7	'A Oth	ler_
Analyzed	for: G	RO BTEX MT	BE DRO Oxy's 1,2-DC	A EDB Ethanol	Other:		
D.O. (if re	eq'd):		Pre-purge:	mg/ _L	Post-purge		mg/
O.R.P. (if			Pre-purge:	mV	Post-purge	:	mV
Blaine T	ech Serv	ices, Inc	. 1680 Rogers	Ave., San Jo	se. CA 9511	2 (408	1572.0555
1.5			-	· · · · ·	-, 	- /=.~O	, 4, 4-6443

ARCO / BP WELL MONITORING DATA SHEET

						,		
BTS #:	060824-	wca		Station # BP	11266			
Sampler:	SC			Date: OS	124/06			
Well I.D	MW-	3		Well Diameter	: (2) 3 4	6 8		
Total We	ell Depth:	19.40	ĵ	Depth to Water	r: 9.67		7	
Depth to	Free Prod	ıct:	 	Thickness of Free Product (feet):				
Referenc	ed to:	(PVC)	Grade	D.O. Meter (if req'd): YSI HACH				
D N. 6 - 41	Well Diame t" 2" 3"		Multiplier y 0.04 0.16 0.37	Well Diameter <u>A</u> 4" (6" Other radiu	<u>fultiplier</u> 0.65 1.47 is ² * 0.163		,,	
Purge Meth		Bailer isposable Bai	:1	Sampling Method:				
		risposable Bai ve Air Displa		X Disposable Bailer				
		ctric Submer		Other:	Extraction Port			
		extraction Pur		Other.				
•,	Other:		•					
Top of Screen	en:		If well is listed as a	no-purge, confirm	that water laval is l	halası tha tau	_	
, ,			of screen. Otherwi	se, the well must be	nurged	neiow me fot	,	
1.6 x 3				1/	Puigou.			
				= <u>7.0</u> Gals.				
٠	1 Case Vol	ume (Gals.)	Specified Vo	lumes Cald	culated Volume			
Time	Temp (°F)	pН	Conductivity (mS oπμS)	Gals. Removed	Observations			
1517	74.0	6.8	537	(.6	Lt. bown	sh jodo-	•	
1517	73.8	6.8	531	7.7	10 00	٠,		
1250	73.5	6.8	525	4.8	رد (۱	fainted	D -	
	·	·	·					
				Gallons actually evacuated: 4.8				
Sampling	Time:	8/ 1	525	Sampling Date	: 08/24/0	6		
Sample I.D.: Mルーろ				Laboratory:	Pace Sequoia	Other_	TA	
Analyzed	for: G	RO BTEX M	TBE DRO Oxy's 1.2-DO	A EDB Ethanol	Other:	e Coc		
D.O. (if req'd):			Pre-purge:	mg/L	Post-purge:	T	mg _{/L}	
O.R.P. (if req'd):		- ·	Pre-purge:	mV	Post-purge:		mV	
Blaine T	ech Serv	ices, Inc	. 1680 Rogers	Ave., San Jo	se, CA 9511:	2 (408) 5	73-0555	

ARCO / BP WELL MONITORING DATA SHEET

BTS#:	060874-	WCZ		Station # BP 11266 Date: 08/24/06				
Sampler:	SC			Date: 08/24/06				
Well I.D.	: MW-L	1		Well Diameter: (2) 3 4 6 8				
Total We	ll Depth:	71.79		Depth to Water: 8-98				
Depth to	Free Produ	ıct:		Thickness of Free Product (feet):				
Reference	ed to:	PVG	Grade	D.O. Meter (if req'd): YSI HACH				
2" 0.04 2" 0.16 3" 0.37			0.04 0.16	Vell Diameter <u>f</u> 4" 6" Other radio	Multiplier 0.65 : 1 47 1s ² * 0.163	,		
Purge Metho		Bailer isposable Bail	ler	Sampling Method:	Bailer Disposable Bailer			
	-	e Air Displac		,	Extraction Port	,		
		ctric Submers		Other:				
		xtraction Pun	ηp					
	Other:				ì			
Top of Scree	n:	····	If well is listed as a	no-purge, confirm	that water level is be	low the top		
		,	of screen. Otherwi	se, the well must be	purged.			
	7.		x 3	_ 6	3			
	1 Case Volume (Gals.) Specified \			olumes Calculated Volume				
			Conductivity		<u> </u>			
Time	Temp (°F)	pН	(mS or (LS)	Gals. Removed	Observations			
1541	70.6	6.6	609	2.1	cldy branish	ino do-		
1544	70.8	6.5	611	4.2	10 (1	· (c · (r		
1547	71-2	6.5	613	6.3	11 11	11 11		
						The state of the s		
Did well dewater? Yes (No)				Gallons actually evacuated: 6.3				
Sampling Time: \\SSS				Sampling Date: 08/24/06				
Sample I.	D.: M1	J-4		Laboratory:	Pace Sequoia	Other TA		
Analyzed	for: G	RO BTEX MT	BE DRO Oxy's 1.2-DC	CA EDB Ethanol	Other: See C			
D.O. (if req'd): Pre-pur				mg/ _L			mg/L	
			Pre-purge:	mV	Post-purge:		mV	
Blaine T	ech Serv	ices, Inc	. 1680 Rogers	S Ave., San Jo	se, CA 95112	(408) 573-05	555	

ARCO / BP WELL MONITORING DATA SHEET

BTS#:	060824-	m CS		Station # BP 11266					
Sampler:	SC			Station # BP 11266 Date: 08/24/06					
Well I.D.	: MW-3	>		Well Diameter: (2) 3 4 6 8					
Total We	ll Depth:	24.05	<u> </u>	Depth to Water	r: 8-12		***************************************		
Depth to	Free Produ	ıct:		Thickness of F	Thickness of Free Product (feet):				
Reference	ed to:	(PVC)	Grade	D.O. Meter (if	req'd):	YSI HACI	<u> </u>		
Purge Metho	Well Diame 1" 2" 3"	Bailer	Multiplier V 0.04 0.16 0.37	Vell Diameter N 4" 0 6" 1	<u>fultiplier</u> 0.65 47 s ² * 0.163				
	,	isposable Bail	er		/Disposable Bailer				
	,	ve Air Displac		Х	Extraction Port				
	Ele	ctric Submers	ible	Other:					
		xtraction Pun	np						
	Other:						_		
Top of Scree	en:		If well is listed as a	no-purge, confirm	that water level is be	low the top			
				se, the well must be		1			
	7.	6	x 3	_ 7	8 01				
	I Case Vol	ume (Gals.)	Specified Vo.	lumes Calc	Gals.				
			Conductivity						
Time	Temp (°F)	pН	(mS or µS)	Gals. Removed	Observations				
1607	69.2	7.0	429	2.6	Cldy branis	sh; noode-			
1611	68.7	7,0	437	5.2	11 ((12 61			
1615	68.5	7.0	446	7.8	10 00	16 1/			
	·		·						
Did well	dewater?	Yes	No	Gallons actuall	y evacuated:	7.8			
Sampling		1620		Sampling Date	: 08/24/0	> 6			
Sample I.	D.: M	W-5		Laboratory:	Pace Sequoia	Other TA			
Analyzed	for: G	RO BTEX MT	BE DRO Oxy's 1,2-DC		Other: Sec	5 C			
D.O. (if re	eq'd):	<u> </u>	Pre-purge:	mg/Ĺ	Post-purge:		^{mg} /∟		
O.R.P. (if	req'd):		Pre-purge:	mV	Post-purge:		mV		
Rlaine T	ach San	icas Ina	1680 Rogers	Aug San Ia	00 CA 05442	1400) 2700			

ARCO / BP WELL MONITORING DATA SHEET

() () () () () () () () () ()						
BTS #: 060824-52-1 WCZ	Station # 11266					
Sampler: We	Date: 8/24/06					
Well I.D.: MW-6	Well Diameter: ② 3 4 6 8					
Total Well Depth: [8-93	Depth to Water: 8-26					
Depth to Free Product:	Thickness of Free Product (feet):					
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH					
	Well Diameter Multiplier					
l" 0.04 2" 0.16	4" 0.65 6" 1.47					
3" 0.37	6" 1.47 Other radius ² * 0.163					
Purge Method: Bailer						
Dispose Bailer	Sampling Method: Bailer					
<u> </u>	Disposable Bailer					
Positive Air Displacement	Extraction Port					
Electric Submersible	Other:					
Extraction Pump						
Other:						
Top of Screen: If well is listed as	a no-purge, confirm that water level is below the top					
-	rise, the well must be purged.					
a a a a a a a a a a a a a a a a a a a	iot, the well must be purged.					
1 (7 x 3	= 5-(Gals.					
l Case Volume (Gals.) Specified Vo						
Conductivity						
1c l						
	Gals. Removed Observations					
1426 74.2 C. 48	1.7					
1429 74.0 6.4 496	3.4					
1431 73.8 6.6 495	\$.1					
·						
.**						
Did well dewater? Yes	Gallons actually evacuated: 5.					
Sampling Time: 1436	Sampling Date: 8-24-06					
Sample I.D.: MW-6	Laboratory: Pace Sequoia TA Other					
Analyzed for GRO BYEX MTBE DRO UNYS 1.2-D						
D.O. (if req'd):	Post-purge: mg/L					
O.R.P. (if req'd): Pre-purge						
Blaine Tech Services Inc. 1680 Perce	s Ave., San Jose, CA 95112 (408) 573-0555					

SOUTHER PROPER POINT	WELL I.D. GALS.	WELL I.D. GALS.
SOURCE RECORD BILL OF LADING FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM	/	VILLE I.D. GALS.
GROUNDWATER WELLS AT:		
BP 11266		
Client		
1560		
Site Name	/	/
VISY (Park St	/	/
Street Address		
Alameda, (A		
City, State	,	/
	added equip.	any other
	rinse water <u>/</u>	adjustments/
THE NON-HAZARDOUS PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO	TOTAL GALS. 42.0	loaded onto BTS vehicle #
LOADS OF APPROPRIATE SIZE AND HAULED TO:	BTS event#	time date
	signature	1665 00 127/06
	signature 1960	
	********	******
	REC'D AT	time date
The contractor performing this work is BLAINE TECH SERVICES,	unlanded la	/
INC., 1680 Rogers Ave., San Jose, CA 95112 (phone [408] 573-0555).	unloaded by signature	
	~ · · · · · · · ·	##

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WELLHEAD INSPECTION CHECKLIST BP / GEM

Date	24-06							
Site Address	1541 PNI	c Stree	t , Al	and	<u> </u>			<u> </u>
Job Number	060824-h	11-1	<u> </u>	Tec	hnician	tw	()	
Well ID	Well Inspected - No Corrective Action Required	Water Balled From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1								
MW-2						****		
					4	X		
MW-3 MW-Y	lat	2	2014		Ker	<u>, </u>		
MW-5	lot	2	bol	61	oken			
MW-6								
						_		
					-			
						~ · · · · · · · · · · · · · · · · · · ·		
						<u></u> -		
			i i					
NOTES:	MIN-4-1	both	- pc) 55+	ng 1	46-5	1 50	(+ m)	Time
					· · · · · · · · · · · · · · · · · · ·			
		· · · · · · · · · · · · · · · · · · ·	٨					······································
•			T-T			-4		

WELL GAUGING DATA

Project #	060821-501	_ Date _08/21/01	Client	BP11266	
Site <i>i)</i>	541 Park 5t-	Alameda, (A			

	1	T			Lantie		·			
		Well		D - 41 /	Thickness	1			Survey	
		Size	Sheen /	Depth to	of	Immiscibles	1		Point:	
Well ID	Time	(in.)	Odor		Immiscible		Depth to water		TOB or	
	-		Odol	Liquid (II.)	Liquid (ft.)	(ml)	(ft.)	bottom (ft.)	TOC	Notes
Mw-1	0932	2 ^					7.82	23.73	T	
MW-Z	1055	2					7.82 7.34	24.50		
MW-3	1203	2						19.57		
mw-4	1834	入 人					9.05	21-41		
MW-Z MW-3 MW-5 MW-6	1305	2		1988				8-7-72	.A.	
mw-6	1426	2					7.65	18.70	V	
										
	at Fline	nd orc	5 to 9	ه دې کې ځ د سې	y +desch	p well				
									_	

Project #: 060821 - 5	Cİ				Client: B	PIIZE	56		20	 -
Developer: SC					Date Dev	eloped:	0 8	8/21/06	AND STATE	
Well I.D. MW-1					Well Diar	neter: (circle		· 4 6	
Total Well Depth: Before 33.73 A	fter 74	.34			Depth to Before 7		Afte	er 12.04		
Reason not developed		2			If Free Pro		hickr	ness:	•	~ **********
Additional Notations:	Sugal	well	L		10 min. p	Acr K	لاجاد	relopment		×.
Volume Conversion Factor (VCF): $\{12 \times (d^2/4) \times \pi\} / 231$ where $12 = \text{in / foot}$ $d = \text{diameter (in.)}$ $\pi = 3.1416$ $231 = \text{in 3/gal}$		Well dia. 2" 3" 4" 6" 10" 12"		VCI 0.16 0.37 .0.65 1.47 4.08 6.87	F 5 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8					- - - - - - - - - - - - - - - - - - -
2.6	Χ.			ਹ			,	26	***************************************	
I Case Volume		S	peci	ified	Volumes			gallons		
Purging Device:		Bailer Suction		ump	•			Electric Subme Positive Air Di		

Type of Installed Pump
Other equipment used

TIME	TEMP (F)	pН	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
ogsi	68.0	6-1	604	332	2.6	Dard both encountries her
0956	69.8	6.3	607	291	5.2	
) o 61	70.1	6.3	618	290	7-8	gray-black; who heavy sift to
1006	69.7	6.4	634	320	10.4	may have a comp
1011	68.7	6.6	664	145	13.0	gregish jodortsteen DTW=1
icie	68.5	6.6	665	82	15.6	10 11 10 pro=11.7
1021	68.4	6.6	662	68	18.2	Clear gregish; oder prv=12
1026	68.2	6.6	660	39	20.8	11 11 11 pTW= 12.16
<u>i031</u>	68.2	6.6	659	2 3	23.4	10 (1 074=12.30
1036	68.2	6.6	661	20	26,0	COTUSIZET
, s						,
		Ų				
id Well Dew	vater? N v	If yes, note ab	ove.	Gallons Actually	y Evacuated:	26.0

Project #: 06082	1-501		•	Cl	ient: B/	9/12	-66			
Developer: 5	<u> </u>			Da	ite Devel	oped:	081	121/06		
Well I.D. ML	1-2	·		W	ell Diam	eter: (circle	one) 🗘	3 4	6
Total Well Depth:				De	pth to W	ater:			<u>-</u>	
Before 24-So	After 25	.12		Ве	fore 7.3	4	Afte	er		
Reason not develo	ped:			If	Free Pro	duct, t	hickn	ess:		
Additional Notation	ons: Suyu	well	To.	-10/	in priso	- to O	erelge	next		
Volume Conversion Factor (V $\{12 \times (d^2/4) \times \pi\} / 23\}$ where $12 = \text{in / foot}$ $d = \text{diameter (in.)}$ $\pi = 3.1416$ $231 = \text{in 3/gal}$		Well dia. 2" 3" 4" 6" 10" 12"		VCF 0.16 0.37 0.65 1.47 4.08 6.87	•	,				
5.8	X			10				28		
1 Case Volume		S	peci	fied Vo	lumes	=		ga	llons	
Purging Device:	☐ Bailer☐ Suction Pump				Electric Submersible Positive Air Displacement					
	Type of Insta Other equipr		-		Surge	b/se.40				

1108			Cond.	TURBIDITY	VOLUME	
TIME	TEMP (F)	pН	(mS or µS)	(NTUs)	DEMOVED	NOTATIONS:
1112	67.0	7.0	535	71000	2.8	henrysilt darkborn, faint 0743
115	68.9	6.7	539	71000	5.6	henryselt darkboung silo- 0742 han bothore newsterly henry silt; darkboung silo- 0742
[119	68.1	6.8	570	71000	8.4	11 , W I R BYNE
1122	67.9	6.8	571	466	11.2	cloudy light broken; feit oclo- b to
1126	68.1	6.8	569	71000	14.0	Cloudy light broken; first vilon b or brown cloudy; 11 4 0702 15
1179	68.2	6.8	572	459	16-8	cldylight bown judo - ETW = 15.68
(133	68.2	6.8	573	192	19.6	11 11 11 fajat DTU = 16.88
1136	68.2	6.8	573	171	22.4	1111 10 10 DTW= 16.97
1140	68-1	6.8	572	184	25.2	11 11 11 11 11 DTW= 17.18
1143	68.2	6.8	574	[14	28.0	11 11 11 11 0 10 2 16 39
				·		
Did Well Dev	vater? Na	If yes, note abo	ve.	Gallons Actuall	ly Evacuated:	28.3

Project #: 060821-	rci	-		Client: BP11266
Developer: SC				Date Developed: 08/21/06
Well I.D. Mu-3				Well Diameter: (circle one) 3 4 6
Total Well Depth:				Depth to Water:
Before 19.57	After 19.	58		Before 9.61 After 11.70
Reason not develop	ed:			If Free Product, thickness:
Additional Notation	15: Surjed	vell		and product development
Volume Conversion Factor (VCF { $12 \times (d^2/4) \times \pi$ } /231 where $12 = \text{in / foot}$ $d = \text{diameter (in.)}$);	Well day 2" 73" 4"	0.3 = 0.6: = 1.4'	
$\pi = 3.1416$ 231 = in 3/gal		10" 12"	= 4.00 = 6.8°	08
1.1	Х		10	16.0
1 Case Volume	* -	S	pecified	d Volumes = gallons
Purging Device:	0	Bailer	on Pump	D Electric Submersible p

Type of Installed Pump
Other equipment used

1223			Cond.	TURBIDITY	VOLUME	Ÿ.
TIME	TEMP (F)	pH	(mS or µS)	(NTUs)	REMOVED:	NOTATIONS:
1225	67.3	7.0	513	>1000	1.6	brown closes; here is
1227	71.2	6.8	527	71000	3.2	11 11 11 10 od 000 21124
1279	カイ	6.7	543	71000	4.8	ic a un u pen ally 2
1231	72.0	6.9	542	71000	6.4	16 61 66 66 11 DOCN=11.47
1233	71.8	7.0	534	71000	8.0	11 11 11 11 10 11 1136
1235	720	6.7	ぎュネ	"365"	9-6	lightbown , Fa Malor Dav 1847
1237	71.9	4.0	523 -	470	11.2	el el ec approvalisz
1239	71.8	7.0	537	200 2	1 6 00	الرود دو در
1241	72.4	6.8	530 0	174	14.4	100 11 00 - 1284
3 HPAS		ç	•		16.00 -	The state of the s
7 1243	725	6.8	528	126,	16.0	clay 17 born no alo- Otaz 1170
			9.1		i de	
Did Well Dew	vater? No	If yes, note abo	ve.	Gallons Actual	ly Evacuated:	16.0

		WEL	L DEVEL	OPMENT	DATA SI	dee i	
Project #	: 06082	1-501		Client:	BP11266	-	
Develope	er: SC		· · · · · · · · · · · · · · · · · · ·		loped: 08/		
Well I.D.	Mh	,-4		Well Dian	neter: (circle	one) (2) 3 4	6
Total We	Il Depth:		·····	Depth to V	Vater:		
Before 7	1.41	After		Before 9.	os Afte	er 10.97	
Reason n	ot develor	ped:		If Free Pro	duct, thickn	ness:	
Additiona	al Notatio	ns: Surged o	well for long.	n prombda	velopmont		
{12 x (where 12 = in	meter (in.) 416	F):	2" = 0. 3" = 0. 4" = 0. 6" = 1.	08			
3	- ට	X		0		ત્રેડ	
1 Case	Volume		Specifie	d Volumes	=	gallons	
Purging De	vice:	0	Bailer Suction Pum	p	<u> </u>	Electric Submersibl Positive Air Displace	
		Type of Insta Other equipm	nent used	J 51-35	, block		
IS41 TIME	TEMP (F)	pН	(mS or (µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIO	NS:
1543	69-7	6.7	5 35	7/000	2.0	darkbown her my	5.14
1546	70.7	6.6	533	71000	4.0	hard bother encounter darkbrown ; here	sty Drw =1
1549	70.7	6.4	541	71000	6.0	11 11 11 11 11	
1552	70.6	6,6	564	71000	8,0	eldy brown, no alon	Drus-w.s
1555	70.5	6,6	577	71000	10.0	11 16 1606 12 16	
1332 1332 1333	70.4	6.6	582	882	12.0	clearing islight	dor
Po+1559	70.4	6.6	588	506	14.0		11 DTW= 1
A. 41601	704	6.5	586	471	16.0	دار دار ور	
940-74603	70.4	6.5	594	313	18.0	11 60 7	
2640/606	70.4	6.6	598	250	20-0	,, ,, ,,	Drw-10.
-							

Gallons Actually Evacuated:

20.0

Did Well Dewater? No If yes, note above.

Project #: 060821-5c		Client: BP 11266
Developer: SC		Date Developed: 08/21/06
Well I.D. Aw-5		Well Diameter: (circle one) ② 3 4 6
Total Well Depth;	07 61	Depth to Water:
Before St. 77 After	23-91	Before 8-18813 After 10.74
Reason not developed:		If Free Product, thickness:
Additional Notations:	Surged of Su	ingeblock loning part acreloguet
Volume Conversion Factor (VCF): $\{12 \times (d^2/4) \times \pi\} / 231$	Well dia. VC	<u>C</u> r
{(2 x (α /4) x π } /23) where	2" = . 0.1 3" \times 0.3	
12 = in / foot	4" = 0.6	
d = diameter (in.)	6" = 1.4	•
$\pi = 3.1416$	10" = 4.0	08
231 = in 3/gat	12" = 6.8	87
0.16 2.5 X	+6	7 10 250 4:0
1 Case Volume	Specified	d Volumes = gallons
Purging Device:	☐ Bailer	☐ Electric Submersible
	Suction Pump	p Positive Air Displacement
Type of	Installed Pump	

Type of Installed Pump

Other equipment used

1318 TIME	TEMP (F)	pН	(mS or (S)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1321	67.0	7,0	495	71000	2.5	brown cloudy ; faint velou
1325	67.8	6.9	363	717	5.0	
1328	67.8	6.4	401	>1000	7.5	light brown ; no see
1332	679	6.8	443	632	9.010.0	
1335	67.8	6.8	468	586	12.5	11 (((())
1339	67.8	6.8	497	269	15.0	16 " " " DTW=10.59
1342	67.7	6.8	507	142	17.5	11 11 faint odo-
1346	677	6.8	520	101	20.0	(« (" DEW=10.63
1349	67.7	6.8	522	90	22.5	clear brun frist
1353	67.7	6.9	527	FS	25.0	10 00 10 DTW-10.74
-						
				,		
Did Well Dev	water? NO	If yes, note above	∕e.	Gallons Actually	y Evacuated:	250

		· · · · · · · · · · · · · · · · · · ·		O1 1411/1/4 1		
Project #:	06082	1-501			P11266	
Develope	r: 5C			Date Deve	loped: 68/	21/06
Well I.D.	MU-6	,			neter: (circle	
Total We	ll Depth:			Depth to V	Vater:	
Before	8.20	After 18	-73	Before 7	65 Afte	er 9.07
Reason no	ot develor	ed:		If Free Pro	duct, thickn	ness:
Additiona	l Notatio	ns: Surgedo	ellh-io,	nia. pri-	to levely men	7
(12 x (where 12 ≈ in /	meter (in.) 416	F):	2" = 0. 3" = 0. 4" = 0. 6" = 1.	37 65 47 08		
-	7	X	i	0		17.0
1 Case	Volume		Specifie	d Volumes		gallons
Purging De	vice:		Bailer Suction Pum alled Pump	-		Electric Submersible Positive Air Displacement
		Other equipr	nent used	21 Sur	gelolick	,
HT7434 TIME	TEMP (F)	pН	Cond. (mS or (4S)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1437	71.8	6.9	487	71000	1-7	O. Ggon fault clay brown; odor
1440	73.2	6,7	479	71000	3.4	handboth in encountered brown oldy , fainfactor UTU=08.
1443	73.2	6-7	492	71600	5.1	15 66 16 15
1446	72.9	6.7	481	21000	6.8	11 (1 ndodo- DEWZ & 6
1449	73.2	6.7	158	OF FFE	8.5	
	73.0	6.6		71000	10.2	heavy sit ; noods-
1455	72.8	6.6	448	839	11-9	e e e
1458	72.9	6.7	57+ 420	571	13.6	11. (((((1 DTW= 8.
1500	72.7	6.6	2470469	587	15.3	lesssit; no alor
1503	73.2	6.6		DH8 368	17.0	lessilt no alor
				t	I	1

Gallons Actually Evacuated:

Did Well Dewater? No If yes, note above.

17,0

BP GEM OIL COMPANY TYPE A BILL OF LADING

BILL OF LADING FOR NON-SOURCE RECORD **HAZARDOUS PURGEWATER RECOVERED FROM** GROUNDWATER WELLS AT BP GEM OIL COMPANY FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY DILLARD ENVIRONMENTAL TO THE ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY IN LIVERMORE, CALIFORNIA.

The contractor performing this work is PLAINE TECH SERVICES, INC. (BTS), 1680 Rogers Avenue, San Jose, CA 95112 (phone [408] 573-0555). Blaine Tech Services, Inc. is authorized by BP GEM OIL COMPANY to recover, collect, apportion into loads the Non-Hazardous Well Purgewater that is drawn from wells at the BP GEM Oil Company facility indicated below and deliver that purgewater to BTS. Transport routing of the Non-Hazardous Well Purgewater may be direct from one BP GEM facility to the designated destination point; from one BP GEM facility; from a BP GEM facility to the designated destination point via another BP GEM facility; from a BP GEM facility, or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of BP GEM Oil Company.

This Source Record BILL OF LADING was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the BP GEM Oil Company facility described below:

BP11266	
Station #	
1541 Park St. A	Lameda, CA
Station Address	
Total Gallons Collected From Gr	oundwater Monitoring Wells:
added equip. rinse water	any other adjustments
TOTAL GALS. 13>	loaded onto BTS vehicle # 22
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WELLHEAD INSPECTION CHECKLIST BP / GEM

Page _____of ____

Debris Scarnet Well Inspected Replaced No Corrective Action Required MW-1 MW-1 MW-3 MW-5 MW-6 NOTES: Christybox > MW-1; MW-2; M	Date <u>OS/</u>	1541 Park	- St.	Alameda	(CA				
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APPENDIX B

REQUEST FOR SITE CLOSURE, BP SERVICE STATION #11266 1541 PARK STREET, ALAMEDA, CALIFORNIA (URS CORPORATION, 21 FEBRUARY 2006)

URS

February 21, 2003

Ms. Eva Chu Hazardous Materials Specialist Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

SUBJECT:

REQUEST FOR SITE CLOSURE, BP SERVICE STATION #11266, 1541 PARK

STREET, ALAMEDA, CALIFORNIA

Dear Ms. Chu:

URS Corporation (URS) has prepared the following request for closure of the subject site on behalf of Group Environmental Management company (a BP affiliate company). This letter includes a brief site history and addresses the six points defining a Low Risk Groundwater Case as laid out in Supplemental Instructions to State Water Board, December 8, 1995, Interim Guidance on Required Cleanup at Low Risk Fuel Sites (CRWQCB, January 5, 1996).

SITE HISTORY

A site history is included in the Baseline Assessment Report for Site 11266, prepared by EMCON Northwest, Inc. (EMCON) in 1994. Site 11266 is an operating 76-branded service station on the southwest corner of the intersection of Lincoln Avenue and Park Street in Alameda, California (Figure 1). Surrounding properties include a restaurant to the west of the site; a restaurant, shopping center, car dealer, and oil change service garage to the south and southeast of the site; and shopping centers and a restaurant to the north and east of the site. BP has been responsible for site environmental issues since ownership of the site was transferred from Mobil Oil Corporation (Mobil) to BP in 1989.

Site features include a station building and two pump islands with a concrete drive slab and canopy. Existing underground storage tanks (USTs) at the station include one 12,000-gallon and two 10,000-gallon double wall fiberglass tanks installed in 1987. A 1,000-gallon double wall fiberglass waste oil tank was also installed in 1987 (EMCON found conflicting information listing the existing waste oil tank at 600 gallons). The station manager at the time of EMCON's investigation stated that all tanks were equipped with leak detection systems according the EMCON's report. The station building has three auto repair service bays, each with a hoist and an associated floor drain. Two remote fill drains for the waste oil tank are also located in the service bay area. The floor drains were said by the station manager at the



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time of EMCON's investigation to discharge to the sanitary sewer, and the remote fills to connect to the waste oil UST.

EMCON personnel visited the site on July 8, 1994 (EMCON, 1994). They noted three observation wells in the UST complex area and seven wells on site. Observation wells within the UST complex could not be accessed during the site visit. The concrete surfaces within the auto repair service bays and by the pump islands were reported to be in good condition with few cracks. The asphalt covering the rest of the site was reported to have a significant number of cracks. A groundwater treatment system near the southwest corner of the site appeared to be operating at the time of EMCON's site visit.

Four USTs are reported to have been on site prior to the installation of the current USTs in 1987 (EMCON, 1994). EMCON found conflicting information the capacities of the former USTs. According to the 1987 Soil Sampling Report prepared by Kaprelian Engineering, Inc. (KEI), former USTs at the site included one 8,000-gallon, one 6,000-gallon, one 5,000-gallon, and one 250-gallon tank. KEI reported the 8,000-gallon and 6,000-gallon tanks were single wall fiberglass, while the 5,000-gallon and the 250-gallon tanks were of steel construction. Mobil permit application information indicated that the former USTs included one 10,000-gallon fiberglass tank installed in 1979, one 8,000-gallon fiberglass tank installed in 1979, one 6,000-gallon steel tank installed in 1972, and one 285-gallon tank installed in 1952. These appear to be the same USTs referenced by KEI, despite the differences in capacity.

CRITERIA FOR CLOSURE AS A LOW-RISK GROUNDWATER SITE

Supplemental Instructions to State Water Board, December 8, 1995, Interim Guidance on Required Cleanup at Low Risk Fuel Sites (CRWQCB, January 5, 1996) lists six criteria for closure of a low-risk groundwater site. These six criteria are addressed in the following paragraphs.

 Leak has been stopped and ongoing sources, including free product, have been removed or remediated

The suspected source of contamination at Site 11266 is the four USTs removed from the site and replaced in September 1987. An 8,000-gallon fiberglass UST, 6,000-gallon fiberglass UST, 5,000-gallon steel UST, and 250-gallon steel UST were removed. Approximately 400 cubic yards of contaminated soil were also removed. Sampling of the excavation sidewalls detected a maximum of 3,200 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPH-g) and 81 mg/kg benzene in two samples along the east side of the excavation at approximately 11.5 feet below ground surface. It is not clear whether this was ever over-excavated. However, subsequent



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investigations did not detect significant contaminant concentrations in site soil. Any soil contamination remaining after UST excavation appears to have been restricted to the east side of the excavation, and has probably attenuated significantly since 1987. Summary data from previous consultants is provided in Appendix A.

The new USTs were tightness tested in October 1987 and reported tight. BP installed new dispensers and product lines at Site 11266 from September through October 1990. The new product lines were leak tested in November 1990 and reported tight. No free product was documented to be present at Site 12266.

2. The site has been adequately characterized

The Baseline Assessment Report prepared by EMCON documents the extensive site investigation... activity between 1987 and 1994, including the following:

- Soil and groundwater sampling associated with UST removal and replacement in October
 1987
- Preliminary groundwater investigation, including soil boring and monitoring well construction in 1988)
- Monthly groundwater monitoring from July to December 1988
- Soil boring and groundwater monitoring well in March 1989
- Phase II site assessment in November 1989

Routine groundwater monitoring was conducted at Site 11266 from March 1988 to September 2001 (Table 1).

3. The dissolved hydrocarbon plume is not migrating

Groundwater monitoring data from 1988 to the most recent sampling event in September 2001 shows that the dissolved hydrocarbon plume has stabilized and is attenuating (Table 1). TPH-g and benzene, toluene, ethylbenzene and xylene (BTEX) compounds were initially detected in wells MW-1, MW-2, MW-4, and RW-1. Monitoring for methyl tertiary butly ether (MTBE) began at the site in 1993. TPH-g, BTEX and MTBE were subsequently detected in wells MW-3 and MW-6. Constituent concentrations increased in well MW-2 in 1993, in well MW-6 from 1995 to 1997, and in well MW-3 in 1999. Constituent concentrations in these wells subsequently attenuated. The last four quarters of

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monitoring detected acceptable concentrations of TPH-g, BTEX and MTBE in site wells, or concentrations indicating an attenuating trend.

During the first four monitoring events, the following TPH-g and benzene concentrations were detected in site wells:

- MW-1: TPH-g ranged from 15,000 micrograms per liter (ug/L) to 95,000 ug/L; benzene ranged from 280 ug/L to 2,000 ug/L
- MW-2: TPH-g ranged from non-detect to 170 ug/L; benzene ranged from non-detect to 1.4 ug/L.
- MW-4: TPH-g ranged from non-detect to 430 ug/L; benzene ranged from non-detect to 6.2 ug/L,
- RW-1: TPH-g ranged from and 660 ug/L to 13,000 ug/L in RW-1; benzene ranged from 13 ug/L to 1,000 ug/L.

MTBE was first detected in site wells in 1993. MTBE concentrations from the first quarter 1993 to the fourth quarter 1993) were as follows:

- MW-1: 220 ug/L to 1,400 ug/L
- MW-2: 23 ug/L to 1,300 ug/L
- MW-3: MTBE not analyzed until third guarter 1995
- MW-4: MTBE not analyzed until third quarter 1995
- MW-5: MTBE not analyzed until third quarter 1995
- MW-6: MTBE not analyzed until third quarter 1994
- RW-1: 315 ug/L to 1,900 ug/L.

Constituent concentrations in well MW-1 have decreased steadily. A moderate spike in TPH-g, BTEX and MTBE was detected in well MW-1 during the first quarter 1994. TPH-g and benzene concentrations declined to 990 ug/L and 24 ug/L, respectively, in the third quarter 2001. MTBE was first detected in well MW-1 during the first quarter 1993 at a concentration of 1,400 ug/L. The MTBE concentration reached its maximum of 68,412 ug/L in the first quarter 1994, and has decreased since to 31.2 ug/L in the third quarter 2001. Concentration trends in well MW-1 are illustrated in Charts 1 and 2. Strong decreasing trends are apparent for TPH-g, benzene and MTBE.

Concentrations of TPH-g and MTBE in MW-2 increased between the first quarter 1993 and approximately the first quarter 1996, reaching maximum concentrations of 3,400 ug/L and 11,000



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ug/L, respectively. Concentrations of TPH-g and MTBE subsequently decreased through the last round of monitoring in 2001 to 100 ug/L and 178 ug/L. Benzene was detected at a maximum concentration of 3.1 ug/L in the fourth quarter 1994, and has been detected once since, at a concentration of 1.02 ug/L in the first quarter 2001.

TPH-g, BTEX or MTBE were not detected or were detected at trace levels in well MW-3 until the first quarter of 1999, when TPH-g was detected at 17,000 ug/L; benzene was detected at 8.2 ug/L; and MTBE was detected at 17,000 ug/L. Well MW-3 is located next to a waste oil tank, and the increase in concentrations after years of non-detects indicates a possible spill or other release. This possibility is further supported by the high concentrations of MTBE, which was generally not used at the time the original release was detected (1987). However, annual monitoring of well MW-3 from 1999 to 2001 shows rapid attenuation of all constituents. TPH-g was last detected at 610 ug/L; benzene at 2.97 ug/L; and MTBE at 572 ug/L. Therefore, there is not an ongoing source of contamination at well MW-3. Concentration trends in well MW-3 are illustrated in Charts 3 and 4. The charts show a decreasing trend since the initial TPH-g, benzene and MTBE detections in 1999.

Low or trace concentrations of TPH-g and BTEX were detected in well MW-4 in the fourth quarter 1989. No detections in MW-4 have been recorded since. MTBE has never been detected in well MW-4. Similarly, no detections of TPH-g, BTEX and MTBE have been recorded for well MW-5 since the beginning of monitoring, with the exception of a trace amount of xylene detected in the third quarter 1993.

TPH-g, BTEX or MTBE were not detected in well MW-6 until the third quarter 1995 for TPH-g and BTEX, and the first quarter 1993 for MTBE. An increasing trend occurred from approximately the second quarter 1995 to the third quarter 1997. A decreasing trend then occurred, with TPH-g, benzene and MTBE not detected during semiannual monitoring in 2000 and 2001. No ongoing source of contamination is apparent upgradient or in the vicinity of well MW-6.

TPH-g and benzene reached maximum concentrations of 27,000 ug/L and 2,400 ug/L, respectively, in well RW-1 during the first quarter of 1995; MTBE reached a maximum concentration of 1,400 ug/L in well RW-1 during the third and fourth quarter of 1993. Monitoring of well RW-1 was terminated in 1997 after six quarters of non-detects for TPH-g, BTEX and MTBE.

During the last year of monitoring, the following concentrations were detected in site wells:

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- MW-1: TPH-g ranged from 990 ug/L to 1,500 ug/L; benzene ranged from 24 ug/L to 28.2 ug/L;
 MTBE ranged from 15.2 ug/L to 31.2 ug/L.
- MW-2: TPH-g ranged from 100 ug/L to 270 ug/L; benzene ranged from ND to 1.02; MTBE ranged from 178 ug/L to 341 ug/L.
- MW-3: TPH-g was detected at 610 ug/L; benzene at 2.97 ug/L; and MTBE at 572 ug/L.
- MW-4: TPH-g, benzene and MTBE were not detected.
- MW-5: TPH-g, benzene and MTBE were not detected.
- MW-6: TPH-g, benzene and MTBE were not detected.
- RW-1: Last monitoring in 1997. TPH-g, benzene and MTBE were not detected.

Figure 2 shows the most recent monitoring results and the distribution of analyte detections. No constituents were detected off site (MW-6); no constituents were detected upgradient of the USTs and dispensers (MW-4 and MW-5); and constituent concentrations in downgradient wells are either below the Tier 1 Risk-Based Screening Levels (RBSLs) for groundwater which is not a current or potential drinking water source, or are decreasing. Constituent concentrations are discussed further with respect to the Tier 1 RBSLs in the discussion of criterion 5.

4. No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.

A water well survey conducted by EMCON in 1990 determined that ten irrigation wells, two industrial wells, one domestic well and one abandoned well existed within 2,000 feet of the site. Four of these wells were located downgradient of the site. Contamination at Site 11266 is restricted to the shallow groundwater zone, which is not likely to be used as a drinking water source. The lateral extent of contamination is limited to the immediate station area. Sensitive receptors are therefore unlikely to be impacted.

5. The site presents no significant threat to human health

The concentrations of TPH-g and benzene are currently below Tier 1 RBSLs for groundwater which is not a current or potential drinking water source of 500 ug/L for TPH-g, 46 ug/L for benzene and 1,800 ug/L for MTBE at all locations with the exception of TPH-g in MW-1 and MW-3. As noted previously, the concentrations of TPH-g and benzene show a strong decreasing trend in MW-1 and MW-3. The site therefore presents no significant threat to human health.



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6. The site presents no significant risk to the environment

Surface waters, wetlands and other sensitive receptors are not likely to be impacted by contamination at Site 11266, as the extent of contamination is limited both vertically and laterally to the immediate station area, and is attenuating significantly. Also, there are no site specific exposure pathways likely to cause impacts off site. The site therefore presents no significant risk to the environment.

Based on the forgoing information, BP Site 11266 meets the criteria for closure of a Low Risk Groundwater Case site. URS therefore respectfully requests closure of BP Site 11266.

Please call us at (510) 874-3115 if you have questions.

Sincerely,

URS CORPORATION

John H. Madigan

Environmental Engineer

Leonard P. Niles, RG #5774, CHG #357

Project Manager

CC:

Mr. Scott Hooton, BP Oil Company

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REFERENCES

California Regional Water Quality Control Board (CRWQCB), 1996. Memorandum, To: San Francisco Bay Area Agencies Overseeing UST Cleanup and Other Interested Parties, Subject: Regional Board Supplemental Instructions to State Water Board, December 8, 1995, Interim Guidance on Required Cleanup at Low-Risk Fuel Sites. Oakland, California. January 5.

EMCON Northwest, Inc. (EMCON), 1994. Baseline Assessment Report, Site 11266, 1541 Park Street, Alameda, California. December 27.

APPENDIX C

GEOTRACKER UPLOAD CONFIRMATION

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Confirmation Number: 9112707555

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Facility Global ID: T0600100207 Facility Name: BP #11266

Submittal Title: 3Q 06 GW Monitoring **Submittal Type:** GW Monitoring Report

Click here to view the detections report for this upload.

BP #11266 Regional Board - Case #: 01-0221 **1541 PARK** SAN FRANCISCO BAY RWQCB (REGION 2) ALAMEDA, CA 94501 Local Agency (lead agency) - Case #: RO0000318 ALAMEDA COUNTY LOP - (SP) CONF# QUARTER 9112707555 3Q 06 GW Monitoring Q3 2006 SUBMITTED BY SUBMIT DATE STATUS Broadbent & Associates, Inc. 10/25/2006 PENDING REVIEW SAMPLE DETECTIONS REPORT # FIELD POINTS SAMPLED 6 # FIELD POINTS WITH DETECTIONS 3 # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL 1 SAMPLE MATRIX TYPES WATER METHOD QA/QC REPORT METHODS USED 8260FA,8260TPH,E200.7,SW8015B TESTED FOR REQUIRED ANALYTES? LAB NOTE DATA QUALIFIERS QA/QC FOR 8021/8260 SERIES SAMPLES TECHNICAL HOLDING TIME VIOLATIONS METHOD HOLDING TIME VIOLATIONS 0 LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT 0 LAB BLANK DETECTIONS DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING? - LAB METHOD BLANK - MATRIX SPIKE N - MATRIX SPIKE DUPLICATE N - BLANK SPIKE Y SURROGATE SPIKE - NON-STANDARD SURROGATE USED WATER SAMPLES FOR 8021/8260 SERIES MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135% Ν MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% SURROGATE SPIKES % RECOVERY BETWEEN 85-115%

BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%

SOIL SAMPLES FOR	8021/8260 SERIES		
MATRIX SPIKE / MATRIX S	PIKE DUPLICATE(S) % RECOV	ERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX S	PIKE DUPLICATE(S) RPD LESS	5 THAN 30%	n/a
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