

**URS**

December 7, 2004

Mr. Robert Schultz  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

**Re: Groundwater Monitoring Report  
Former BP Service Station # 11124  
3315 High Street  
Oakland, California  
URS Project #38486986**

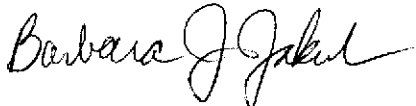
Dear Mr. Schultz:

On behalf of Atlantic Richfield Company, a BP affiliated company, URS Corporation (URS) is submitting the *One-Time 2004 Groundwater Monitoring Report* for the Former BP Service Station #11124, located at 1355 High Street, Oakland, California.

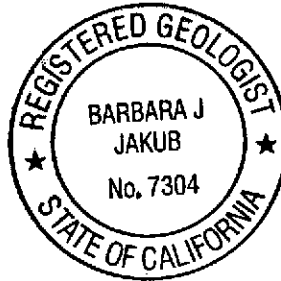
If you have any questions regarding this submission, please call me at (510) 874-3296.

Sincerely,

**URS CORPORATION**



Barbara J. Jakub, R.G.  
Senior Geologist



Enclosure: One-Time 2004 Groundwater Monitoring Report

cc: Mr. Kyle Christie, Atlantic Richfield Company (RM), copy uploaded to ENFOS  
Ms. Liz Sewell, ConocoPhillips, copy uploaded to URS ftp server

**R E P O R T**

**ONE-TIME GROUNDWATER  
MONITORING REPORT**

**FORMER BP SERVICE STATION #11124  
3315 HIGH STREET  
OAKLAND, CALIFORNIA**

*Prepared for*  
RM

December 7, 2004

**URS**

URS Corporation  
1333 Broadway, Suite 800  
Oakland, California 94612

38486986

Date: December 7, 2004  
Quarter: 4Q 04

### RM GROUNDWATER MONITORING REPORT

Former Facility No.: 11124 Address: 3315 High Street, Oakland, CA  
RM Environmental Business Manager: Kyle Christie  
Consulting Co./Contact Person: URS Corporation / Barbara J. Jakub  
Consultant Project No.: 38486986  
Primary Agency: Alameda County Environmental Health (ACEH)

#### WORK PERFORMED THIS QUARTER (Fourth – 2004):

1. Performed fourth quarter 2004 groundwater monitoring event on October 19, 2004.
2. Prepared and submitted this fourth quarter 2004 groundwater monitoring report.
3. Prepared and submitted subsurface investigation work plan on December 7, 2004.

#### WORK PROPOSED FOR NEXT QUARTER (First – 2005):

1. Prepare and submit first quarter 2005 status report.

Current Phase of Project:	<u>GW monitoring/sampling</u>
Frequency of Groundwater Sampling:	<u>Wells MW-1, MW-2 and MW-4 One-Time</u>
Frequency of Groundwater Monitoring:	<u>One-Time</u>
Is Free Product (FP) Present On-Site:	<u>No</u>
Current Remediation Techniques:	<u>Natural Attenuation</u>
Approximate Depth to Groundwater:	<u>9.45 (MW-2) to 10.50 (MW-1) feet</u>
Groundwater Gradient (direction):	<u>South-Southwest</u>
Groundwater Gradient (magnitude):	<u>0.022 feet per foot</u>

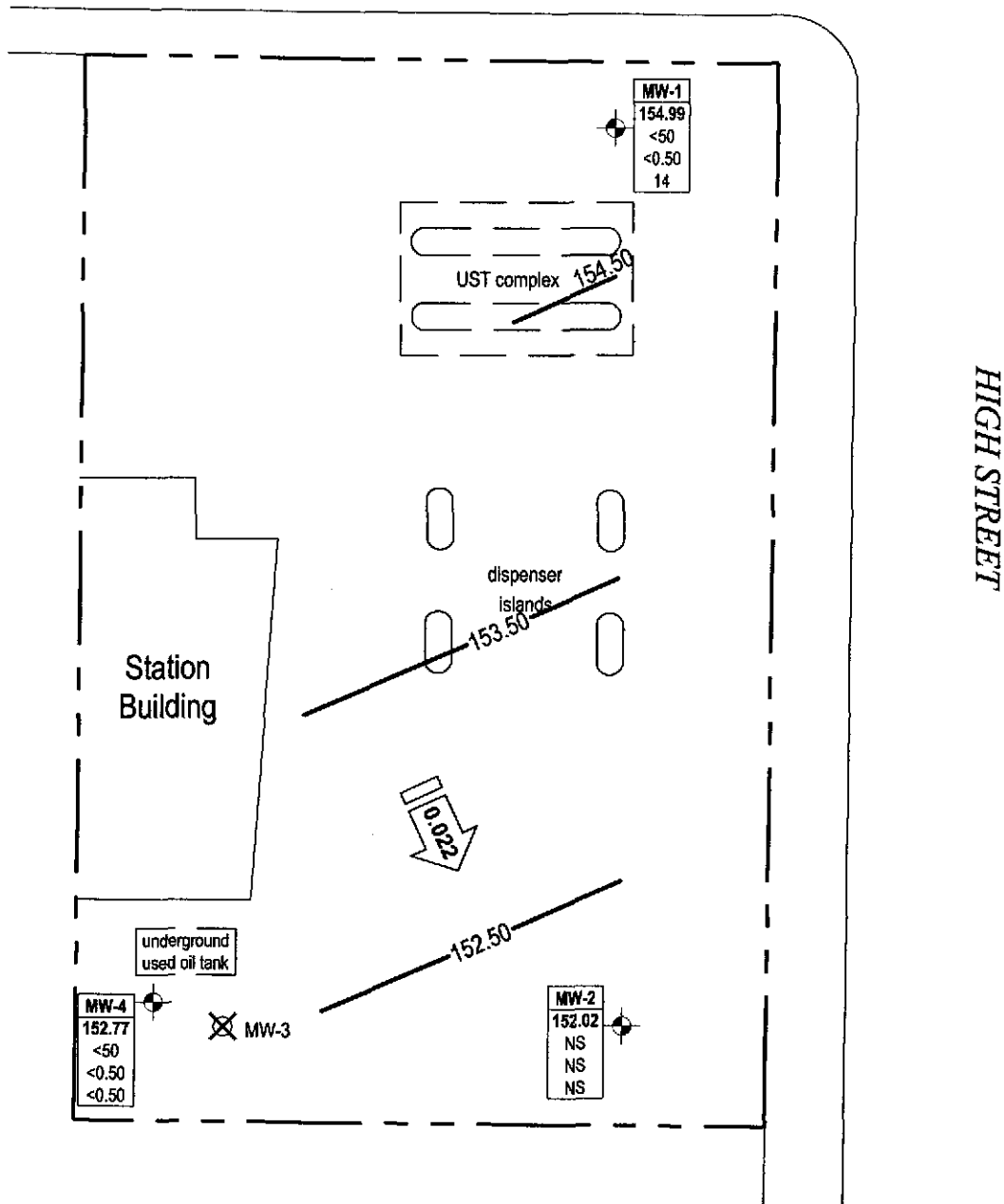
#### DISCUSSION:

Methyl tert-butyl ether (MTBE) was detected at or above the laboratory reporting limit in one of the two wells sampled at a concentration of 14 µg/L (MW-1). Gasoline range organics (GRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), and other fuel additives were not detected at or above the laboratory reporting limit in either of the two wells sampled. Due to insufficient water above an obstruction in the well, MW-2 could not be sampled this quarter.

**ATTACHMENTS:**

- Figure 1– Groundwater Analytical Summary Map –October 19, 2004
- Table 1 – Groundwater Elevation and Analytical Data
- Table 2 – Fuel Additives Analytical Data
- Attachment A – Field Procedures and Field Data Sheets
- Attachment B – Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records
- Attachment C – Error Check Reports and EDF/Geowell Submittal Confirmations

PORTER STREET



**EXPLANATION**

	Groundwater monitoring well		Groundwater flow direction and gradient (ft/ft)
	Abandoned monitoring well		154.50 Groundwater flow direction and gradient (ft/ft)
<b>Well</b>	Well Designation		
<b>ELEV</b>	Groundwater elevation (ft/MSL)		
<b>GRO</b>	GRO, Benzene & MTBE concentrations (µg/L)		
<b>Benzene</b>			
<b>MTBE</b>			

NOTE: SITE MAP ADAPTED FROM ALISTO ENGINEERING FIGURES.  
SITE DIMENSIONS AND FIGURES FACILITY LOCATIONS NOT VERIFIED.



Dec 07, 2004 - 1:38pm X:\v\_snu\waste\BP\_GEM Sites\Barb\_Alabah\Kyle's sites\11124\Repairs\Monitoring\Cir. 4, 2004\11124-4004-CW.dwg



Project No. 38486985  
Former BP Service Station #11124  
3315 High Street  
Oakland, California

**GROUNDWATER ELEVATION CONTOUR  
AND ANALYTICAL SUMMARY MAP**  
Fourth Quarter 2004 (October 15, 2004)

FIGURE  
**1**

**Table 1**

**Groundwater Elevation and Analytical Data**

Former BP Station #11124  
3315 High St., Oakland, CA

Well No.	Date	P/ NP	Well Elevation/ TOC (feet)	DTW (feet)	Product Thickness (feet)	GWE (feet)	GRO/ TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DO (mg/L)	Lab	pH	Comments
MW-1	10/19/2004	P	154.99	10.50	--	144.49	<50	<0.50	<0.50	<0.50	<0.50	14	0.96	SEQM	6.9	
MW-2	10/19/2004	--	152.02	9.45	--	142.57	--	--	--	--	--	--	--	--	--	Dry
MW-4	10/19/2004	P	152.77	9.55	--	143.22	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.82	SEQM	7.0	

**Table 1**  
**Groundwater Elevation and Analytical Data**  
Former BP Station #11124  
3315 High St., Oakland, CA

ABBREVIATIONS AND SYMBOLS:

P Well purged  
NP Well not purged  
TOC Top of casing  
DTW Depth to water  
GWE Groundwater elevation  
TPH-G Total petroleum hydrocarbons as gasoline  
GRO Gasoline range organics, C4 to C12 range  
B Benzene  
T Toluene  
E Ethylbenzene  
X Total xylenes  
MTBE Methyl tert butyl ether  
DO Dissolved oxygen  
bgs Below ground surfac  
ug/L Micrograms per liter  
--- Not analyzed/measured/applicable  
< Not detected at or above laboratory reporting limit

Table 2

Fuel Additives Analytical Data

Former BP Station #11124

3315 High St., Oakland, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Footnotes/ Comments
MW-1	10/19/2004	<100	<20	14	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4	10/19/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	



## Table 2

### Fuel Additives Analytical Data

Former BP Station #11124

3315 High St., Oakland, CA

NOTE: All fuel oxygenate compounds are analyzed using EPA Method 8260B.

#### ABBREVIATIONS AND SYMBOLS:

TBA = Tert-butyl alcohol

MTBE = Methyl tert-butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tert butyl ether

TAME = Tert-amyl methyl ether

1,2-DCA = 1,2-Dichloroethane

EDB = 1,2-Dibromomethane

ug/L = micrograms per liter

< = Not detected at or above laboratory reporting limit

## FIELD PROCEDURES

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### 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 Teflon™ 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.



## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>041019-MT1</u>	Station # <u>11124</u>
Sampler: <u>MT</u>	Date: <u>10/19/04</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>31.40</u>	Depth to Water: <u>10.50</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: <u>Bailer</u> Disposable Bailer Positive <u>Air Displacement</u> Electric Submersible Extraction Pump Other: _____	Sampling Method: <u>Bailer</u> Disposable <u>Bailer</u> Extraction Port Other: _____
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Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>3.3</u>	x	<u>3</u>	=	<u>9.9</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
<u>1022</u>	<u>67.0</u>	<u>7.0</u>	<u>1100</u>	<u>3.3</u>	
<u>1026</u>	<u>66.8</u>	<u>6.9</u>	<u>1070</u>	<u>6.6</u>	
<u>1029</u>	<u>66.2</u>	<u>6.9</u>	<u>1063</u>	<u>9.9</u>	

Did well dewater? Yes <u>(No)</u>	Gallons actually evacuated: <u>9.9</u>	
Sampling Time: <u>1055</u>	Sampling Date: <u>10/19/04</u>	
Sample I.D.: <u>MW-1</u>	Laboratory: Pace <u>Sequoia</u> Other _____	
Analyzed for: <u>GRO</u> <u>BTEX</u> <u>MTBE</u> DRO Other: <u>Refer to COC</u>		
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: <u>0.96</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>241019-MT1</u>	Station # <u>11124</u>
Sampler: <u>NT</u>	Date: <u>10/19/04</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>3</u> 3 4 6 8 <u>   </u>
Total Well Depth: <u>10.30</u>	Depth to Water: <u>9.45</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
~~Disposable Bailer~~  
 Extraction Port  
 Other: \_\_\_\_\_

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
					<u>Insufficient water to Purge &amp; Sample</u>

Did well dewater? Yes  No

Gallons actually evacuated: \_\_\_\_\_

Sampling Time: \_\_\_\_\_ Sampling Date: 10/19/04

Sample I.D.: MW-2 Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: GRO MTX MTBE DRO Other: Refer to COC

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## ARCO / BP WELL MONITORING DATA SHEET

BTS #: <u>041019-MT1</u>	Station # <u>11124</u>
Sampler: <u>MT</u>	Date: <u>10/19/04</u>
Well I.D.: <u>MW-4</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>31.35</u>	Depth to Water: <u>9.55</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Purge Method: <u>Bailer</u>	Sampling Method: <u>Bailer</u>
<input type="checkbox"/> Disposable Bailer	<input checked="" type="checkbox"/> Disposable Bailer
<input checked="" type="checkbox"/> Positive Air Displacement	<input type="checkbox"/> Extraction Port
<input type="checkbox"/> Electric Submersible	Other: _____
<input type="checkbox"/> Extraction Pump	
Other: _____	

Top of Screen: \_\_\_\_\_ If well is listed as a no-purge, confirm that water level is below the top of screen. Otherwise, the well must be purged.

<u>3.5</u>	X	<u>3</u>	=	<u>10.5</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Conductivity (mS or µS)	Gals. Removed	Observations
<u>1000</u>	<u>70.0</u>	<u>7.3</u>	<u>1270</u>	<u>3.5</u>	
<u>1004</u>	<u>65.6</u>	<u>7.0</u>	<u>1257</u>	<u>7</u>	
<u>1010</u>	<u>65.9</u>	<u>7.0</u>	<u>1257</u>	<u>10.5</u>	

Did well dewater? Yes  No  Gallons actually evacuated: 10.5

Sampling Time: 1015 Sampling Date: 10/19/04

Sample I.D.: MW-4 Laboratory: Pace Sequoia Other \_\_\_\_\_

Analyzed for: GRO RTEX MTBE DRO Other: Refer to COC

D.O. (if req'd):	Pre-purge:	<u> </u> mg/L	Post-purge:	<u>0.92</u> mg/L
O.R.P. (if req'd):	Pre-purge:	<u> </u> mV	Post-purge:	<u> </u> mV

**BP GEM OIL COMPANY TYPE A BILL OF LADING**

SOURCE RECORD BILL OF LADING FOR NON-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 BLAINE 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 to the designated destination point via another BP GEM facility; from a BP GEM facility to the designated destination point via the contractor's 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:

11174

Station #

3315 High St. Oakland, CA

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

25 gal

added equip. rinse water 5

any other adjustments \_\_\_\_\_

TOTAL GALS. RECOVERED 30 gal

loaded onto BTS vehicle # 62

BTS event # 04109-MT1

time \_\_\_\_\_ date 10/17/01

signature \_\_\_\_\_

\*\*\*\*\*

REC'D AT \_\_\_\_\_ time \_\_\_\_\_ date 1/1

unloaded by signature \_\_\_\_\_

## **LABORATORY PROCEDURES**

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### **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.





3 November, 2004

Barbara Jakub  
URS Corporation [Arco]  
1333 Broadway, Suite 800  
Oakland, CA 94612

RE: BP Heritage #11124, Oakland ,CA  
Work Order: MNJ0607

Enclosed are the results of analyses for samples received by the laboratory on 10/20/04 17:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race  
Senior Project Manager

CA ELAP Certificate #1210

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

Project:BP Heritage #11124, Oakland ,CA  
Project Number:-  
Project Manager:Barbara Jakub

MNJ0607  
Reported:  
11/03/04 11:00

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MNJ0607-01	Water	10/19/04 10:35	10/20/04 17:35
MW-4	MNJ0607-02	Water	10/19/04 10:15	10/20/04 17:35
TB10190411124	MNJ0607-03	Water	10/19/04 00:00	10/20/04 17:35

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.

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

 Project:BP Heritage #11124, Oakland, CA  
 Project Number:-  
 Project Manager:Barbara Jakub

 MNJ0607  
 Reported:  
 11/03/04 11:00

**Volatile Organic Compounds by EPA Method 8260B**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>MW-1 (MNJ0607-01) Water Sampled: 10/19/04 10:35 Received: 10/20/04 17:35</b>										
tert-Amyl methyl ether	ND	0.50		ug/l	1	4J28002	10/28/04	10/28/04	EPA 8260B	
Benzene	ND	0.50		"	"	"	"	"	"	
tert-Butyl alcohol	ND	20		"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50		"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50		"	"	"	"	"	"	
Ethanol	ND	100		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Ethylbenzene	ND	0.50		"	"	"	"	"	"	
<b>Methyl tert-butyl ether</b>	<b>14</b>	<b>0.50</b>		"	"	"	"	"	"	
Toluene	ND	0.50		"	"	"	"	"	"	
Xylenes (total)	ND	0.50		"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50		"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>123 %</i>		<i>78-129</i>					

**MW-4 (MNJ0607-02) Water Sampled: 10/19/04 10:15 Received: 10/20/04 17:35**

tert-Amyl methyl ether	ND	0.50		ug/l	1	4J28002	10/28/04	10/28/04	EPA 8260B	
Benzene	ND	0.50		"	"	"	"	"	"	
tert-Butyl alcohol	ND	20		"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50		"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50		"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50		"	"	"	"	"	"	
Ethanol	ND	100		"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Ethylbenzene	ND	0.50		"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50		"	"	"	"	"	"	
Toluene	ND	0.50		"	"	"	"	"	"	
Xylenes (total)	ND	0.50		"	"	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	50		"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>121 %</i>		<i>78-129</i>					

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

 Project:BP Heritage #11124, Oakland ,CA  
 Project Number:-  
 Project Manager:Barbara Jakub

 MNJ0607  
 Reported:  
 11/03/04 11:00

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4J28002 - EPA 5030B P/T / EPA 8260B**
**Blank (4J28002-BLK1)**

Prepared &amp; Analyzed: 10/28/04

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	100	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Gasoline Range Organics (C4-C12)	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>6.07</i>		<i>"</i>	<i>5.00</i>		<i>121</i>	<i>78-129</i>			

**Laboratory Control Sample (4J28002-BS1)**

Prepared &amp; Analyzed: 10/28/04

tert-Amyl methyl ether	9.02	0.50	ug/l	10.0		90	82-140			
Benzene	8.02	0.50	"	10.0		80	69-124			
tert-Butyl alcohol	55.2	20	"	50.0		110	56-131			
Di-isopropyl ether	8.25	0.50	"	10.0		82	76-130			
1,2-Dibromoethane (EDB)	10.5	0.50	"	10.0		105	77-132			
1,2-Dichloroethane	8.92	0.50	"	10.0		89	77-136			
Ethanol	275	100	"	200		138	31-143			
Ethyl tert-butyl ether	8.52	0.50	"	10.0		85	81-121			
Ethylbenzene	10.8	0.50	"	10.0		108	84-132			
Methyl tert-butyl ether	8.01	0.50	"	10.0		80	63-137			
Toluene	11.2	0.50	"	10.0		112	78-129			
Xylenes (total)	33.8	0.50	"	30.0		113	83-137			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.80</i>		<i>"</i>	<i>5.00</i>		<i>116</i>	<i>78-129</i>			

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

 Project:BP Heritage #11124, Oakland ,CA  
 Project Number:-  
 Project Manager:Barbara Jakub

 MNJ0607  
 Reported:  
 11/03/04 11:00

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4J28002 - EPA 5030B P/T / EPA 8260B**
**Laboratory Control Sample (4J28002-BS2)**

Prepared &amp; Analyzed: 10/28/04

Benzene	5.24	0.50	ug/l	6.40		82	69-124			
Ethylbenzene	7.76	0.50	"	7.52		103	84-132			
Methyl tert-butyl ether	8.30	0.50	"	9.92		84	63-137			
Toluene	31.4	0.50	"	31.9		98	78-129			
Xylenes (total)	38.6	0.50	"	36.6		105	83-137			
Gasoline Range Organics (C4-C12)	395	50	"	440		90	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.91</i>		<i>"</i>	<i>5.00</i>		<i>118</i>	<i>78-129</i>			

**Laboratory Control Sample Dup (4J28002-BSD1)**

Prepared &amp; Analyzed: 10/28/04

tert-Amyl methyl ether	8.70	0.50	ug/l	10.0		87	82-140	4	20	
Benzene	8.09	0.50	"	10.0		81	69-124	0.9	20	
tert-Butyl alcohol	53.8	20	"	50.0		108	56-131	3	20	
Di-isopropyl ether	8.07	0.50	"	10.0		81	76-130	2	20	
1,2-Dibromoethane (EDB)	10.8	0.50	"	10.0		108	77-132	3	20	
1,2-Dichloroethane	8.97	0.50	"	10.0		90	77-136	0.6	20	
Ethanol	227	100	"	200		114	31-143	19	20	
Ethyl tert-butyl ether	8.48	0.50	"	10.0		85	81-121	0.5	20	
Ethylbenzene	10.2	0.50	"	10.0		102	84-132	6	20	
Methyl tert-butyl ether	8.35	0.50	"	10.0		84	63-137	4	20	
Toluene	9.68	0.50	"	10.0		97	78-129	15	20	
Xylenes (total)	30.5	0.50	"	30.0		102	83-137	10	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.89</i>		<i>"</i>	<i>5.00</i>		<i>118</i>	<i>78-129</i>			

**Matrix Spike (4J28002-MS1)**

Source: MNJ0601-01

Prepared &amp; Analyzed: 10/28/04

Benzene	5.20	0.50	ug/l	6.40	ND	81	69-124			
Ethylbenzene	8.64	0.50	"	7.52	ND	115	84-132			
Methyl tert-butyl ether	9.03	0.50	"	9.92	1.1	80	63-137			
Toluene	40.4	0.50	"	31.9	ND	127	78-129			
Xylenes (total)	43.9	0.50	"	36.6	ND	120	83-137			
Gasoline Range Organics (C4-C12)	343	50	"	440	15	75	70-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>5.91</i>		<i>"</i>	<i>5.00</i>		<i>118</i>	<i>78-129</i>			

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

Project:BP Heritage #11124, Oakland ,CA  
Project Number:-  
Project Manager:Barbara Jakub

MNJ0607  
Reported:  
11/03/04 11:00

**Volatile Organic Compounds by EPA Method 8260B - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4J28002 - EPA 5030B P/T / EPA 8260B**

<b>Matrix Spike Dup (4J28002-MSD1)</b>	<b>Source: MNJ0601-01</b>			<b>Prepared &amp; Analyzed: 10/28/04</b>						
Benzene	5.30	0.50	ug/l	6.40	ND	83	69-124	2	20	
Ethylbenzene	7.87	0.50	"	7.52	ND	105	84-132	9	20	
Methyl tert-butyl ether	9.46	0.50	"	9.92	1.1	84	63-137	5	20	
Toluene	32.3	0.50	"	31.9	ND	101	78-129	22	20	RB
Xylenes (total)	38.2	0.50	"	36.6	ND	104	83-137	14	20	
Gasoline Range Organics (C4-C12)	367	50	"	440	15	80	70-124	7	20	
Surrogate: 1,2-Dichloroethane-d4	6.08		"	5.00		122	78-129			

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

Project:BP Heritage #11124, Oakland ,CA  
Project Number:-  
Project Manager:Barbara Jakub

MNJ0607  
Reported:  
11/03/04 11:00

**Notes and Definitions**

RB RPD exceeded method control limit; % recoveries within limits.  
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



# Chain of Custody Record

Project Name GWM  
 BP BU/GEM CO Portfolio Retail 11124 MD30607  
 BP Laboratory Contract Number: Atlantic Richfield Company  
 Requested Due Date (mm/dd/yy) 14 day TAT

Date: 10/19/07

On-site Time: 0930 Temp: 69°  
 Off-site Time: Temp:           
 Sky Conditions: Rain  
 Meteorological Events:           
 Wind Speed: 0 Direction: 0

Send To:	BP/GEM Facility No.: <u>11124</u>	Consultant/Contractor: <u>URS</u>
Lab Name: <u>SEQUOIA</u>	BP/GEM Facility Address: <u>3315 High St., Oakland, CA</u>	Address: <u>1333 Broadway, Suite 800</u>
Lab Address: <u>885 Jarvis Dr.</u>	Site ID No. <u>11124</u>	<u>Oakland, CA 94612</u>
<u>Morgan Hill, CA 95037</u>	Site Lat/Long:	e-mail EDD: <u>donna.rosper@URSCorp.com</u>
	California Global ID #: <u>T00000239</u>	Consultant/Contractor Project No.:
Lab PM <u>Lisa Rice</u>	BP/GEM PM Contact: <u>Kyle Christie</u>	Consultant Tele/Fax: <u>510-893-3600/510-874-3208</u>
Tele/Fax: <u>408-776-9600 / 408-782-6308</u>	Address: <u>P.O. Box 6549</u>	Consultant/Contractor PM: <u>Barb Jakob</u>
Report Type & QC Level: <u>1 Send BDF Reports</u>	<u>Moraga, CA 94570</u>	Invoice to: Consultant/Contractor or <u>BP/GEM</u> (Circle one)
BP/GEM Account No.: <u>400-6-21124</u>	Tele/Fax: <u>925-299-8891/925-299-8872</u>	BP/GEM Work Release No:

Item No.	Sample Description	Time	Matrix				Laboratory No.	No. of containers	Preservatives			Requested Analysis						Sample Point Lat/Long and Comments	
			Soil/Solid	Water/Liquid	Sediments	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	GRO / BTEX (8015) (8015) (8021) (8026)	DRO w/SGC (8015)	MTBE (8021)	MTBE (8260)	MTBE, TAME, ETBE (8260)		DIPE, TBA (8260)
1	<u>MW-1</u>	<u>10/35</u>	X				<u>4</u>	<u>3</u>				X			X	X	X		
2	<u>MW-4</u>	<u>10/35</u>	X				<u>08</u>	<u>3</u>				X			X	X	X		
3	<u>TB01904/1124</u>		X				<u>07</u>	<u>2</u>				X			X	X	X		<u>ON HOLD</u>
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Sampler's Name: <u>Lisa Rice</u>	Relinquished By / Affiliation:	Date:	Time:	Accepted By / Affiliation:	Date:	Time:
Sampler's Company: <u>BTS</u>	<u>[Signature]</u> <u>BTS</u>	<u>10/20/07</u>	<u>10:07</u>	<u>[Signature]</u>	<u>10/20/07</u>	<u>10:07</u>
Shipment Date:		<u>10/20/07</u>	<u>1735</u>			
Shipment Method:						
Shipment Tracking No:						

Special Instructions: Address Invoice to BP/GEM but send to URS for approval

Custody Seals in Place Yes No Temperature Blank Yes No Cooler Temperature on Receipt 0 F/C Trip Blank Yes No



## SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: BP 11124  
 REC. BY (PRINT): JD  
 WORKORDER: MW3067

DATE REC'D AT LAB: 10/20/04  
 TIME REC'D AT LAB: 1735  
 DATE LOGGED IN: 10-25-06

For Regulatory Purposes?  
 DRINKING WATER YES/NO  
 WASTE WATER YES/NO

(For clients requiring preservation checks at receipt, document here ↓)

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	PH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC)
1. Custody Seal(s) Present / Absent Intact / Broken*	01	A-C	MW-1	VGA (3)	NO	-	L	10/19/04	
2. Chain-of-Custody Present / Absent*	02	AB	TB 10/19 04 9/11/24	↓ (2)	↓	↓	↓	↓	
3. Traffic Reports or Packing List: Present / Absent									
4. Airbill: Airbill / Sticker Present / Absent									
5. Airbill #:									
6. Sample Labels: Present / Absent									
7. Sample IDs: Listed / Not Listed on Chain-of-Custody									
8. Sample Condition: Intact / Broken* / Leaking*									
9. Does information on chain-of-custody, traffic reports and sample labels agree? Yes / No*									
10. Sample received within hold time? Yes / No*									
11. Adequate sample volume received? Yes / No*									
12. Proper Preservatives used? Yes / No*									
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / No*									
14. Temp Rec. at Lab: Is temp 4 ± 2°C? Yes / No**									

(Acceptance range for samples requiring thermal pres.)  
 \*\*Exception (if any): METALS / OFF ON ICE or Problem COC

\*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION\*

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#11124

**Submittal Date/Time:** 11/17/2004 6:11:01 PM

**Confirmation**  
**Number:** 6399825870

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**Confirmation Number:** 2939093351  
**Date/Time of Submittal:** 11/17/2004 6:05:34 PM  
**Facility Global ID:** T0600100919  
**Facility Name:** BP  
**Submittal Title:** Fourth Quarter 2004. Site #11124  
**Submittal Type:** GW Monitoring Report

[Click here to view the detections report for this upload.](#)

<b>BP</b>	<b><u>Regional Board - Case #: 01-0996</u></b>
3315 HIGH ST	SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)
OAKLAND, CA 94619	<b><u>Local Agency (lead agency) - Case #: 1075</u></b>
	ALAMEDA COUNTY LOP - (RWS)

<b>CONF #</b>	<b>TITLE</b>	<b>QUARTER</b>
2939093351	Fourth Quarter 2004. Site #11124	Q4 2004
<b>SUBMITTED BY</b>	<b>SUBMIT DATE</b>	<b>STATUS</b>
Srijesh Thapa	11/17/2004	PENDING REVIEW

**SAMPLE DETECTIONS REPORT**

# FIELD POINTS SAMPLED	2
# FIELD POINTS WITH DETECTIONS	1
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	0
SAMPLE MATRIX TYPES	WATER

**METHOD QA/QC REPORT**

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

**QA/QC FOR 8021/8260 SERIES SAMPLES**

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

**WATER SAMPLES FOR 8021/8260 SERIES**

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
---	---

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y	
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	N	
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	N	
<b>SOIL SAMPLES FOR 8021/8260 SERIES</b>		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a	
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a	
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%	n/a	
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	n/a	
<b>FIELD QC SAMPLES</b>		
<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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<u>USER NAME:</u>	URSCORP-OAKLAND
<u>DATE CHECKED:</u>	11/17/2004 6:05:06 PM
<u>GLOBAL ID:</u>	T0600100919
<u>FILE UPLOADED:</u>	BP#11124-EDF-MNJ0607.zip

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BP 3315 HIGH ST OAKLAND, CA 94619	<u>Regional Board - Case #: 01-0996</u> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <u>Local Agency (lead agency) - Case #: 1075</u> ALAMEDA COUNTY LOP - (RWS)
---	--

#### SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	2
# FIELD POINTS WITH DETECTIONS	1
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	0
SAMPLE MATRIX TYPES	WATER

#### METHOD QA/QC REPORT

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

#### QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	Y

- SURROGATE SPIKE		Y
<b>WATER SAMPLES FOR 8021/8260 SERIES</b>		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%		Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%		N
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		N
<b>SOIL SAMPLES FOR 8021/8260 SERIES</b>		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%		n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%		n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		n/a
<b>FIELD QC SAMPLES</b>		
<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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<u>USER NAME:</u>	URSCORP-OAKLAND
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<u>GLOBAL ID:</u>	T0600100919
<u>FILE UPLOADED:</u>	BP#11124-EDF-MNJ0607.zip

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BP 3315 HIGH ST OAKLAND, CA 94619	<b>Regional Board - Case #: 01-0996</b> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) <b>Local Agency (lead agency) - Case #: 1075</b> ALAMEDA COUNTY LOP - (RWS)
---	--

#### SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	2
# FIELD POINTS WITH DETECTIONS	1
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	0
SAMPLE MATRIX TYPES	WATER

#### METHOD QA/QC REPORT

METHODS USED	8260FA
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- 8260FA REQUIRES DBFM TO BE TESTED	
- 8260FA REQUIRES BR4FBZ TO BE TESTED	
- 8260FA REQUIRES BZMED8 TO BE TESTED	
LAB NOTE DATA QUALIFIERS	Y

#### QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	Y

- SURROGATE SPIKE		Y
<b>WATER SAMPLES FOR 8021/8260 SERIES</b>		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%		Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%		N
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		N
<b>SOIL SAMPLES FOR 8021/8260 SERIES</b>		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%		n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%		n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		n/a
<b>FIELD QC SAMPLES</b>		
<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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