

# Atlantic Richfield Company

**RECEIVED**

By Alameda County Environmental Health at 11:12 am, Aug 01, 2014

**Chuck Carmel**

Remediation Management Project Manager

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July 31, 2014

Re: Second Quarter 2014 Groundwater Monitoring Report  
Former Richfield Oil Company Station #402  
1450 Fruitvale Avenue, Oakland, California  
ACEH Case #RO0000307

"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,



**Chuck Carmel**

Remediation Management Project Manager

Attachment:



July 31, 2014

Project No. 08-88-602

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

Attn.: Mr. Chuck Carmel

Re: Second Quarter 2014 Monitoring Report, Atlantic Richfield Company Station No. 402,  
1450 Fruitvale Avenue, Oakland, Alameda County, California; ACEH Case #RO0000307

Dear Mr. Carmel:


Attached is the *Second Quarter 2014 Monitoring Report* for Atlantic Richfield Company (a BP affiliated company) Station No. 402 located at 1450 Fruitvale Avenue in Oakland, Alameda County, California (the Site). This report presents results of groundwater monitoring conducted at the Site during the Second Quarter 2014.

Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (707) 455-7290.

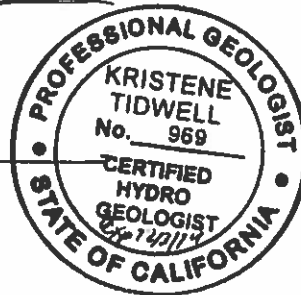
Sincerely,  
BROADBENT & ASSOCIATES



Alex Martinez  
Senior Staff Geologist



Kristene Tidwell, P.G., C.H.G.  
Senior Geologist



Enclosures

cc: Ms. Karol Detterman, Alameda County Environmental Health (Submitted via ACEH ftp site)  
Electronic copy uploaded to GeoTracker

**SECOND QUARTER 2014  
MONITORING REPORT  
ATLANTIC RICHFIELD COMPANY STATION No. 402  
OAKLAND, CALIFORNIA**

Broadbent and Associates, Inc. (Broadbent) is pleased to present this *Second Quarter 2014 Monitoring Report* on behalf of Atlantic Richfield Company (ARC, a BP affiliated company) for Station No. 402 located at 1450 Fruitvale Avenue in Oakland, Alameda County, California (the Site). Monitoring activities at the Site were performed in accordance with an agency directive issued by the Alameda County Environmental Health (ACEH). Details of work performed, discussion of results, and recommendations are provided below.

Facility Name / Address:	Station No. 402 / 1450 Fruitvale Ave., Oakland, California; Drawing 1
Client Project Manager / Title:	Mr. Chuck Carmel / Remediation Management Project Manager
Broadbent Contact:	Ms. Kristene Tidwell, (707) 455-7290
Broadbent Project No.:	08-88-602
Primary Regulatory Agency / ID No.:	ACEH / Case # RO0000307
Current phase of project:	Monitoring
List of Acronyms / Abbreviations:	See end of report text for list of acronyms/abbreviations used in report.

**WORK PERFORMED THIS QUARTER (Second Quarter 2014):**

1. Submit *Fourth Quarter 2013 Status Report* on April 30, 2014.
2. Conducted groundwater monitoring/sampling for Second Quarter 2014 on June 26, 2014.

**WORK SCHEDULED FOR NEXT QUARTER (Third Quarter 2014):**

1. Submit *Second Quarter 2014 Monitoring Report* (contained herein).
2. Conduct groundwater monitoring/sampling for Third Quarter 2014.

**QUARTERLY MONITORING PLAN SUMMARY:**

Groundwater level gauging:	MW-4, MW-5, MW-6, MW-7	Quarterly
Groundwater sample collection:	MW-4, MW-5, MW-6, MW-7	Quarterly
Biodegradation indicator parameter monitoring:	None	(Quarterly)

**QUARTERLY MONITORING PLAN SUMMARY:**

Groundwater level gauging:	MW-4, MW-5, MW-6, MW-7	Quarterly
Groundwater sample collection:	MW-4, MW-5, MW-6, MW-7	Quarterly
Biodegradation indicator parameter monitoring:	None	(Quarterly)

**QUARTERLY RESULTS SUMMARY:**

**LNAPL**

LNAPL observed this quarter:	No	(yes/no)
LNAPL recovered this quarter:	None	(gal)
Cumulative LNAPL recovered:	None	(gal)

**Groundwater Elevation and Gradient:**

Depth to groundwater:	12.52 ft (MW-5) to 14.20 ft (MW-6)	(ft below TOC)
Gradient direction:	Southwest	(compass direction)
Gradient magnitude:	0.01	(ft/ft)
Average change in elevation:	-2.25	(ft since last measurement)

## Laboratory Analytical Data

### Summary:

Analytical Results are as follows:

- GRO was detected in two wells at a maximum concentration of 1,300 µg/L in well MW-4.
  - Benzene was detected in two wells at a maximum concentration of 61 µg/L in well MW-4.
  - Ethylbenzene was detected in two wells at a maximum concentration of 32 µg/L in well MW-4.
  - Total Xylenes were detected in well MW-4 at a concentration of 1.7 µg/L.
  - MTBE was detected in well MW-6 at a concentration of 13 µg/L.
  - DIPE was detected in well MW-4 at a concentration of 1.9 µg/L.
- 

## ACTIVITIES CONDUCTED & RESULTS:

Second Quarter 2014 groundwater monitoring and sampling activities were conducted on June 26, 2014 by Broadbent personnel in accordance with the Second Quarter monitoring plan. No irregularities were noted during gauging. Light Non-Aqueous Phase Liquid (LNAPL) was not present in the wells monitored during this event. Depth to groundwater ranged from 12.52 ft in MW-5 to 14.20 ft in MW-6. As shown on Drawing 2, groundwater gradient on June 26, 2014 was 0.01 ft/ft in a southwest direction. Current and historic groundwater elevations and groundwater sample analytical data are provided in Tables 1 and 2. Historical groundwater gradient information is provided in Table 3. Drawing 2 presents a groundwater elevation contours and analytical summary map for June 26, 2014. Field procedures used during groundwater monitoring are provided in Appendix A. Field data sheets are included in Appendix B.

Groundwater samples were collected on July 26, 2014. No irregularities were reported during sampling. Samples were submitted to Test America Laboratories, Inc. (Test America) of Irvine, California for analyses of GRO, by EPA Method 8015B; for BTEX, MTBE, ETBE, TAME, DIPE, TBA, EDB, 1,2-DCA and ethanol by EPA Method 8260B. No irregularities were encountered during analysis of the samples. Laboratory analytical report and chain of custody record are provided in Appendix C. Groundwater monitoring data (GEO\_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation receipts are provided in Appendix D.

Results of the sampling event are included in the laboratory analytical data summary above. These results indicate that the highest concentrations of petroleum hydrocarbons are present in well MW-4. The remaining analytes detected this quarter are consistent with previous data. Further discussion of these results is presented below.

## **DISCUSSION:**

Review of historical groundwater gradient data indicates that levels were within historical limits for all wells. Groundwater elevations yielded a potentiometric groundwater gradient to the southwest at 0.01 ft/ft, consistent with the historic gradient data presented in Table 3.

Review of historical groundwater results indicate that well MW-4 contains the highest residual petroleum compounds at the Site. Results of the current sampling event are generally consistent with previous results. Petroleum hydrocarbon concentrations from the Second Quarter 2014 monitoring event were within historical ranges. Overall, analytical data indicates the residual petroleum impacts are small and limited primarily to the former source area, near well MW-4.

## **RECOMMENDATIONS:**

The next quarterly monitoring event is scheduled for the Second Quarter 2014. Data collected to date indicates that the site may be eligible for closure under the California state water resources control boards low threat UST closure policy. If data from the Second Quarter 2014 is consistent with previous data, a conceptual site model (CSM) will be prepared to aid in determining the site's closure eligibility.

## **LIMITATIONS:**

The findings presented in this report are based upon observations of field personnel, points investigated, results of laboratory tests performed by Test America, and our understanding of ACEH guidelines. 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 ARC. It is possible that variations in soil or groundwater 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: Site Location Map
- Drawing 2: Groundwater Elevation Contour and Analytical Summary Map, June
  
- Table 1: Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
- Table 2: Summary of Fuel Additives Analytical Data
- Table 3: Historical Groundwater Gradient - Direction and Magnitude
  
- Appendix A: Field Methods
- Appendix B: Field Data Sheets
- Appendix C: Laboratory Report and Chain-of-Custody Documentation
- Appendix D: GeoTracker Upload Confirmation Receipts

## **LIST OF COMMONLY USED ACCRONYMS/ABBREVIATIONS:**

- |      |                                     |      |                                 |
|------|-------------------------------------|------|---------------------------------|
| ACEH | Alameda County Environmental Health | gal: | gallons                         |
| ARC: | Atlantic Richfield Company          | GRO: | Gasoline Range Organics (C6-12) |

Broadbent	Broadbent & Associates	LNAPL:	Light Non-Aqueous Phase Liquid
BTEX:	Benzene, Toluene, Ethylbenzene, Total Xylenes	MTBE:	Methyl Tertiary Butyl Ether
1,2-DCA:	1,2-Dichloroethane	TAME:	Tert-Amyl Methyl Ether
DIPE:	Di-Isopropyl Ether	TBA:	Tert-Butyl Alcohol
EDB:	1,2-Dibromomethane	TOC:	Top of Casing
EPA:	Environmental Protection Agency	µg/L:	Micrograms Per Liter
ETBE:	Ethyl Tert-Butyl Ether	1Q:	First Quarter
ft:	feet	3Q:	Third Quarter
ft/ft:	foot per foot	ft bgs:	Feet Below Ground Surface

**Table 1. Summary of Groundwater Monitoring Data: Water Elevations and Laboratory Analyses  
Former BP Station #402, 1450 Fruitvale Avenue, Oakland, California**

Well ID and Date Monitored	P/NP	TOC Elevation (feet)	Depth to Water (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	Footnote
					GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
<b>MW-4</b>												
12/2/2013	P	48.18	14.06	34.12	810	38	0.71	57	15	<0.50	1.60	a
3/18/2014	P		10.72	37.46	600	28	<0.50	20	4.8	<0.50	1.64	
6/26/2014	P		<b>13.54</b>	<b>34.64</b>	<b>1,300</b>	<b>51</b>	<b>0.76</b>	<b>32</b>	<b>1.7</b>	<b>&lt;0.50</b>	<b>1.58</b>	
<b>MW-5</b>												
12/2/2013	P	47.62	13.67	33.95	<50	<0.50	<0.50	<0.50	<1.0	0.69	4.70	a
3/18/2014	P		10.91	36.71	<50	<0.50	<0.50	<0.50	<1.0	<0.50	3.03	
6/26/2014	P		<b>12.52</b>	<b>35.10</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>&lt;0.50</b>	<b>0.76</b>	
<b>MW-6</b>												
12/2/2013	P	48.89	15.07	33.82	<50	<0.50	<0.50	<0.50	<1.0	10	1.25	a
3/18/2014	P		11.72	37.17	<50	<0.50	<0.50	<0.50	<1.0	14	1.94	
6/26/2014	P		<b>14.20</b>	<b>34.69</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;1.0</b>	<b>13</b>	<b>0.47</b>	
<b>MW-7</b>												
12/2/2013	P	48.28	15.35	32.93	96	<0.50	<0.50	1.5	<1.0	<0.50	5.35	a
3/18/2014	P		11.25	37.03	190	2.3	<0.50	2.2	<1.0	<0.50	2.63	
6/26/2014	P		<b>13.44</b>	<b>34.84</b>	<b>530</b>	<b>5.0</b>	<b>0.63</b>	<b>1.9</b>	<b>&lt;1.0</b>	<b>&lt;0.50</b>	<b>1.14</b>	

Symbols & Abbreviations:

-- = Not analyzed/applicable/sampled/measured

< = Not detected at or above specified laboratory reporting limit

TOC = Top of casing measured in ft

NS = Well not surveyed

DO = Dissolved oxygen

GRO = Gasoline range organics

TPHg = Total petroleum hydrocarbons as gasoline

µg/L = Micrograms per liter

mg/L = Milligrams per liter

MTBE = Methyl tert-butyl ether

NP = Not purged before sampling

P = Purged before sampling

Footnotes:

a = Well surveyed 12/17/2013



**Table 2. Summary of Fuel Additives Analytical Data  
Former BP Station #402, 1450 Fruitvale Avenue, Oakland, California**

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-4</b>									
12/2/2013	--	<10	<0.50	1.7	<0.50	<0.50	--	--	
3/18/2014	<150	<10	<0.50	1.8	<0.50	<0.50	<0.50	<0.50	
<b>6/26/2014</b>	<b>&lt;150</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>1.9</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>MW-5</b>									
12/2/2013	--	<10	0.69	<0.50	<0.50	<0.50	--	--	
3/18/2014	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>6/26/2014</b>	<b>&lt;150</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>MW-6</b>									
12/2/2013	--	<10	10	<0.50	<0.50	<0.50	--	--	
3/18/2014	<150	<10	14	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>6/26/2014</b>	<b>&lt;150</b>	<b>&lt;10</b>	<b>13</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>MW-7</b>									
12/2/2013	--	<10	<0.50	<0.50	<0.50	<0.50	--	--	
3/18/2014	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>6/26/2014</b>	<b>&lt;150</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	

Symbols & Abbreviations:

TBA = Tert-butyl alcohol

MTBE = Methyl tert-butyl ether

DIPE = Diisopropyl ether

ETBE = Ethyl tert-butyl ether

TAME = Tert-amyl methyl ether

1,2-DCA = 1,2-Dichloroethane

EDB = Ethylene dibromide

ug/L = Micrograms per liter

< = Below given laboratory detection limit

-- = Not measured or analyzed

**Table 3. Summary of Groundwater Gradient - Direction and Magnitude**  
**Former BP Station #402, 1450 Fruitvale Avenue, Oakland, California**

<b>Date Measured</b>	<b>Approximate Gradient Direction</b>	<b>Approximate Gradient Magnitude (ft/ft)</b>
12/2/2013	East-Southeast	0.01
3/18/2014	Southeast	0.01
<b>6/26/2014</b>	<b>South</b>	<b>0.01</b>

**APPENDIX A**

FIELD METHODS

## **QUALITY ASSURANCE/QUALITY CONTROL FIELD METHODS**

Field methods discussed herein were implemented to provide for accuracy and reliability of field activities, data collection, sample collection, and handling. Discussion of these methods is provided below.

### **1.0 Equipment Calibration**

Equipment calibration was performed per equipment manufacturer specifications before use.

### **2.0 Depth to Groundwater and Light Non-Aqueous Phase Liquid Measurement**

Depth to groundwater was measured in wells identified for gauging in the scope of work using a decontaminated water level indicator. The depth to water measurement was taken from a cut notch or permanent mark at the top of the well casing to which the well head elevation was originally surveyed.

Once depth to water was measured, an oil/water interface meter or a new disposable bailer was utilized to evaluate the presence and, if present, to measure the “apparent” thickness of light non-aqueous phase liquid (LNAPL) in the well. If LNAPL was present in the well, groundwater purging and sampling were not performed, unless sampling procedures in the scope of work specified collection of samples in the presence of LNAPL. Otherwise, time allowing, LNAPL was bailed from the well using either a new disposable bailer, or the disposal bailer previously used for initial LNAPL assessment. Bailing of LNAPL continued until the thickness of LNAPL (or volume) stabilized in each bailer pulled from the well, or LNAPL was no longer present. After LNAPL thickness either stabilized or was eliminated, periodic depth to water and depth to LNAPL measurements were collected as product came back into the well to evaluate product recovery rate and to aid in further assessment of LNAPL in the subsurface. LNAPL thickness measurements were recorded as “apparent.” If a bailer was used for LNAPL thickness measurement, the field sampler noted the bailer entry diameter and chamber diameter to enable correction of thickness measurements. Recovered LNAPL was stored on-site in a labeled steel drum(s) or other appropriate container(s) prior to disposal.

### **3.0 Well Purging and Groundwater Sample Collection**

Well purging and groundwater sampling were performed in wells specified in the scope of work after measuring depth to groundwater and evaluating the presence of LNAPL. Purging and sampling were performed using one of the methods detailed below. The method used was noted in the field records. Purge water was stored on-site in labeled steel drum(s) or other appropriate container(s) prior to disposal or on-site treatment (in cases where treatment using an on-site system is authorized).

### 3.1 Purging a Predetermined Well Volume

Purging a predetermined well volume is performed per ASTM International (ASTM) D4448-01. This purging method has the objective of removing a predetermined volume of stagnant water from the well prior to sampling. The volume of stagnant water is defined as either the volume of water contained within the well casing, or the volume within the well casing and sand/gravel in the annulus if natural flow through these is deemed insufficient to keep them flushed out.

This purging method involves removal of a minimum of three stagnant water volumes from the well using a decontaminated pump with new disposable plastic discharge or suction tubing, dedicated well tubing, or using a new disposable or decontaminated reusable bailer. If a new disposable bailer was used for assessment of LNAPL, that bailer may be used for purging. The withdrawal rate used is one that minimizes drawdown while satisfying time constraints.

To evaluate when purging is complete, one or more groundwater stabilization parameters are monitored and recorded during purging activities until stabilization is achieved. Most commonly, stabilization parameters include temperature, conductivity, and pH, but field procedures detailed in the scope of work may also include monitoring of dissolved oxygen concentrations, oxidation reduction potential, and/or turbidity<sup>1</sup>. Parameters are considered stable when two (2) consecutive readings recorded three (3) minutes apart fall within ranges provided below in Table 1. In the event that the parameters have not stabilized and five (5) well casing volumes have been removed, purging activities will cease and be considered complete. Once the well is purged, a groundwater sample(s) is collected from the well using a new disposable bailer. If a new disposable bailer was used for purging, that bailer may be used to collect the sample(s). A sample is not collected if the well is inadvertently purged dry.

Table 1. Criteria for Defining Stabilization of Water-Quality Indicator Parameters

Parameter	Stabilization Criterion
Temperature	± 0.2°C (± 0.36°F)
pH	± 0.1 standard units
Conductivity	± 3%
Dissolved oxygen	± 10%
Oxidation reduction potential	± 10 mV
Turbidity <sup>1</sup>	± 10% or 1.0 NTU (whichever is greater)

### 3.2 Low-Flow Purging and Sampling

“Low-Flow”, “Minimal Drawdown”, or “Low-Stress” purging is performed per ASTM D6771-02. It is a method of groundwater removal from within a well’s screened interval that is intended to

<sup>1</sup> As stated in ASTM D6771-02, turbidity is not a chemical parameter and not indicative of when formation-quality water is being purged; however, turbidity may be helpful in evaluating stress on the formation during purging. Turbidity measurements are taken at the same time that stabilization parameter measurements are made, or, at a minimum, once when purging is initiated and again just prior to sample collection, after stabilization parameters have stabilized. To avoid artifacts in sample analysis, turbidity should be as low as possible when samples are collected. If turbidity values are persistently high, the withdrawal rate is lowered until turbidity decreases. If high turbidity persists even after lowering the withdrawal rate, the purging is stopped for a period of time until turbidity settles, and the purging process is then restarted. If this fails to solve the problem, the purging/sampling process for the well is ceased, and well maintenance or redevelopment is considered.

minimize drawdown and mixing of the water column in the well casing. This is accomplished by pumping the well using a decontaminated pump with new disposable plastic discharge or suction tubing or dedicated well tubing at a low flow rate while evaluating the groundwater elevation during pumping.

The low flow pumping rate is well specific and is generally established at a volume that is less than or equal to the natural recovery rate of the well. A pump with adjustable flow rate control is positioned with the intake at or near the mid-point of the submerged well screen. The pumping rate used during low-flow purging is low enough to minimize mobilization of particulate matter and drawdown (stress) of the water column. Low-flow purging rates will vary based on the individual well characteristics; however, the purge rate should not exceed 1.0 Liter per minute (L/min) or 0.25 gallon per minute (gal/min). Low-flow purging should begin at a rate of approximately 0.1 L/min (0.03 gal/min)<sup>2</sup>, or the lowest rate possible, and be adjusted based on an evaluation of drawdown. Water level measurements should be recorded at approximate one (1) to two (2) minute intervals until the low-flow rate has been established, and drawdown is minimized. As a general rule, drawdown should not exceed 25% of the distance between the top of the water column and the pump in-take.

To evaluate when purging is complete, one or more groundwater stabilization parameters are monitored and recorded during purging activities until stabilization is achieved. Most commonly, stabilization parameters include temperature, conductivity, and pH, but field procedures detailed in the scope of work may also include monitoring of dissolved oxygen concentrations, oxidation reduction potential, and/or turbidity<sup>1</sup>. The frequency between measurements will be at an interval of one (1) to three (3) minutes; however, if a flow cell is used, the frequency will be determined based on the time required to evacuate one cell volume. Stabilization is defined as three (3) consecutive readings recorded several minutes apart falling within ranges provided in Table 1. Samples will be collected by filling appropriate containers from the pump discharge tubing at a rate not to exceed the established pumping rate.

### 3.3 Minimal Purge, Discrete Depth, and Passive Sampling

Per ASTM D4448-01, sampling techniques that do not rely on purging, or require only minimal purging, may be used if a particular zone within a screened interval is to be sampled or if a well is not capable of yielding sufficient groundwater for purging. To properly use these sampling techniques, a water sample is collected within the screened interval with little or no mixing of the water column within the casing. These techniques include minimal purge sampling which uses a dedicated sampling pump capable of pumping rates of less than 0.1 L/min (0.03 gal/min)<sup>2</sup>, discrete depth sampling using a bailer that allows groundwater entry at a controlled depth (e.g. differential pressure bailer), or passive (diffusion) sampling. These techniques are based on certain studies referenced in ASTM D4448-01 that indicate that under certain conditions, natural groundwater flow is laminar and horizontal with little or no mixing within the well screen.

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<sup>2</sup> According to ASTM D4448-01, studies have indicated that at flow rates of 0.1 L/min, low-density polyethylene (LDPE) and plasticized polypropylene tubing materials are prone to sorption. Therefore, TFE-fluorocarbon or other appropriate tubing material is used, particularly when tubing lengths of 50 feet or longer are used.

#### 4.0 Decontamination

Reusable groundwater sampling equipment were cleaned using a solution of Alconox or other acceptable detergent, rinsed with tap water, and finally rinsed with distilled water prior to use in each well. Decontamination water was stored on-site in labeled steel drum(s) or other appropriate container(s) prior to disposal.

#### 5.0 Sample Containers, Labeling, and Storage

Samples were collected in laboratory prepared containers with appropriate preservative (if preservative was required). Samples were properly labeled (site name, sample I.D., sampler initials, date, and time of collection) and stored chilled (refrigerator or ice chest with ice) until delivery to a certified laboratory, under chain of custody procedures.

#### 6.0 Chain of Custody Record and Procedure

The field sampler was personally responsible for care and custody of the samples collected until they were properly transferred to another party. To document custody and transfer of samples, a Chain of Custody Record was prepared. The Chain of Custody Record provided identification of the samples corresponding to sample labels and specified analyses to be performed by the laboratory. The original Chain of Custody Record accompanied the shipment, and a copy of the record was stored in the project file. When the samples were transferred, the individuals relinquishing and receiving them signed, dated, and noted the time of transfer on the record.

#### 7.0 Field Records

Daily Report and data forms were completed by staff personnel to provide daily record of significant events, observations, and measurements. Field records were signed, dated, and stored in the project file.



**APPENDIX B**

FIELD DATA SHEETS



DAILY REPORT

Page 1 of 1

Project: BP 402 Project No.: 08-88-602

Field Representative(s): James/Jessica Day: 6/26/14 Thursday Date:

Time Onsite: From: 0945 To: 1230 ; From: To: ; From: To:

- Signed HASP Safety Glasses Hard Hat Steel Toe Boots Safety Vest
N/A UST Emergency System Shut-off Switches Located Proper Gloves
Proper Level of Barricading Other PPE (describe)

Weather: Sunny

Equipment In Use: peristaltic pump,
horiba, water level water

Visitors:

Table with 2 columns: TIME and WORK DESCRIPTION. Includes entries for 0945, 1056, 1122, 1150, and 1230.

Signature: [Handwritten Signature]



GROUNDWATER MONITORING SITE SHEET

Page 1 of 1

Project: BP 402 Project No.: 08-88-602 Date: 6/26/14

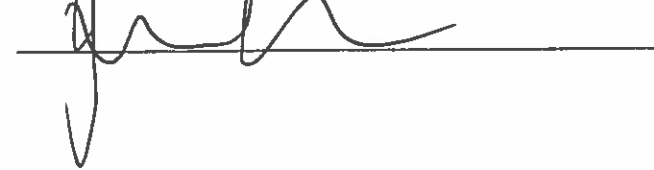
Field Representative: James/Jessica Elevation: \_\_\_\_\_

Formation recharge rate is historically: High Low (circle one)

W. L. Indicator ID #: \_\_\_\_\_ Oil/Water Interface ID #: \_\_\_\_\_ (List #s of all equip used.)

WELL ID RECORD					WELL GAUGING RECORD					LAB ANALYSES		
Well ID	Well Sampling Order	As-Built Well Diameter (inches)	As-Built Well Screen Interval (ft)	Previous Depth to Water (ft)	Time (24:00)	Depth to LNAPL (ft)	Apparent LNAPL Thickness (ft)*	Depth to Water (ft)	Well Total Depth (ft)			
MW-4	1				1027			13.84	27.8			
MW-5	2				1100			12.52	27.8			
MW-6	3				1125			14.20	27.8			
MW-7	4				1155			13.44	31.86			

\* Device used to measure LNAPL thickness: Bailer Oil/Water Interface Meter (circle one)  
 If bailer used, note bailer dimensions (inches): Entry Diameter \_\_\_\_\_ Chamber Diameter \_\_\_\_\_

Signature: 



GROUNDWATER SAMPLING DATA SHEET

Page 1 of 1

Project: BP 402 Project No.: 08-88-602 Date: 6/26/14
Field Representative: James/Jessica
Well ID: MW-4 Start Time: 10:25 End Time: 10:50 Total Time (minutes):

PURGE EQUIPMENT: Dis. Bailer, 120V Pump, Flow Cell, Dis. Tubing, 12V Pump, Peristaltic Pump, Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments: Improvement Needed (circle one)

PURGING/SAMPLING METHOD: Predetermined Well Volume, Low-Flow, Other:

PREDETERMINED WELL VOLUME: Casing Diameter, Unit Volume, Total Well Depth, Initial Depth to Water, Water Column Height (WCH) = (a - b), Water Column Volume (WCV) = WCH x Unit Volume. LOW-FLOW: Previous Low-Flow Purge Rate, Total Well Depth (a), Initial Depth to Water (b), Pump In-take Depth = b + (a-b)/2, Maximum Allowable Drawdown = (a-b)/8, Low-Flow Purge Rate. Comments: \*Low-flow purge rate should be within range of instruments used but should not exceed 0.25 gpm. Drawdown should not exceed Maximum Allowable Drawdown.

GROUNDWATER STABILIZATION PARAMETER RECORD table with columns: Time (24:00), Cumulative Vol. gal or (L), Temperature °C, pH, Conductivity µS or mS, DO mg/L, ORP mV, Turbidity NTU, NOTES (Odor, color, sheen or other). Rows show data from 10:35 to 10:43.

PURGE COMPLETION RECORD: Low Flow & Parameters Stable, 3 Casing Volumes & Parameters Stable, 5 Casing Volumes, Other:

SAMPLE COLLECTION RECORD: Depth to Water at Sampling: 14.44 (ft), Sample Collected Via: Dis. Pump Tubing, Sample ID: MW-4, Sample Collection Time: 10:45 (24:00), Containers (#): 6 VOA (6 preserved or unpreserved), Liter Amber. GEOCHEMICAL PARAMETERS: DO (mg/L), Ferrous Iron (mg/L), Redox Potential (mV), Alkalinity (mg/L), Other:

Signature: [Handwritten Signature]



GROUNDWATER SAMPLING DATA SHEET
Page 2 of 4

Project: BP 402 Project No.: 08-85-602 Date: 6/26/14
Field Representative: James/Jessica
Well ID: MW-5 Start Time: 10:55 End Time: 11:20 Total Time (minutes):

PURGE EQUIPMENT: Disp. Bailer, 120V Pump, Flow Cell, X Disp. Tubing, 12V Pump, X Peristaltic Pump, Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments:
Good X Improvement Needed (circle one)

PURGING/SAMPLING METHOD: Predetermined Well Volume, Low-Flow, Other: (circle one)

PREDETERMINED WELL VOLUME and LOW-FLOW sections with tables for casing diameters, well depths, and purge rates. Includes a diagram of a well casing.

GROUNDWATER STABILIZATION PARAMETER RECORD

Table with columns: Time (24:00), Cumulative Vol. gal of B, Temperature °C, pH, Conductivity µS or mS, DO mg/L, ORP mV, Turbidity NTU, NOTES. Contains handwritten data points.

Previous Stabilized Parameters

PURGE COMPLETION RECORD: X Low Flow & Parameters Stable, 3 Casing Volumes & Parameters Stable, 5 Casing Volumes, Other:

SAMPLE COLLECTION RECORD and GEOCHEMICAL PARAMETERS sections. Includes fields for depth to water, sample collection time, and various chemical parameters.

Signature: [Handwritten signature]



GROUNDWATER SAMPLING DATA SHEET

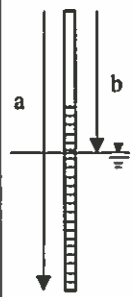
Project: BP 402 Project No.: 08-88-602 Date: 6/26/14
Field Representative: James/Jessica
Well ID: MW-6 Start Time: 11:25 End Time: 11:40 Total Time (minutes):

PURGE EQUIPMENT: Disp. Bailer, 120V Pump, Flow Cell, Disp. Tubing, 12V Pump, Peristaltic Pump, Other/ID#:

WELL HEAD INTEGRITY (cap, lock, vault, etc.) Comments: Good Improvement Needed (circle one)

PURGING/SAMPLING METHOD: Predetermined Well Volume, Low-Flow, Other: (circle one)

Table with columns for Predetermined Well Volume and Low-Flow parameters. Includes casing diameters (1" to 12"), well depth (29.83 ft), initial depth to water (14.20 ft), and low-flow purge rate (0.25 Lpm).



GROUNDWATER STABILIZATION PARAMETER RECORD

Table with columns: Time (24:00), Cumulative Vol. gal or L, Temperature °C, pH, Conductivity µS or µS, DO mg/L, ORP mV, Turbidity NTU, NOTES. Contains 5 rows of data.

PURGE COMPLETION RECORD: X Low Flow & Parameters Stable, 3 Casing Volumes & Parameters Stable, 5 Casing Volumes, Other:

SAMPLE COLLECTION RECORD / GEOCHEMICAL PARAMETERS

Table for sample collection and geochemical parameters. Includes Depth to Water at Sampling (14.69 ft), Sample ID (MW-6), Sample Collection Time (11:40), and parameters like DO, Ferrous Iron, Redox Potential, Alkalinity.

Signature: [Handwritten Signature]





Laboratory Management Program LaMP Chain of Custody Record

BP Site Node Path: 08-88-602

Req Due Date (mm/dd/yy): \_\_\_\_\_

Rush TAT: Yes \_\_\_ No \_\_\_

BP Facility No: 402

Lab Work Order Number: \_\_\_\_\_

Lab Name: Test America				Facility Address: 1450 Fruitvale Avenue				Consultant/Contractor: Broadbent & Associates Inc.											
Lab Address: 17461 Derian Avenue, Suite 100, Irvine, CA				City, State, ZIP Code: Oakland, California				Consultant/Contractor Project No: 08-88-602											
Lab PM: Kathleen Robb				Lead Regulatory Agency: Alameda County Environmental Health				Address: 4820 Business Center Dr, #110, Fairfield, California											
Lab Phone: 949-261-1022				California Global ID No.: T06019734265				Consultant/Contractor PM: Kristene Tidwell											
Lab Shipping Acct: Fed ex#: 11103-6633-7				Enfos Proposal No/ WR#: 0064V-0009 / WR273481				Phone: 707-455-7290/707-455-7295(F) Email: <a href="mailto:ktidwell@broadbentinc.com">ktidwell@broadbentinc.com</a>											
Lab Bottle Order No:				Accounting Mode: Provision <input checked="" type="checkbox"/> OOC-BU ___ OOC-RM ___				Email EDD To: <a href="mailto:ktidwell@broadbentinc.com">ktidwell@broadbentinc.com</a> and to <a href="mailto:lab.enfosdoc@bp.com">lab.enfosdoc@bp.com</a>											
Other Info:				Stage: Execute (40) Activity: GWM (401)				Invoice To: BP <input checked="" type="checkbox"/> Contractor ___											
BP Project Manager (PM): Chuck Carmel				Matrix		No. Containers / Preservative				Requested Analyses				Report Type & QC Level					
BP PM Phone: 925-275-3803														Standard <input checked="" type="checkbox"/>					
BP PM Email: <a href="mailto:charles.carmel@bp.com">charles.carmel@bp.com</a>														Full Data Package ___					
Lab No.	Sample Description	Date	Time	Soil / Solid	Water / Liquid	Air / Vapor	Is this location a well?	Total Number of Container	Unpreserved	H2SO4	HNO3	HCl	Methanol	GRO by 8015M	BTEX/5 FO + EDB by 826	1,2 DCA by 8260	Ethanol by 8260	Comments	
	MW-4	6/26/14	1045	x		y	6					x		x	x	x	x		
	MW-5		1115	x		y	6					x		x	x	x	x		
	MW-6		1140	x		y	6					x		x	x	x	x		
	MW-7		1210	x		y	6					x		x	x	x	x		
	TB -402-06262014		1700	x		y	2					x						ON HOLD	
Sampler's Name: James Ramos				Relinquished By / Affiliation				Date	Time	Accepted By / Affiliation				Date	Time				
Sampler's Company: Broadbent & Associates				<i>[Signature]</i> / Broadbent				6/26/14	1700										
Shipment Method: Fed Ex Ship Date: 6/26/2014																			
Shipment Tracking No:																			
Special Instructions:																			
THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No				Temp Blank: Yes / No				Cooler Temp on Receipt: _____ *F/C				Trip Blank: Yes / No		MS/MSD Sample Submitted: Yes / No					



**APPENDIX C**

LABORATORY REPORT  
AND CHAIN-OF-CUSTODY DOCUMENTATION

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-81881-1

Client Project/Site: ARCO 0402, Oakland

For:

Broadbent & Associates, Inc.

4820 Business Center Drive

#110

Fairfield, California 94534

Attn: Kristene Tidwell



Authorized for release by:

7/9/2014 1:20:26 PM

Kathleen Robb, Project Manager II

(949)261-1022

[kathleen.robbs@testamericainc.com](mailto:kathleen.robbs@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Sample Summary

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-81881-1	MW-4	Water	06/26/14 10:45	06/27/14 10:30
440-81881-2	MW-5	Water	06/26/14 11:15	06/27/14 10:30
440-81881-3	MW-6	Water	06/26/14 11:40	06/27/14 10:30
440-81881-4	MW-7	Water	06/26/14 12:10	06/27/14 10:30

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# Case Narrative

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

**Job ID: 440-81881-1**

**Laboratory: TestAmerica Irvine**

## Narrative

**Job Narrative**  
**440-81881-1**

### Comments

No additional comments.

### Receipt

The samples were received on 6/27/2014 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

Except:

One or more containers for the following sample(s) was received broken or leaking: MW-7 (440-81881-4). MW-7: one of the 40 mL HCl vials was broken. The broken vial was not logged in. Enough sample volume remained to run requested analyses.

### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### GC VOA

Method(s) 8015B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with batch 191628 were outside control limits: (440-81881-1 MS), (440-81881-1 MSD). The associated laboratory control sample (LCS) recovery met acceptance criteria. Percent RPD are within limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Client Sample Results

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

**Client Sample ID: MW-4**  
**Date Collected: 06/26/14 10:45**  
**Date Received: 06/27/14 10:30**

**Lab Sample ID: 440-81881-1**  
**Matrix: Water**

**Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			06/30/14 14:48	1
1,2-Dichloroethane	ND		0.50	ug/L			06/30/14 14:48	1
<b>Benzene</b>	<b>51</b>		0.50	ug/L			06/30/14 14:48	1
Ethanol	ND		150	ug/L			06/30/14 14:48	1
<b>Ethylbenzene</b>	<b>32</b>		0.50	ug/L			06/30/14 14:48	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			06/30/14 14:48	1
<b>Isopropyl Ether (DIPE)</b>	<b>1.9</b>		0.50	ug/L			06/30/14 14:48	1
<b>m,p-Xylene</b>	<b>1.7</b>		1.0	ug/L			06/30/14 14:48	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	ug/L			06/30/14 14:48	1
o-Xylene	ND		0.50	ug/L			06/30/14 14:48	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			06/30/14 14:48	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			06/30/14 14:48	1
<b>Toluene</b>	<b>0.76</b>		0.50	ug/L			06/30/14 14:48	1
<b>Xylenes, Total</b>	<b>1.7</b>		1.0	ug/L			06/30/14 14:48	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	112		80 - 120				06/30/14 14:48	1
Dibromofluoromethane (Surr)	103		76 - 132				06/30/14 14:48	1
Toluene-d8 (Surr)	108		80 - 128				06/30/14 14:48	1

**Method: 8015B/5030B - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>GRO (C6-C12)</b>	<b>1300</b>		50	ug/L			06/30/14 22:44	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	123		65 - 140				06/30/14 22:44	1

**Client Sample ID: MW-5**  
**Date Collected: 06/26/14 11:15**  
**Date Received: 06/27/14 10:30**

**Lab Sample ID: 440-81881-2**  
**Matrix: Water**

**Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			06/30/14 15:16	1
1,2-Dichloroethane	ND		0.50	ug/L			06/30/14 15:16	1
Benzene	ND		0.50	ug/L			06/30/14 15:16	1
Ethanol	ND		150	ug/L			06/30/14 15:16	1
Ethylbenzene	ND		0.50	ug/L			06/30/14 15:16	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			06/30/14 15:16	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			06/30/14 15:16	1
m,p-Xylene	ND		1.0	ug/L			06/30/14 15:16	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	ug/L			06/30/14 15:16	1
o-Xylene	ND		0.50	ug/L			06/30/14 15:16	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			06/30/14 15:16	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			06/30/14 15:16	1
Toluene	ND		0.50	ug/L			06/30/14 15:16	1
Xylenes, Total	ND		1.0	ug/L			06/30/14 15:16	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	105		80 - 120				06/30/14 15:16	1

TestAmerica Irvine

# Client Sample Results

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

**Client Sample ID: MW-5**

**Lab Sample ID: 440-81881-2**

Date Collected: 06/26/14 11:15

Matrix: Water

Date Received: 06/27/14 10:30

**Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	118		76 - 132		06/30/14 15:16	1
Toluene-d8 (Surr)	103		80 - 128		06/30/14 15:16	1

**Method: 8015B/5030B - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			07/01/14 00:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		65 - 140		07/01/14 00:09	1

**Client Sample ID: MW-6**

**Lab Sample ID: 440-81881-3**

Date Collected: 06/26/14 11:40

Matrix: Water

Date Received: 06/27/14 10:30

**Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			06/30/14 15:45	1
1,2-Dichloroethane	ND		0.50	ug/L			06/30/14 15:45	1
Benzene	ND		0.50	ug/L			06/30/14 15:45	1
Ethanol	ND		150	ug/L			06/30/14 15:45	1
Ethylbenzene	ND		0.50	ug/L			06/30/14 15:45	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			06/30/14 15:45	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			06/30/14 15:45	1
m,p-Xylene	ND		1.0	ug/L			06/30/14 15:45	1
<b>Methyl-t-Butyl Ether (MTBE)</b>	<b>13</b>		0.50	ug/L			06/30/14 15:45	1
o-Xylene	ND		0.50	ug/L			06/30/14 15:45	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			06/30/14 15:45	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			06/30/14 15:45	1
Toluene	ND		0.50	ug/L			06/30/14 15:45	1
Xylenes, Total	ND		1.0	ug/L			06/30/14 15:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120		06/30/14 15:45	1
Dibromofluoromethane (Surr)	115		76 - 132		06/30/14 15:45	1
Toluene-d8 (Surr)	103		80 - 128		06/30/14 15:45	1

**Method: 8015B/5030B - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			07/01/14 00:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		65 - 140		07/01/14 00:37	1

**Client Sample ID: MW-7**

**Lab Sample ID: 440-81881-4**

Date Collected: 06/26/14 12:10

Matrix: Water

Date Received: 06/27/14 10:30

**Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			06/30/14 16:13	1
1,2-Dichloroethane	ND		0.50	ug/L			06/30/14 16:13	1

TestAmerica Irvine

# Client Sample Results

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

**Client Sample ID: MW-7**

**Lab Sample ID: 440-81881-4**

**Date Collected: 06/26/14 12:10**

**Matrix: Water**

**Date Received: 06/27/14 10:30**

**Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>5.0</b>		0.50	ug/L			06/30/14 16:13	1
Ethanol	ND		150	ug/L			06/30/14 16:13	1
<b>Ethylbenzene</b>	<b>1.9</b>		0.50	ug/L			06/30/14 16:13	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			06/30/14 16:13	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			06/30/14 16:13	1
m,p-Xylene	ND		1.0	ug/L			06/30/14 16:13	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	ug/L			06/30/14 16:13	1
o-Xylene	ND		0.50	ug/L			06/30/14 16:13	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			06/30/14 16:13	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			06/30/14 16:13	1
<b>Toluene</b>	<b>0.63</b>		0.50	ug/L			06/30/14 16:13	1
Xylenes, Total	ND		1.0	ug/L			06/30/14 16:13	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	109		80 - 120				06/30/14 16:13	1
Dibromofluoromethane (Surr)	114		76 - 132				06/30/14 16:13	1
Toluene-d8 (Surr)	109		80 - 128				06/30/14 16:13	1

**Method: 8015B/5030B - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>GRO (C6-C12)</b>	<b>530</b>		50	ug/L			07/01/14 01:05	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	88		65 - 140				07/01/14 01:05	1



# Method Summary

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

Method	Method Description	Protocol	Laboratory
8260B/5030B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8015B/5030B	Gasoline Range Organics (GC)	SW846	TAL IRV

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



# Lab Chronicle

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

## Client Sample ID: MW-4

Date Collected: 06/26/14 10:45

Date Received: 06/27/14 10:30

## Lab Sample ID: 440-81881-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	191309	06/30/14 14:48	SS	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	191628	06/30/14 22:44	AK	TAL IRV

## Client Sample ID: MW-5

Date Collected: 06/26/14 11:15

Date Received: 06/27/14 10:30

## Lab Sample ID: 440-81881-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	191309	06/30/14 15:16	SS	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	191628	07/01/14 00:09	AK	TAL IRV

## Client Sample ID: MW-6

Date Collected: 06/26/14 11:40

Date Received: 06/27/14 10:30

## Lab Sample ID: 440-81881-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	191309	06/30/14 15:45	SS	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	191628	07/01/14 00:37	AK	TAL IRV

## Client Sample ID: MW-7

Date Collected: 06/26/14 12:10

Date Received: 06/27/14 10:30

## Lab Sample ID: 440-81881-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/5030B		1	10 mL	10 mL	191309	06/30/14 16:13	SS	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	191628	07/01/14 01:05	AK	TAL IRV

### Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# QC Sample Results

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

## Method: 8260B/5030B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-191309/4**

**Matrix: Water**

**Analysis Batch: 191309**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	ug/L			06/30/14 07:57	1
1,2-Dichloroethane	ND		0.50	ug/L			06/30/14 07:57	1
Benzene	ND		0.50	ug/L			06/30/14 07:57	1
Ethanol	ND		150	ug/L			06/30/14 07:57	1
Ethylbenzene	ND		0.50	ug/L			06/30/14 07:57	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			06/30/14 07:57	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			06/30/14 07:57	1
m,p-Xylene	ND		1.0	ug/L			06/30/14 07:57	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50	ug/L			06/30/14 07:57	1
o-Xylene	ND		0.50	ug/L			06/30/14 07:57	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			06/30/14 07:57	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			06/30/14 07:57	1
Toluene	ND		0.50	ug/L			06/30/14 07:57	1
Xylenes, Total	ND		1.0	ug/L			06/30/14 07:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		06/30/14 07:57	1
Dibromofluoromethane (Surr)	100		76 - 132		06/30/14 07:57	1
Toluene-d8 (Surr)	103		80 - 128		06/30/14 07:57	1

**Lab Sample ID: LCS 440-191309/5**

**Matrix: Water**

**Analysis Batch: 191309**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	25.0	27.2		ug/L		109	70 - 130
1,2-Dichloroethane	25.0	27.2		ug/L		109	57 - 138
Benzene	25.0	24.7		ug/L		99	68 - 130
Ethanol	250	236		ug/L		94	50 - 149
Ethylbenzene	25.0	25.6		ug/L		102	70 - 130
Ethyl-t-butyl ether (ETBE)	25.0	23.4		ug/L		94	60 - 136
Isopropyl Ether (DIPE)	25.0	22.9		ug/L		92	58 - 139
m,p-Xylene	50.0	53.6		ug/L		107	70 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	23.6		ug/L		94	63 - 131
o-Xylene	25.0	27.2		ug/L		109	70 - 130
Tert-amyl-methyl ether (TAME)	25.0	23.0		ug/L		92	57 - 139
tert-Butyl alcohol (TBA)	125	120		ug/L		96	70 - 130
Toluene	25.0	25.3		ug/L		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	105		76 - 132
Toluene-d8 (Surr)	104		80 - 128

TestAmerica Irvine

# QC Sample Results

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

## Method: 8260B/5030B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-81882-A-2 MS**

**Matrix: Water**

**Analysis Batch: 191309**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	ND		25.0	26.7		ug/L		107	70 - 131
1,2-Dichloroethane	ND		25.0	28.3		ug/L		113	56 - 146
Benzene	ND		25.0	22.9		ug/L		92	66 - 130
Ethanol	ND		250	202		ug/L		81	54 - 150
Ethylbenzene	ND		25.0	24.6		ug/L		98	70 - 130
Ethyl-t-butyl ether (ETBE)	ND		25.0	25.9		ug/L		104	70 - 130
Isopropyl Ether (DIPE)	ND		25.0	25.4		ug/L		101	64 - 138
m,p-Xylene	ND		50.0	49.2		ug/L		98	70 - 133
Methyl-t-Butyl Ether (MTBE)	ND		25.0	26.5		ug/L		106	70 - 130
o-Xylene	ND		25.0	26.9		ug/L		107	70 - 133
Tert-amyl-methyl ether (TAME)	ND		25.0	25.4		ug/L		102	68 - 133
tert-Butyl alcohol (TBA)	ND		125	118		ug/L		95	70 - 130
Toluene	ND		25.0	24.4		ug/L		97	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	113		76 - 132
Toluene-d8 (Surr)	105		80 - 128

**Lab Sample ID: 440-81882-A-2 MSD**

**Matrix: Water**

**Analysis Batch: 191309**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	ND		25.0	26.8		ug/L		107	70 - 131	0	25
1,2-Dichloroethane	ND		25.0	29.8		ug/L		119	56 - 146	5	20
Benzene	ND		25.0	24.9		ug/L		100	66 - 130	8	20
Ethanol	ND		250	238		ug/L		95	54 - 150	16	30
Ethylbenzene	ND		25.0	25.8		ug/L		103	70 - 130	5	20
Ethyl-t-butyl ether (ETBE)	ND		25.0	27.3		ug/L		109	70 - 130	5	25
Isopropyl Ether (DIPE)	ND		25.0	27.0		ug/L		108	64 - 138	6	25
m,p-Xylene	ND		50.0	52.5		ug/L		105	70 - 133	6	25
Methyl-t-Butyl Ether (MTBE)	ND		25.0	27.3		ug/L		109	70 - 130	3	25
o-Xylene	ND		25.0	27.8		ug/L		111	70 - 133	3	20
Tert-amyl-methyl ether (TAME)	ND		25.0	26.8		ug/L		107	68 - 133	5	30
tert-Butyl alcohol (TBA)	ND		125	128		ug/L		103	70 - 130	8	25
Toluene	ND		25.0	27.0		ug/L		108	70 - 130	10	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	111		76 - 132
Toluene-d8 (Surr)	107		80 - 128

TestAmerica Irvine

# QC Sample Results

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

## Method: 8015B/5030B - Gasoline Range Organics (GC)

**Lab Sample ID: MB 440-191628/29**

**Matrix: Water**

**Analysis Batch: 191628**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	ND		50	ug/L			06/30/14 22:15	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		65 - 140				06/30/14 22:15	1

**Lab Sample ID: LCS 440-191628/28**

**Matrix: Water**

**Analysis Batch: 191628**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	800	820		ug/L		102	80 - 120
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	97		65 - 140				

**Lab Sample ID: 440-81881-1 MS**

**Matrix: Water**

**Analysis Batch: 191628**

**Client Sample ID: MW-4**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	1700		800	2350	EY	ug/L		85	65 - 140
Surrogate	%Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	120		65 - 140						

**Lab Sample ID: 440-81881-1 MSD**

**Matrix: Water**

**Analysis Batch: 191628**

**Client Sample ID: MW-4**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	1700		800	2340	EY	ug/L		84	65 - 140	0	20
Surrogate	%Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	125		65 - 140								

# QC Association Summary

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

## GC/MS VOA

### Analysis Batch: 191309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-81881-1	MW-4	Total/NA	Water	8260B/5030B	
440-81881-2	MW-5	Total/NA	Water	8260B/5030B	
440-81881-3	MW-6	Total/NA	Water	8260B/5030B	
440-81881-4	MW-7	Total/NA	Water	8260B/5030B	
440-81882-A-2 MS	Matrix Spike	Total/NA	Water	8260B/5030B	
440-81882-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B/5030B	
LCS 440-191309/5	Lab Control Sample	Total/NA	Water	8260B/5030B	
MB 440-191309/4	Method Blank	Total/NA	Water	8260B/5030B	

## GC VOA

### Analysis Batch: 191628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-81881-1	MW-4	Total/NA	Water	8015B/5030B	
440-81881-1 MS	MW-4	Total/NA	Water	8015B/5030B	
440-81881-1 MSD	MW-4	Total/NA	Water	8015B/5030B	
440-81881-2	MW-5	Total/NA	Water	8015B/5030B	
440-81881-3	MW-6	Total/NA	Water	8015B/5030B	
440-81881-4	MW-7	Total/NA	Water	8015B/5030B	
LCS 440-191628/28	Lab Control Sample	Total/NA	Water	8015B/5030B	
MB 440-191628/29	Method Blank	Total/NA	Water	8015B/5030B	

## Definitions/Glossary

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

### Qualifiers

#### GC VOA

Qualifier	Qualifier Description
EY	Result exceeds normal dynamic range; reported as a min. est.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Certification Summary

Client: Broadbent & Associates, Inc.  
Project/Site: ARCO 0402, Oakland

TestAmerica Job ID: 440-81881-1

## Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-14
California	LA Cty Sanitation Districts	9	10256	01-31-15
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-15
Hawaii	State Program	9	N/A	01-29-15 *
Nevada	State Program	9	CA015312007A	07-31-14 *
New Mexico	State Program	6	N/A	01-29-15
Northern Mariana Islands	State Program	9	MP0002	01-29-15
Oregon	NELAP	10	4005	01-29-15
USDA	Federal		P330-09-00080	06-06-15
USEPA UCMR	Federal	1	CA01531	01-31-15

\* Certification renewal pending - certification considered valid.

TestAmerica Irvine





440-81881 Chain of Custody



### Laboratory Management Program LaMP Chain of Custody Record

Page 1 of 1

BP Site Node Path: 08-88-602

Req Due Date (mm/dd/yy): \_\_\_\_\_

Rush TAT: Yes \_\_\_ No

BP Facility No: 402

Lab Work Order Number: \_\_\_\_\_

Lab Name: Test America	Facility Address: 1450 Fruitvale Avenue	Consultant/Contractor: Broadbent & Associates Inc.
Lab Address: 17461 Derian Avenue, Suite 100, Irvine, CA	City, State, ZIP Code: Oakland, California	Consultant/Contractor Project No: 08-88-602
Lab PM: Kathleen Robb	Lead Regulatory Agency: Alameda County Environmental Health	Address: 4820 Business Center Dr, #110, Fairfield, California
Lab Phone: 949-261-1022	California Global ID No.: T06019734265	Consultant/Contractor PM: Kristene Tidwell
Lab Shipping Acct: Fed ex#: 11103-6633-7	Enfos Proposal No/ WR#: 0064V-0009 / WR273481	Phone: 707-455-7290/707-455-7295(F) Email: ktidwell@broadbentinc.com
Lab Bottle Order No:	Accounting Mode: Provision <input checked="" type="checkbox"/> OOC-BU ___ OOC-RM ___	Email EDD To: ktidwell@broadbentinc.com and to lab.enfosdoc@bp.com
Other Info:	Stage: Execute (40) Activity: GWM (401)	Invoice To: BP <input checked="" type="checkbox"/> Contractor ___

BP Project Manager (PM): Chuck Carmel	<b>Matrix</b>	<b>No. Containers / Preservative</b>	<b>Requested Analyses</b>	<b>Report Type &amp; QC Level</b>
BP PM Phone: 925-275-3803				Standard <input checked="" type="checkbox"/>
BP PM Email: charles.carmel@bp.com				Full Data Package ___

Lab No.	Sample Description	Date	Time	Soil / Solid	Water / Liquid	Air / Vapor	Is this location a well?	Total Number of Container	Unpreserved	H2SO4	HNO3	HCl	Methanol	GRO by 8015M	BTEX15 FO + EDB by 826	1,2 DCA by 8260	Ethanol by 8260	Comments
	MW-4	6/26/14	1045	x			y	6						x	x	x	x	
	MW-5		1115	x			y	6						x	x	x	x	
	MW-6		1140	x			y	6						x	x	x	x	
	MW-7		1210	x			y	6						x	x	x	x	
	TB -402-06262014		1700	x			y	2										ON HOLD

Sampler's Name: James Ramos	Relinquished By / Affiliation: <i>[Signature]</i> / Broadbent	Date: 6/26/14	Time: 1700	Accepted By / Affiliation: <i>[Signature]</i>	Date: 06/27/14	Time: 10:30
Shipment Method: Fed Ex Ship Date: 6/26/2014						

Special Instructions: Fed-EX #: 80027 8050 2030

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No Temp Blank: Yes / No Cooler Temp on Receipt: 33.0 °F/C Trp Blank: Yes / No MS/MSD Sample Submitted: Yes / No

Page 16 of 17

7/9/2014



## Login Sample Receipt Checklist

Client: Broadbent & Associates, Inc.

Job Number: 440-81881-1

**Login Number: 81881**

**List Number: 1**

**Creator: Pratt, Amanda K**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	1 of 6 voas for MW-7 was rec'd broken.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



**APPENDIX D**

**GEOTRACKER UPLOAD CONFIRMATION RECEIPTS**

## STATE WATER RESOURCES CONTROL BOARD

**GEOTRACKER ESI**

UPLOADING A EDF FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

<b><u>Submittal Type:</u></b>	<b>EDF</b>
<b><u>Report Title:</u></b>	<b>Second Quarter Groundwater Monitoring Report</b>
<b><u>Report Type:</u></b>	<b>Monitoring Report - Semi-Annually</b>
<b><u>Facility Global ID:</u></b>	<b>T06019734265</b>
<b><u>Facility Name:</u></b>	<b>ARCO #0402 / PARKING LOT</b>
<b><u>File Name:</u></b>	<b>440-81881-1_09 Jul 14 1338_EDF.zip</b>
<b><u>Organization Name:</u></b>	<b>Broadbent &amp; Associates, Inc.</b>
<b><u>Username:</u></b>	<b>BROADBENT-C</b>
<b><u>IP Address:</u></b>	<b>69.170.11.178</b>
<b><u>Submittal Date/Time:</u></b>	<b>7/28/2014 11:35:54 AM</b>
<b><u>Confirmation Number:</u></b>	<b>5943925976</b>

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[VIEW DETECTIONS REPORT](#)

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## STATE WATER RESOURCES CONTROL BOARD

**GEOTRACKER ESI**

UPLOADING A GEO\_WELL FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

<b><u>Submittal Type:</u></b>	<b>GEO_WELL</b>
<b><u>Report Title:</u></b>	<b>Second Quarter Groundwater Monitoring Report</b>
<b><u>Facility Global ID:</u></b>	<b>T06019734265</b>
<b><u>Facility Name:</u></b>	<b>ARCO #0402 / PARKING LOT</b>
<b><u>File Name:</u></b>	<b>geo_well.zip</b>
<b><u>Organization Name:</u></b>	<b>Broadbent &amp; Associates, Inc.</b>
<b><u>Username:</u></b>	<b>BROADBENT-C</b>
<b><u>IP Address:</u></b>	<b>69.170.11.178</b>
<b><u>Submittal Date/Time:</u></b>	<b>7/28/2014 12:13:39 PM</b>
<b><u>Confirmation Number:</u></b>	<b>3818346142</b>

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