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Atlantic Richfield Company

Chuck Carmel
Remediation Management Project Manager

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San Ramon, CA 94583
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E-Mail: chuck.carmel@bp.com

April 30, 2014

Re: First 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:

BROADBENT
875 Cotting Ln., Suite G, Vacaville, CA 95688
[T] 707-455-7290 [F] 707-455-7295
broadbentinc.com

Creating Solutions. Building Trust.

April 30, 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: First 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 *First 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 First 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

Sarah Jones
Staff Geologist

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

PROFESSIONAL GEOLOGIST
KRISTENE TIDWELL
No. 969
CERTIFIED HYDRO GEOLOGIST
STATE OF CALIFORNIA

Enclosures

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

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

Broadbent and Associates, Inc. (Broadbent) is pleased to present this *First 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 (First Quarter 2014):

1. Submit *Fourth Quarter 2013 Status Report* on January 24, 2014.
2. Conducted groundwater monitoring/sampling for First Quarter 2014 on March 18, 2014.
3. Submitted Monitoring Well Installation and Vapor Intrusion Assessment Report on February 28, 2014.

WORK SCHEDULED FOR NEXT QUARTER (Second Quarter 2014):

1. Submit *First Quarter 2014 Monitoring Report* (contained herein).
2. Conduct groundwater monitoring/sampling for Second Quarter 2014.
3. No other environmental work activities are scheduled for the Second 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 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:	10.72 ft (MW-4) to 11.72 ft (MW-6)	(ft below TOC)
Gradient direction:	Southwest	(compass direction)
Gradient magnitude:	0.01	(ft/ft)
Average change in elevation:	-3.39	(ft since last measurement)

Laboratory Analytical Data

Summary:

Analytical Results are as follows:

- GRO was detected in two wells at a maximum concentration of 600 µg/L in well MW-4.
- Benzene was detected in two wells at a maximum concentration of 28 µg/L in well MW-4.
- Ethylbenzene was detected in two wells at a maximum concentration of 20 µg/L in well MW-4.
- Total Xylenes were detected in well MW-4 at a concentration of 4.8 µg/L.
- MTBE was detected in well MW-6 at a concentration of 14 µg/L.
- DIPE was detected in well MW-4 at a concentration of 1.8 µg/L.

ACTIVITIES CONDUCTED & RESULTS:

First Quarter 2014 groundwater monitoring and sampling activities were conducted on March 18, 2014 by Broadbent personnel in accordance with the First 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 10.72 ft in MW-4 to 11.72 ft in MW-6. As shown on Drawing 2, groundwater gradient on March 18, 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 March 18, 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 March 18, 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. Comparison of analytical results over the last two sampling events indicate that monitoring well MW-4 present residual petroleum constitutes and additives have decreased, with exception of DIPE (1.7 µg/L to 1.8 µg/L). MTBE has increased in monitoring well MW-6 (10 µg/L to 14 µg/L) and decreased in monitoring well MW-5(0.69 µg/L to <0.50 µg/L). GRO, benzene and ethylbenzene have increased at monitoring well MW-7(96 µg/L to <190 µg/L), (<0.50 µg/L to 2.3 µg/L) and (1.5 µg/L to 2.2 µg/L), respectively, over the last two sampling events. All other petroleum hydrocarbon constituents were detected below laboratory reporting limits during First Quarter 2014. Petroleum hydrocarbon concentrations from the First 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, March 18, 2014
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

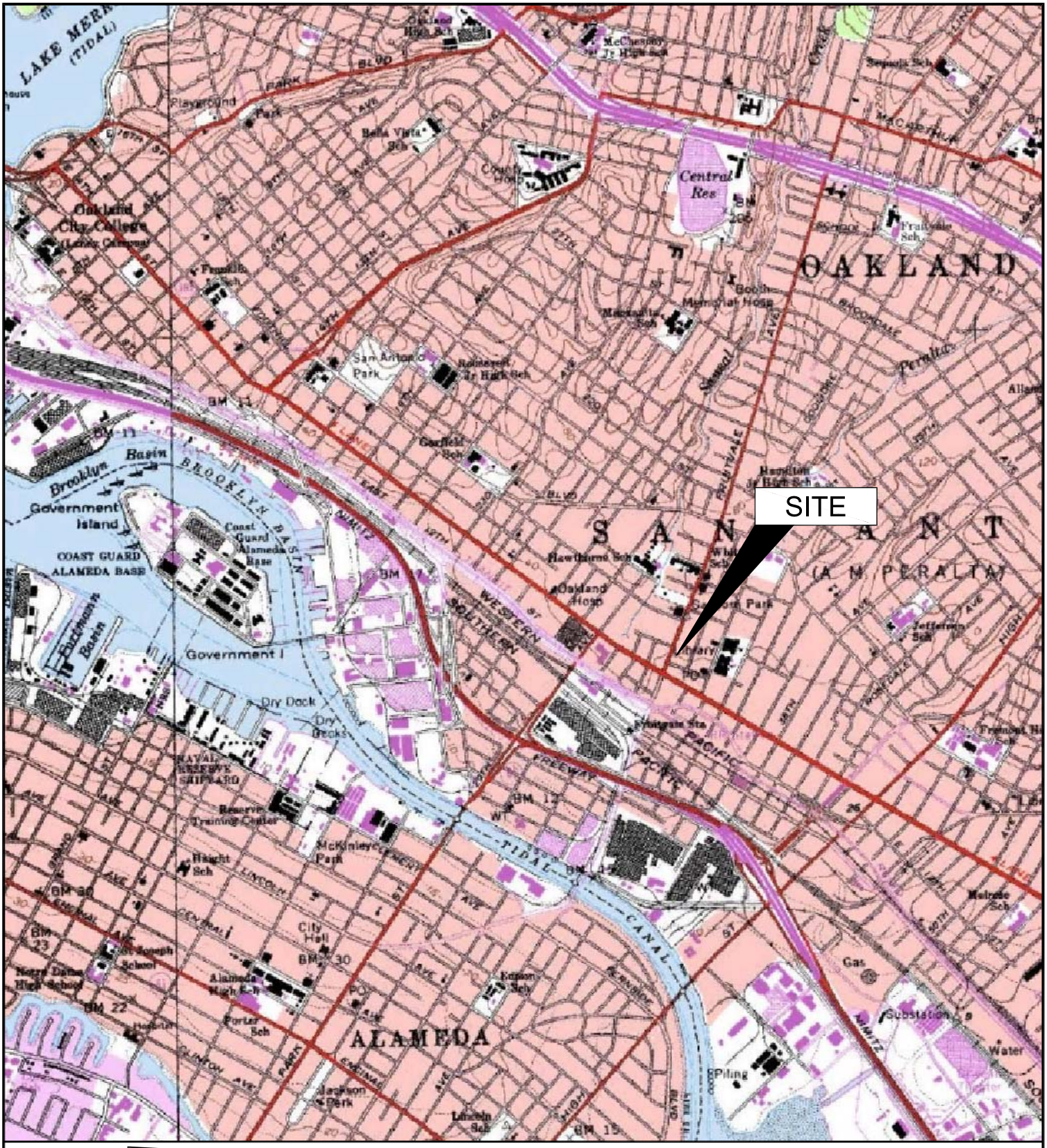


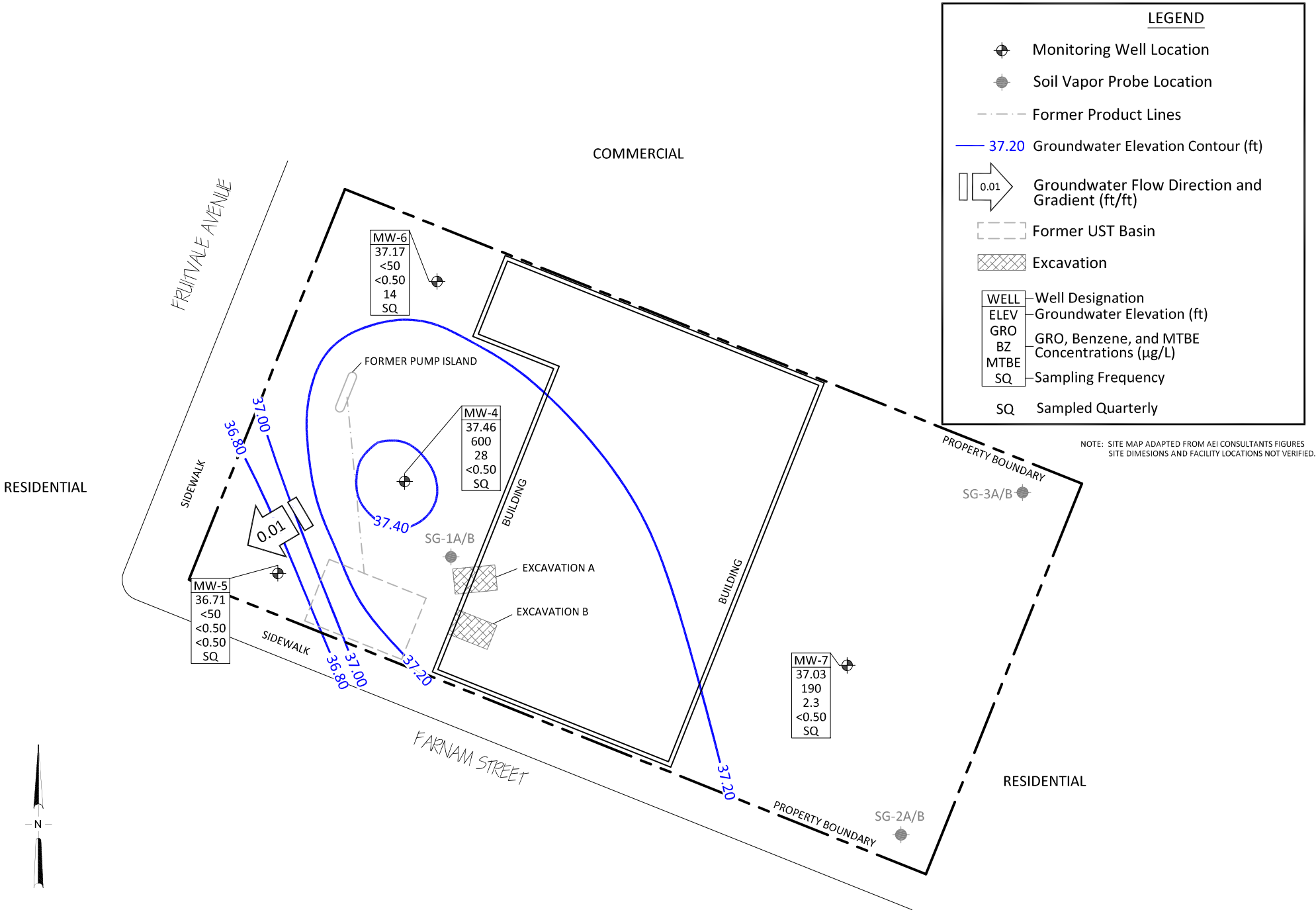
IMAGE SOURCE: USGS

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, CA 95926
Project No.: 08-88-602 Date: 10/9/09

Station #402
1450 Fruitvale Avenue
Oakland, California

Site Location Map

Drawing
1



BROADBENT
875 Cotting Lane, Suite G
Vacaville, California 95688
Project No.: 08-88-602 Date: 04/14/2014

ARCO Former Station № 402
1450 Fruitvale Avenue
Oakland, California

Groundwater Elevation Contour and Analytical Summary Map, March 18, 2014

Drawing
2

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		
MW-4												
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**	
MW-5												
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**	
MW-6												
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**	
MW-7												
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**	

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	
MW-4									
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**	
MW-5									
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**	
MW-6									
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**	
MW-7									
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**	

Symbols & Abbreviations:
TBA = Tert-butyl alcohol
MTBE = Methyl tert-butyl ether
DIPE = Disopropyl 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

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
12/2/2013	East-Southeast	0.01
3/18/2014	**Southeast**	**0.01**

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[1]. 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	± 0.2ºC (± 0.36ºF)
pH	± 0.1 standard units
Conductivity	± 3%
Dissolved oxygen	± 10%
Oxidation reduction potential	± 10 mV
Turbidity[1]	± 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

[1] 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)[2], 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[1]. 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)[2], 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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[2] 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

BROADBENT

DAILY REPORT

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

Field Representative(s): A. Martinez / S. Jones Day: Tuesday Date: 3/18/14

Time Onsite: From: 0820 To: 1130; From: _____ To: _____; From: _____ To: _____

x Signed HASP x Safety Glasses x Hard Hat x Steel Toe Boots x Safety Vest

N/A UST Emergency System Shut-off Switches Located x Proper Gloves

x Proper Level of Barricading ___ Other PPE (describe) _____

Weather: Sunny

Equipment In Use: H_2O meter, peristaltic pump, UST meter.

Visitors: None

TIME:	WORK DESCRIPTION:
0820	Arrived onsite and conducted tailgate
0845	Set up for sampling @ MW-4
0930	Set up @ MW-5
1005	Set up @ MW-6
1035	Set up @ MW-7
1130	Completed Fieldwork & offsite.

Signature: _____

BROADBENT

GROUNDWATER MONITORING SITE SHEET

Project: BP 402 Project No.: 08-88-602 Date: 3/18/14

Field Representative: AM/SJ 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					NOTES
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					0910	—	—	10.72	27.85	
MW-5					0937	—	—	10.91	27.83	
MW-6					1010	—	—	11.72	27.83	
MW-7					1045	—	—	11.25	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:

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: BP 402 Project No.: 08-88-602 Date: 3/18/14

Field Representative: AM/SS

Well ID: MW-4 Start Time: - End Time: - Total Time (minutes): -

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

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

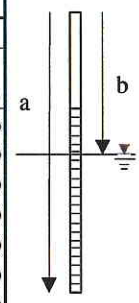
PURGING/SAMPLING METHOD Predetermined Well Volume Low-Flow Other: *(circle one)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:
4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ___" | (___)

Total Well Depth (a): ___(ft)
Initial Depth to Water (b): ___(ft)
Water Column Height (WCH) = (a - b): ___(ft)
Water Column Volume (WCV) = WCH x Unit Volume: ___(gal)
Three Casing Volumes = WCV x 3: ___(gal)
Five Casing Volumes = WCV x 5: ___(gal)
Pump Depth (if pump used): ___(ft)



LOW-FLOW

Previous Low-Flow Purge Rate: ___(lpm)
Total Well Depth (a): 27.85 (ft)
Initial Depth to Water (b): 10.72 (ft)
Pump In-take Depth = b + (a-b)/2: 19.28 (ft)
Maximum Allowable Drawdown = (a-b)/8: 2.14 (ft)
Low-Flow Purge Rate: 0.25 (Lpm)*
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

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
0913	0.0	16.80	6.75	1.03	4.60	175	42.2	
0915	0.5	17.74	6.41	1.01	2.77	172	~~39~~ 40.3	
0917	1.0	18.16	6.24	1.01	2.23	168	34.6	
0919	1.5	18.44	6.13	1.00	1.90	161	28.2	
0921	2.0	18.64	6.09	1.00	1.64	151	28.6	
Previous Stabilized Parameters								

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

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 11.27 (ft)
Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing
X Disp. Pump Tubing Other:
Sample ID: MW-4 Sample Collection Time: 0925 (24:00)
Containers (#): 6 VOA (X preserved or ___ unpreserved) ___ Liter Amber
___ Other: ___ Other:
___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature:

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: BP 402 Project No.: 08-88-602 Date: 3/18/14

Field Representative: SS/AM

Well ID: MW-5 Start Time: - End Time: - Total Time (minutes): -

PURGE EQUIPMENT

___ Disp. Bailer ___ 120V Pump X Flow Cell

X Disp. Tubing ___ 12V Pump X 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)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:

4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ___" | (___)

Total Well Depth (a): ___ (ft)

Initial Depth to Water (b): ___ (ft)

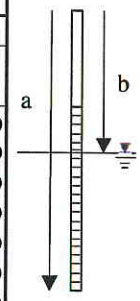
Water Column Height (WCH) = (a - b): ___ (ft)

Water Column Volume (WCV) = WCH x Unit Volume: ___ (gal)

Three Casing Volumes = WCV x 3: ___ (gal)

Five Casing Volumes = WCV x 5: ___ (gal)

Pump Depth (if pump used): ___ (ft)



LOW-FLOW

Previous Low-Flow Purge Rate: ___ (lpm)

Total Well Depth (a): 27.93 (ft)

Initial Depth to Water (b): 10.91 (ft)

Pump In-take Depth = b + (a-b)/2: 19.37 (ft)

Maximum Allowable Drawdown = (a-b)/8: 2.11 (ft)

Low-Flow Purge Rate: 0.25 (Lpm)*

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

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
0941	0.0	18.81	6.40	1.28	6.53	152	0.0	
0943	0.5	18.72	6.38	1.23	2.94	150	0.0	
0945	1.0	18.97	6.38	1.20	2.88	150	0.0	
0947	1.5	19.10	6.37	1.18	2.88	150	0.0	
0949	2.0	19.17	6.37	1.16	3.03	151	0.0	
Previous Stabilized Parameters								

PURGE COMPLETION RECORD X Low Flow & Parameters Stable ___ 3 Casing Volumes & Parameters Stable ___ 5 Casing Volumes

___ Other:

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 11.39 (ft)

Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing

X Disp. Pump Tubing Other:

Sample ID: MW-5 Sample Collection Time: 0950 (24:00)

Containers (#): 6 VOA (X preserved or ___ unpreserved) ___ Liter Amber

___ Other: ___ Other:

___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature:

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: BP 402 Project No.: 08-88-602 Date: 3/18/14

Field Representative: SJ/AM

Well ID: MW-6 Start Time: - End Time: - Total Time (minutes): -

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

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

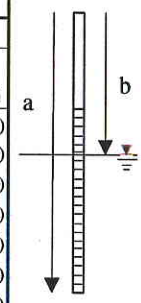
PURGING/SAMPLING METHOD Predetermined Well Volume X Low-Flow Other: *(circle one)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:
4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ____" | (____)

Total Well Depth (a): _____ (ft)
Initial Depth to Water (b): _____ (ft)
Water Column Height (WCH) = (a - b): _____ (ft)
Water Column Volume (WCV) = WCH x Unit Volume: _____ (gal)
Three Casing Volumes = WCV x 3: _____ (gal)
Five Casing Volumes = WCV x 5: _____ (gal)
Pump Depth (if pump used): _____ (ft)



LOW-FLOW

Previous Low-Flow Purge Rate: _____ (lpm)
Total Well Depth (a): 27.83 (ft)
Initial Depth to Water (b): 11.72 (ft)
Pump In-take Depth = b + (a-b)/2: 19.77 (ft)
Maximum Allowable Drawdown = (a-b)/8: 2.01 (ft)
Low-Flow Purge Rate: 0.25 (Lpm)*
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

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
1014	0.0	18.47	6.67	0.852	2.94	168	101	
1016	0.5	18.80	6.56	0.846	2.50	170	96.7	
1018	1.0	19.06	6.47	0.838	2.23	172	106	
1020	1.5	19.22	6.40	0.839	2.05	174	86.6	
1022	2.0	19.32	6.36	0.841	1.94	175	73.8	
Previous Stabilized Parameters								

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

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 11.85 (ft)
Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing
X Disp. Pump Tubing Other:
Sample ID: MW-6 Sample Collection Time: 1025 (24:00)
Containers (#): 6 VOA (X preserved or ___ unpreserved) ___ Liter Amber
___ Other: ___ Other:
___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature: _____

BROADBENT

GROUNDWATER SAMPLING DATA SHEET

Project: BP 402 Project No.: 08-88-602 Date: 3/18/14

Field Representative: SJ IAM

Well ID: MW-7 Start Time: - End Time: - Total Time (minutes): -

PURGE EQUIPMENT ___ Disp. Bailer ___ 120V Pump X Flow Cell X Disp. Tubing ___ 12V Pump X 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)*

PREDETERMINED WELL VOLUME

Casing Diameter | Unit Volume (gal/ft) *(circle one)*

1" | (0.04) 1.25" | (0.08) 2" | (0.17) 3" | (0.38) Other:

4" | (0.66) 6" | (1.50) 8" | (2.60) 12" | (5.81) ___" | (___)

Total Well Depth (a): ___(ft)

Initial Depth to Water (b): ___(ft)

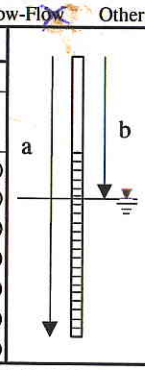
Water Column Height (WCH) = (a - b): ___(ft)

Water Column Volume (WCV) = WCH x Unit Volume: ___(gal)

Three Casing Volumes = WCV x 3: ___(gal)

Five Casing Volumes = WCV x 5: ___(gal)

Pump Depth (if pump used): ___(ft)



LOW-FLOW

Previous Low-Flow Purge Rate: ___(lpm)

Total Well Depth (a): 31.86 (ft)

Initial Depth to Water (b): 11.25 (ft)

Pump In-take Depth = b + (a-b)/2: 21.55 (ft)

Maximum Allowable Drawdown = (a-b)/8: 2.57 (ft)

Low-Flow Purge Rate: 0.25 (Lpm)*

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

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
1048	0.0	19.87	6.12	1.20	4.38	198	93.9	
1050	0.5	20.30	6.06	1.19	3.18	197	76.3	
1052	1.0	20.57	6.01	1.19	2.72	197	41.1	
1054	1.5	20.72	6.04	1.19	2.44	196	16.1	
1056	2.0	20.84	6.13	1.18	2.63	195	2.4	
Previous Stabilized Parameters								

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

SAMPLE COLLECTION RECORD

Depth to Water at Sampling: 11.92 (ft)

Sample Collected Via: ___ Disp. Bailer ___ Dedicated Pump Tubing X Disp. Pump Tubing Other:

Sample ID: MW-7 Sample Collection Time: 1100 (24:00)

Containers (#): 6 VOA (X preserved or ___ unpreserved) ___ Liter Amber

___ Other: ___ Other:

___ Other: ___ Other:

GEOCHEMICAL PARAMETERS

Parameter	Time	Measurement
DO (mg/L)		
Ferrous Iron (mg/L)		
Redox Potential (mV)		
Alkalinity (mg/L)		
Other:		
Other:		

Signature: Alex Mathes

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: 440-73602-1
TestAmerica Sample Delivery Group: 08-88-602
Client Project/Site: ARCO 0402, Oakland

For:
Broadbent & Associates, Inc.
875 Cotting Lane
Suite G
Vacaville, California 95688

Attn: Kristene Tidwell

Authorized for release by:
3/28/2014 12:21:12 PM

Kathleen Robb, Project Manager II
(949)261-1022
kathleen.robb@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-73602-1
SDG: 08-88-602

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-73602-1	MW-4	Water	03/18/14 09:25	03/19/14 10:00
440-73602-2	MW-5	Water	03/18/14 09:50	03/19/14 10:00
440-73602-3	MW-6	Water	03/18/14 10:25	03/19/14 10:00
440-73602-4	MW-7	Water	03/18/14 11:00	03/19/14 10:00

Job ID: 440-73602-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-73602-1

Comments
No additional comments.

Receipt
The samples were received on 3/19/2014 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5º C.

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

GC VOA
No analytical or quality issues were noted, other than those described 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 ID: MW-4

Lab Sample ID: 440-73602-1

Date Collected: 03/18/14 09:25

Matrix: Water

Date Received: 03/19/14 10:00

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			03/23/14 12:25	1
1,2-Dichloroethane	ND		0.50		ug/L			03/23/14 12:25	1
Benzene	**28**		0.50		ug/L			03/23/14 12:25	1
Ethanol	ND		150		ug/L			03/23/14 12:25	1
Ethylbenzene	**20**		0.50		ug/L			03/23/14 12:25	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/23/14 12:25	1
Isopropyl Ether (DIPE)	**1.8**		0.50		ug/L			03/23/14 12:25	1
m,p-Xylene	**4.8**		1.0		ug/L			03/23/14 12:25	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/23/14 12:25	1
o-Xylene	ND		0.50		ug/L			03/23/14 12:25	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/23/14 12:25	1
tert-Butyl alcohol (TBA)	ND		10		ug/L			03/23/14 12:25	1
Toluene	ND		0.50		ug/L			03/23/14 12:25	1
Xylenes, Total	**4.8**		1.0		ug/L			03/23/14 12:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*80 - 120*		*03/23/14 12:25*	*1*
Dibromofluoromethane (Surr)	*100*		*76 - 132*		*03/23/14 12:25*	*1*
Toluene-d8 (Surr)	*112*		*80 - 128*		*03/23/14 12:25*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	**600**		50		ug/L			03/21/14 03:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*65 - 140*		*03/21/14 03:51*	*1*

Client Sample ID: MW-5

Lab Sample ID: 440-73602-2

Date Collected: 03/18/14 09:50

Matrix: Water

Date Received: 03/19/14 10:00

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			03/23/14 14:24	1
1,2-Dichloroethane	ND		0.50		ug/L			03/23/14 14:24	1
Benzene	ND		0.50		ug/L			03/23/14 14:24	1
Ethanol	ND		150		ug/L			03/23/14 14:24	1
Ethylbenzene	ND		0.50		ug/L			03/23/14 14:24	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/23/14 14:24	1
Isopropyl Ether (DIPE)	ND		0.50		ug/L			03/23/14 14:24	1
m,p-Xylene	ND		1.0		ug/L			03/23/14 14:24	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/23/14 14:24	1
o-Xylene	ND		0.50		ug/L			03/23/14 14:24	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/23/14 14:24	1
tert-Butyl alcohol (TBA)	ND		10		ug/L			03/23/14 14:24	1
Toluene	ND		0.50		ug/L			03/23/14 14:24	1
Xylenes, Total	ND		1.0		ug/L			03/23/14 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*80 - 120*		*03/23/14 14:24*	*1*

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

TestAmerica Job ID: 440-73602-1
SDG: 08-88-602

Client Sample ID: MW-5

Lab Sample ID: 440-73602-2

Date Collected: 03/18/14 09:50
Matrix: Water
Date Received: 03/19/14 10:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*99*		*76 - 132*		*03/23/14 14:24*	*1*
Toluene-d8 (Surr)	*111*		*80 - 128*		*03/23/14 14:24*	*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			03/21/14 05:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*65 - 140*		*03/21/14 05:14*	*1*

Client Sample ID: MW-6

Lab Sample ID: 440-73602-3

Date Collected: 03/18/14 10:25
Matrix: Water
Date Received: 03/19/14 10:00

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			03/23/14 14:54	1
1,2-Dichloroethane	ND		0.50	ug/L			03/23/14 14:54	1
Benzene	ND		0.50	ug/L			03/23/14 14:54	1
Ethanol	ND		150	ug/L			03/23/14 14:54	1
Ethylbenzene	ND		0.50	ug/L			03/23/14 14:54	1
Ethyl-t-butyl ether (ETBE)	ND		0.50	ug/L			03/23/14 14:54	1
Isopropyl Ether (DIPE)	ND		0.50	ug/L			03/23/14 14:54	1
m,p-Xylene	ND		1.0	ug/L			03/23/14 14:54	1
Methyl-t-Butyl Ether (MTBE)	**14**		0.50	ug/L			03/23/14 14:54	1
o-Xylene	ND		0.50	ug/L			03/23/14 14:54	1
Tert-amyl-methyl ether (TAME)	ND		0.50	ug/L			03/23/14 14:54	1
tert-Butyl alcohol (TBA)	ND		10	ug/L			03/23/14 14:54	1
Toluene	ND		0.50	ug/L			03/23/14 14:54	1
Xylenes, Total	ND		1.0	ug/L			03/23/14 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*03/23/14 14:54*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/23/14 14:54*	*1*
Toluene-d8 (Surr)	*110*		*80 - 128*		*03/23/14 14:54*	*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			03/21/14 05:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*65 - 140*		*03/21/14 05:41*	*1*

Client Sample ID: MW-7

Lab Sample ID: 440-73602-4

Date Collected: 03/18/14 11:00
Matrix: Water
Date Received: 03/19/14 10:00

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			03/23/14 15:24	1
1,2-Dichloroethane	ND		0.50	ug/L			03/23/14 15:24	1

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

TestAmerica Job ID: 440-73602-1
SDG: 08-88-602

Client Sample ID: MW-7
Date Collected: 03/18/14 11:00
Date Received: 03/19/14 10:00

Lab Sample ID: 440-73602-4
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.3**		0.50		ug/L			03/23/14 15:24	1
Ethanol	ND		150		ug/L			03/23/14 15:24	1
Ethylbenzene	**2.2**		0.50		ug/L			03/23/14 15:24	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/23/14 15:24	1
Isopropyl Ether (DIPE)	ND		0.50		ug/L			03/23/14 15:24	1
m,p-Xylene	ND		1.0		ug/L			03/23/14 15:24	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/23/14 15:24	1
o-Xylene	ND		0.50		ug/L			03/23/14 15:24	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/23/14 15:24	1
tert-Butyl alcohol (TBA)	ND		10		ug/L			03/23/14 15:24	1
Toluene	ND		0.50		ug/L			03/23/14 15:24	1
Xylenes, Total	ND		1.0		ug/L			03/23/14 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*80 - 120*		*03/23/14 15:24*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/23/14 15:24*	*1*
Toluene-d8 (Surr)	*111*		*80 - 128*		*03/23/14 15:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C12)	**190**		50		ug/L			03/21/14 06:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*65 - 140*		*03/21/14 06:09*	*1*

Method Summary

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

TestAmerica Job ID: 440-73602-1
SDG: 08-88-602

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: 440-73602-1
SDG: 08-88-602

Client Sample ID: MW-4

Lab Sample ID: 440-73602-1

Date Collected: 03/18/14 09:25

Matrix: Water

Date Received: 03/19/14 10:00

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	171096	03/23/14 12:25	UP	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	170592	03/21/14 03:51	IM	TAL IRV

Client Sample ID: MW-5

Lab Sample ID: 440-73602-2

Date Collected: 03/18/14 09:50

Matrix: Water

Date Received: 03/19/14 10:00

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	171096	03/23/14 14:24	UP	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	170592	03/21/14 05:14	IM	TAL IRV

Client Sample ID: MW-6

Lab Sample ID: 440-73602-3

Date Collected: 03/18/14 10:25

Matrix: Water

Date Received: 03/19/14 10:00

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	171096	03/23/14 14:54	UP	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	170592	03/21/14 05:41	IM	TAL IRV

Client Sample ID: MW-7

Lab Sample ID: 440-73602-4

Date Collected: 03/18/14 11:00

Matrix: Water

Date Received: 03/19/14 10:00

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	171096	03/23/14 15:24	UP	TAL IRV
Total/NA	Analysis	8015B/5030B		1	10 mL	10 mL	170592	03/21/14 06:09	IM	TAL IRV

Laboratory References:

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

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

TestAmerica Job ID: 440-73602-1
SDG: 08-88-602

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

Lab Sample ID: MB 440-171096/5
Matrix: Water
Analysis Batch: 171096

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			03/23/14 10:56	1
1,2-Dichloroethane	ND		0.50		ug/L			03/23/14 10:56	1
Benzene	ND		0.50		ug/L			03/23/14 10:56	1
Ethanol	ND		150		ug/L			03/23/14 10:56	1
Ethylbenzene	ND		0.50		ug/L			03/23/14 10:56	1
Ethyl-t-butyl ether (ETBE)	ND		0.50		ug/L			03/23/14 10:56	1
Isopropyl Ether (DIPE)	ND		0.50		ug/L			03/23/14 10:56	1
m,p-Xylene	ND		1.0		ug/L			03/23/14 10:56	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			03/23/14 10:56	1
o-Xylene	ND		0.50		ug/L			03/23/14 10:56	1
Tert-amyl-methyl ether (TAME)	ND		0.50		ug/L			03/23/14 10:56	1
tert-Butyl alcohol (TBA)	ND		10		ug/L			03/23/14 10:56	1
Toluene	ND		0.50		ug/L			03/23/14 10:56	1
Xylenes, Total	ND		1.0		ug/L			03/23/14 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*80 - 120*		*03/23/14 10:56*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*03/23/14 10:56*	*1*
Toluene-d8 (Surr)	*112*		*80 - 128*		*03/23/14 10:56*	*1*

Lab Sample ID: LCS 440-171096/6
Matrix: Water
Analysis Batch: 171096

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	28.5		ug/L		114	70 - 130		
1,2-Dichloroethane			25.0	30.3		ug/L		121	57 - 138		
Benzene			25.0	27.4		ug/L		110	68 - 130		
Ethanol			250	234		ug/L		94	50 - 149		
Ethylbenzene			25.0	29.8		ug/L		119	70 - 130		
Ethyl-t-butyl ether (ETBE)			25.0	28.7		ug/L		115	60 - 136		
Isopropyl Ether (DIPE)			25.0	28.1		ug/L		112	58 - 139		
m,p-Xylene			50.0	58.7		ug/L		117	70 - 130		
Methyl-t-Butyl Ether (MTBE)			25.0	28.8		ug/L		115	63 - 131		
o-Xylene			25.0	30.0		ug/L		120	70 - 130		
Tert-amyl-methyl ether (TAME)			25.0	28.5		ug/L		114	57 - 139		
tert-Butyl alcohol (TBA)			125	131		ug/L		104	70 - 130		
Toluene			25.0	29.5		ug/L		118	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*
Toluene-d8 (Surr)	*110*		*80 - 128*

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

Lab Sample ID: 440-73602-1 MS
Matrix: Water
Analysis Batch: 171096

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
1,2-Dibromoethane (EDB)	ND		25.0	30.5		ug/L		122	70 - 131
1,2-Dichloroethane	ND		25.0	30.7		ug/L		123	56 - 146
Benzene	28		25.0	56.3		ug/L		113	66 - 130
Ethanol	ND		250	242		ug/L		97	54 - 150
Ethylbenzene	20		25.0	47.4		ug/L		110	70 - 130
Ethyl-t-butyl ether (ETBE)	ND		25.0	30.1		ug/L		120	70 - 130
Isopropyl Ether (DIPE)	1.8		25.0	31.4		ug/L		118	64 - 138
m,p-Xylene	4.8		50.0	63.9		ug/L		118	70 - 133
Methyl-t-Butyl Ether (MTBE)	ND		25.0	31.1		ug/L		124	70 - 130
o-Xylene	ND		25.0	31.0		ug/L		124	70 - 133
Tert-amyl-methyl ether (TAME)	ND		25.0	30.7		ug/L		123	68 - 133
tert-Butyl alcohol (TBA)	ND		125	132		ug/L		106	70 - 130
Toluene	ND		25.0	30.9		ug/L		122	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*111*		*80 - 128*

Lab Sample ID: 440-73602-1 MSD
Matrix: Water
Analysis Batch: 171096

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
1,2-Dibromoethane (EDB)	ND		25.0	29.1		ug/L		116	70 - 131	5	25
1,2-Dichloroethane	ND		25.0	29.1		ug/L		116	56 - 146	5	20
Benzene	28		25.0	55.3		ug/L		108	66 - 130	2	20
Ethanol	ND		250	250		ug/L		100	54 - 150	3	30
Ethylbenzene	20		25.0	46.4		ug/L		106	70 - 130	2	20
Ethyl-t-butyl ether (ETBE)	ND		25.0	29.7		ug/L		119	70 - 130	1	25
Isopropyl Ether (DIPE)	1.8		25.0	31.6		ug/L		119	64 - 138	1	25
m,p-Xylene	4.8		50.0	64.6		ug/L		120	70 - 133	1	25
Methyl-t-Butyl Ether (MTBE)	ND		25.0	29.9		ug/L		120	70 - 130	4	25
o-Xylene	ND		25.0	31.2		ug/L		125	70 - 133	1	20
Tert-amyl-methyl ether (TAME)	ND		25.0	29.6		ug/L		119	68 - 133	4	30
tert-Butyl alcohol (TBA)	ND		125	135		ug/L		108	70 - 130	2	25
Toluene	ND		25.0	31.1		ug/L		123	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*76 - 132*
Toluene-d8 (Surr)	*111*		*80 - 128*

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

Lab Sample ID: MB 440-170592/31
Matrix: Water
Analysis Batch: 170592

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			03/20/14 23:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*65 - 140*		*03/20/14 23:17*	*1*

Lab Sample ID: LCS 440-170592/30
Matrix: Water
Analysis Batch: 170592

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	786		ug/L		98	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*65 - 140*

Lab Sample ID: 440-73628-B-7 MSD
Matrix: Water
Analysis Batch: 170592

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
GRO (C4-C12)	ND		800	739		ug/L		92	65 - 140	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*65 - 140*

QC Association Summary

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

TestAmerica Job ID: 440-73602-1
SDG: 08-88-602

GC/MS VOA

Analysis Batch: 171096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-73602-1	MW-4	Total/NA	Water	8260B/5030B	
440-73602-1 MS	MW-4	Total/NA	Water	8260B/5030B	
440-73602-1 MSD	MW-4	Total/NA	Water	8260B/5030B	
440-73602-2	MW-5	Total/NA	Water	8260B/5030B	
440-73602-3	MW-6	Total/NA	Water	8260B/5030B	
440-73602-4	MW-7	Total/NA	Water	8260B/5030B	
LCS 440-171096/6	Lab Control Sample	Total/NA	Water	8260B/5030B	
MB 440-171096/5	Method Blank	Total/NA	Water	8260B/5030B	

GC VOA

Analysis Batch: 170592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-73602-1	MW-4	Total/NA	Water	8015B/5030B	
440-73602-2	MW-5	Total/NA	Water	8015B/5030B	
440-73602-3	MW-6	Total/NA	Water	8015B/5030B	
440-73602-4	MW-7	Total/NA	Water	8015B/5030B	
440-73628-B-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B/5030B	
LCS 440-170592/30	Lab Control Sample	Total/NA	Water	8015B/5030B	
MB 440-170592/31	Method Blank	Total/NA	Water	8015B/5030B	

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
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: 440-73602-1
SDG: 08-88-602

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

* Expired certification is currently pending renewal and is considered valid.

bp rm

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 X

BP Facility No: 402 | Lab Work Order Number:

Lab Name: Test America	Facility Address: 1450 Fruitvale Ave.	Consultant/Contractor: Broadbent and Associates, Inc.
Lab Address: 17461 Derian Avenue Suite #100, Irvine, CA 92614	City, State, ZIP Code: Oakland, CA	Consultant/Contractor Project No: 08-88-602
Lab PM: Kathleen Robb	Lead Regulatory Agency: ACEH	Address: 875 Cotting Lane, Suite G, Vacaville, CA 95688
Lab Phone: 949-261-1022	California Global ID No.: T06019734265	Consultant/Contractor PM: Kristene Tidwell
Lab Shipping Acct: 1103-6633-7	Enfos Proposal No:	Phone: 707-455-7290 Fax: 707-455-7295
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: ktidwell@broadbentinc.com and to lab enfosdoc@bp.com
Other Info:	Stage: Execute (40) Activity: GWM	Invoice To: BP x Contractor ___
BP Project Manager (PM): Chuck Carmel		
BP PM Phone: 925-275-3804		
BP PM Email: chuck.carmel@bp.com		

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix: Is this location a well?	No. Containers / Preservative: Total Number of Container	Unpreserved	H2SO4	HNO3	HCl	Methanol	Requested Analyses: GRO by 8015M	BTEX/5 Fuel Oxys by 8260	Ethanol by 8260	EDB & 1,2-DCA by 8260	Report Type & QC Level / Comments
																		Standard x; Full Data Package ___
																		Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.
	MW-4	3/18/2014	0925		x		y	6				x		x	x	x	x	
	MW-5	3/18/2014	0950		x		y	6				x		x	x	x	x	
	MW-6	3/18/2014	1025		x		y	6				x		x	x	x	x	
	MW-7	3/18/2014	1100		x		y	6				x		x	x	x	x	
	TB-402-03182014	–	–		x		n	2				x						On Hold

Page 16 of 17

440-73602 Chain of Custody

Sampler's Name: Alex Martinez	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Broadbent and Associates	Alex Martinez BAI	3/18/14	1700		3/19/14	10:00
Shipment Method: Fed Ex Ship Date: 3/18/14						
Shipment Tracking No: 8025 2344 5267						

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)

3.6/3.5 IR-59

Login Sample Receipt Checklist

Client: Broadbent & Associates, Inc.

Job Number: 440-73602-1
SDG Number: 08-88-602

Login Number: 73602
List Number: 1
Creator: Perez, Angel

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.	True	
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!

Submittal Type:	**EDF**
Report Title:	**Groundwater Monitoring Report**
Report Type:	**Monitoring Report - Semi-Annually**
Facility Global ID:	**T06019734265**
Facility Name:	**ARCO #0402 / PARKING LOT**
File Name:	**440-73602-1_28 Mar 14 1301_EDF.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**69.170.11.178**
Submittal Date/Time:	**4/23/2014 4:28:33 PM**
Confirmation Number:	**6069466769**

VIEW QC REPORT

VIEW DETECTIONS REPORT

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!

Submittal Type:	**GEO_WELL**
Report Title:	**First Quarter 2014 Groundwater Monitoring Report**
Facility Global ID:	**T06019734265**
Facility Name:	**ARCO #0402 / PARKING LOT**
File Name:	**geo_well.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**69.170.11.178**
Submittal Date/Time:	**4/23/2014 4:34:19 PM**
Confirmation Number:	**9272646069**