Atlantic Richfield Company

Chuck Carmel
Environmental Business Manager

PO Box 1257
San Ramon, CA 94583
Phone: (925) 275-3803
Fax: (925) 275-3815
E-Mail: charles.carmel@bp.com

April 29, 2011

Re: Off-Site Soil and Groundwater Investigation Report
Atlantic Richfield Company Station #771
899 Rincon Avenue
Livermore, California
ACEH Case RO0000200

"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
Project Manager

Attachment

OFF-SITE SOIL & GROUNDWATER INVESTIGATION REPORT

Atlantic Richfield Company Station #771
899 Rincon Avenue, Livermore, California
ACEH Case No. RO0000200

Prepared for:

Mr. Chuck Carmel
Project Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by:

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

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

April 29, 2011

Project No. 06-82-608

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

BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL, WATER RESOURCES & ENGINEERING

April 29, 2011

Project No. 06-82-608

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

Attn.: Mr. Chuck Carmel

Re: Off-Site Soil & Groundwater Investigation Report, Atlantic Richfield Company Station #771, 899 Rincon Avenue, Livermore, California; ACEH Case No. RO0000200

Dear Mr. Carmel:

Attached is the *Off-Site Soil & Groundwater Investigation Report* for Atlantic Richfield Company Station #771 located at 899 Rincon Avenue, Livermore, California (Site). Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

BROADBENT & ASSOCIATES, INC.

Jason Duda
Project Scientist

Matthew G. Herrick, P.G., C.HG
Senior Hydrogeologist

Enclosure

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)
Mr. Paul M. Smith, Livermore-Pleasanton Fire Department, 3560 Nevada St., Pleasanton, California 94566
Mr. Chuck Headlee, California Regional Water Quality Control Board – San Francisco Region (Submitted via GeoTracker)
Electronic copy uploaded to GeoTracker

OFF-SITE SOIL & GROUNDWATER INVESTIGATION REPORT
Atlantic Richfield Company Station #771
899 Rincon Avenue, Livermore, California
ACEH Case No. RO0000200

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APPENDICES

OFF-SITE SOIL & GROUNDWATER INVESTIGATION REPORT
Atlantic Richfield Company Station #771
899 Rincon Avenue, Livermore, California
ACEH Case No. RO0000200

1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company, RM – a BP affiliated company, Broadbent & Associates, Inc. (BAI) has prepared this *Off-Site Soil & Groundwater Investigation Report* for Atlantic Richfield Company Station #771 located at 899 Rincon Avenue, Livermore, California (Site). This off-site soil and groundwater investigation was completed to further evaluate the lateral extent of petroleum hydrocarbon impacted soil and groundwater off-site to the south and west of the Site. Investigation activities were conducted in accordance with the BAI *Initial Site Conceptual Model and Soil and Ground-Water Investigation Work Plan* dated February 10, 2009, the BAI *Addendum Soil and Ground-Water Investigation Work Plan* dated April 29, 2009, and the BAI *Second Addendum Soil and Ground-Water Investigation Work Plan* dated August 13, 2010. Alameda County Environmental Health (ACEH) approved the work activities proposed within the *Second Addendum Soil and Ground-Water Investigation Work Plan* in their response letter dated September 10, 2010. Due to off-site property access issues and a client-issued safety stand-down, off-site investigative activities have been delayed. In email correspondence dated December 12, 2010, BAI informed ACEH of a change in the proposed scope of work. The proposed angled boring beneath the existing underground storage tanks (USTs) was not advanced due to safety concerns. This report includes discussions on the Site Description, Field Activities Performed, Results of the Investigation, Conclusions and Recommendations.

2.0 SITE DESCRIPTION

The Site is an active ARCO-brand retail gasoline station and mini-market located on the southwest corner of the intersection of Pine Street and Rincon Avenue Livermore, California (Drawing 1 and Drawing 2). The land use in the immediate vicinity of the Site is mixed commercial and residential. Development at the Site consists of a station building and one pump island with a canopy and concrete driveslab. Existing USTs include four double-wall fiberglass gasoline tanks (10,000 gallons each).

A shopping center and small strip mall borders the Site to the west and south. Family residences are located across Rincon Avenue to the east, northeast, and southeast. A fire station is located across Pine Street to the north of the Site.

3.0 FIELD ACTIVITIES PERFORMED

This off-site soil and groundwater investigation was completed to further evaluate the lateral extent of petroleum hydrocarbon impacted soil and groundwater to the west and south of the Site. On March 25, 2011, BAI oversaw RSI Drilling, Inc. (RSI) of Woodland, California advance two soil borings (identified as SB-2 and SB-3) on the off-site property adjacent to the Site. The soil boring locations from this investigation are depicted in Drawing 2.

3.1 Preliminary Field Activities

Prior to initiating field activities, BAI obtained the necessary drilling permits from the Zone 7 Water Agency (See Appendix A), prepared a site health and safety plan specific to the work scope; and cleared the boring locations from conflicts with subsurface utilities. The utility clearance included notifying Underground Service Alert of the work a minimum of 48 hours prior to initiating the field investigation, and additionally securing the services of Cruz Brothers, a private utility locating company to confirm the absence of underground utilities at the boring locations. Boreholes were physically cleared to 6.5 feet below ground surface (bgs) using an air knife rig on March 24, 2011, consistent with the safety protocols contained within the BP Ground Disturbance Defined Practice.

3.2 Soil Boring Advancement and Sampling Activities

On March 25, 2011, BAI field personnel observed RSI advance two soil borings (SB-2 and SB-3). RSI utilized a hollow stem auger drill rig to advance the soil borings to a maximum depth of 35 feet bgs. Physical soil samples were collected at approximate five foot intervals during soil boring activities. Select samples were submitted to the laboratory for analysis.

Soil boring SB-2 was advanced to a total depth of 35 feet bgs. Soil samples were collected from boring SB-2 at 10, 15, 20, 25, 30, and 33 feet bgs. No visual or olfactory contamination was observed during advancement of boring SB-2. Screening with the photo-ionization detector (PID) did not find contamination by volatile organic compounds (VOCs) at the specified soil sampling depths. Following completion of soil boring advancement, a grab groundwater sample was collected from the boring within the augers utilizing a stainless-steel bailer between approximately 30 and 35 feet bgs.

Soil boring SB-3 was advanced to a total depth of 35 feet bgs. Soil samples were collected from boring SB-3 at 10, 15, 20, 25, and 30 feet bgs. No visual or olfactory contamination was observed during advancement of boring SB-3. Screening with the photo-ionization detector (PID) did not find contamination by volatile organic compounds (VOCs) at the specified soil sampling depths. Following completion of soil boring advancement, a grab groundwater sample was collected from the boring within the augers utilizing a stainless-steel bailer between approximately 30 and 35 feet bgs. Field sheets and soil boring logs are provided within Appendix B.

3.3 Investigation-Derived Residuals Management

Residual solids and liquids generated during the off-site investigation activities were stored temporarily on-site in Department of Transportation-approved 55-gallon drums pending analytical results and profiling. Following characterization and profiling, Belshire Environmental Services was scheduled to transport the investigation-derived residuals to an Atlantic Richfield Company-approved facility for treatment or disposal.

4.0 RESULTS OF INVESTIGATION

Soil and groundwater samples were shipped to Calscience Environmental Laboratories, Inc. (Garden Grove), a California State-certified laboratory, under chain-of-custody protocol. Samples were analyzed for Gasoline Range Organics (GRO, hydrocarbon chain lengths between C6-C12) by EPA Method 8015B; and for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX), Methyl Tert-Butyl Ether (MTBE), Ethyl Tert-Butyl Ether (ETBE), Tert-Amyl Methyl Ether (TAME), Di-Isopropyl Ether (DIPE), Tert-Butyl Alcohol (TBA), 1,2-Dichloroethane (1,2-DCA), 1,2-Dibromoethane (EDB), and Ethanol using EPA Method 8260B. According to the laboratory, the GRO concentration detected in the groundwater sample collected from SB-3 was "quantitated against gasoline." No other significant irregularities were reported during laboratory analysis of the samples.

Laboratory analytical results for the soil samples submitted from this investigation were below laboratory reporting limits for each constituent analyzed. GRO and MTBE were detected above laboratory reporting limits in the groundwater sample collected from boring SB-3 at concentrations of 81 micrograms per liter (µg/L) and 3.8 µg/L, respectively. The remaining analytes were not detected above laboratory reporting limits in the two groundwater samples collected. Soil and groundwater sampling analytical data are provided in Tables 1 and 2, respectively. Tabulated soil and groundwater sample laboratory analytical results are compared against the residential Environmental Screening Levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, 2008) for deep soil under a potential drinking water resource scenario. A copy of the laboratory analytical report with chain-of-custody documentation is provided in Appendix C. Laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. The upload confirmation page is provided in Appendix D.

5.0 CONCLUSIONS

On behalf of the Atlantic Richfield Company, BAI prepared this *Off-Site Soil & Groundwater Investigation Report* for Station #771, located at 899 Rincon Avenue, Livermore, California. Based on the findings of this investigation, BAI concludes the following:

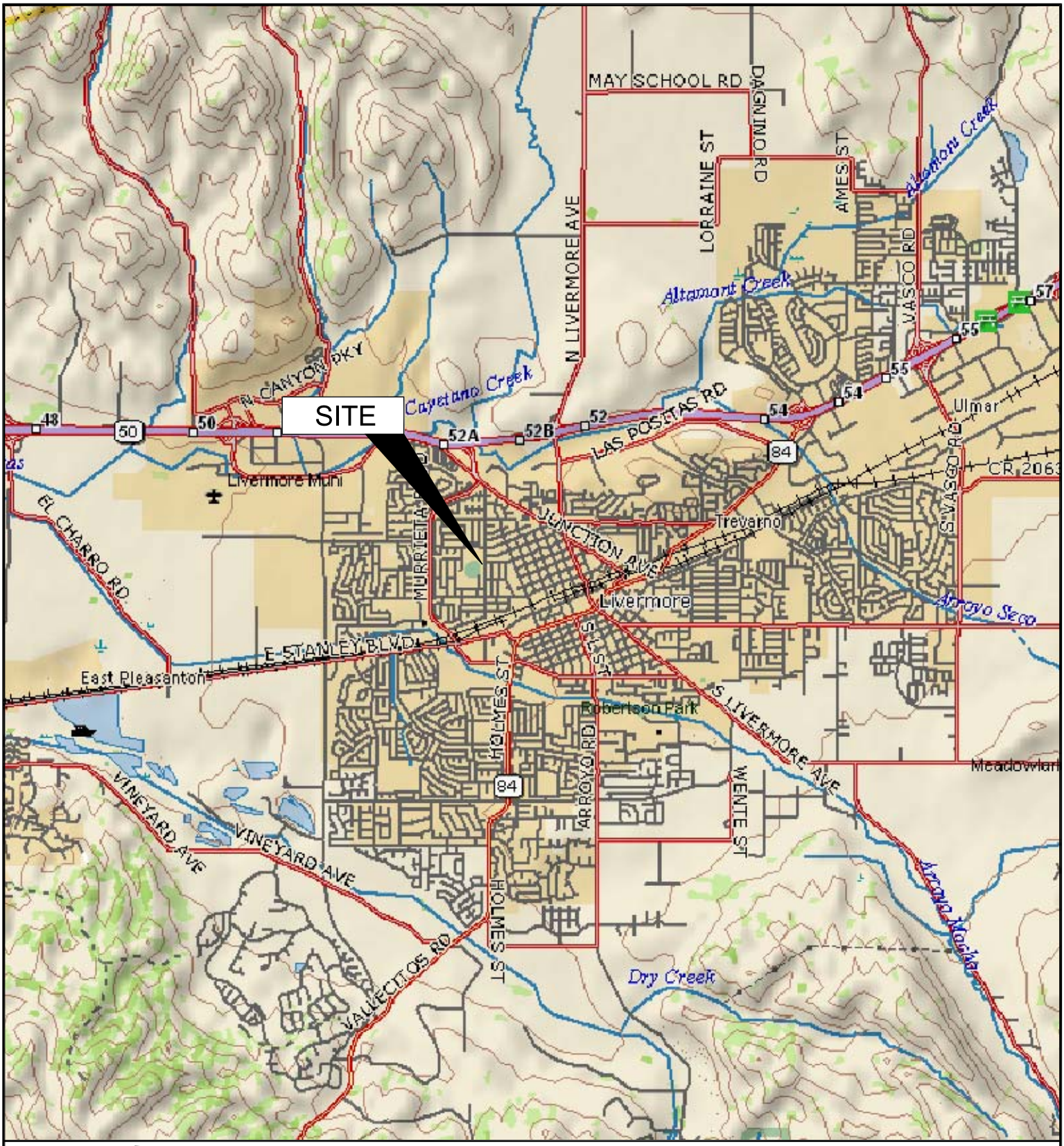
- Based on visual and olfactory observations during boring advancement at each location, petroleum hydrocarbon impacted soil and groundwater does not appear to be present from ground surface to total depth explored, approximately 35 feet bgs.
- Based on laboratory analysis of soil samples collected during the investigation, petroleum hydrocarbon impacted soil does not appear to be present at depths of 10 and 30 feet bgs within boring locations SB-2 and SB-3.
- Based on laboratory analysis of grab groundwater samples collected during the investigation, petroleum hydrocarbon impacted groundwater does not appear to be present within boring SB-2. Minor concentrations of GRO (81 µg/L) and MTBE (3.8 µg/L) were detected in the groundwater sample collected from SB-3. However, these concentrations are well below the ESLs established by the SFBRWQCB for residential and commercial land use scenarios (See Tables 1 and 2).

6.0 RECOMMENDATIONS

Based on the results obtained during this recent off-site soil and groundwater investigation and current site conditions, BAI recommends that a complete site review be conducted followed by a case closure evaluation, if deemed appropriate.

7.0 CLOSURE

This document has been prepared for the exclusive use of Atlantic Richfield Company (a BP affiliated company). The findings presented in this report are based upon the observations of BAI field personnel, points of investigation and results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California). Services were performed in accordance with the generally accepted standard of practice at the time this report was written. No warranty, expressed or implied, is intended. It is possible that variations in the soil or groundwater conditions could exist beyond the points explored in this investigation. Also, changes in site conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage or other factors.

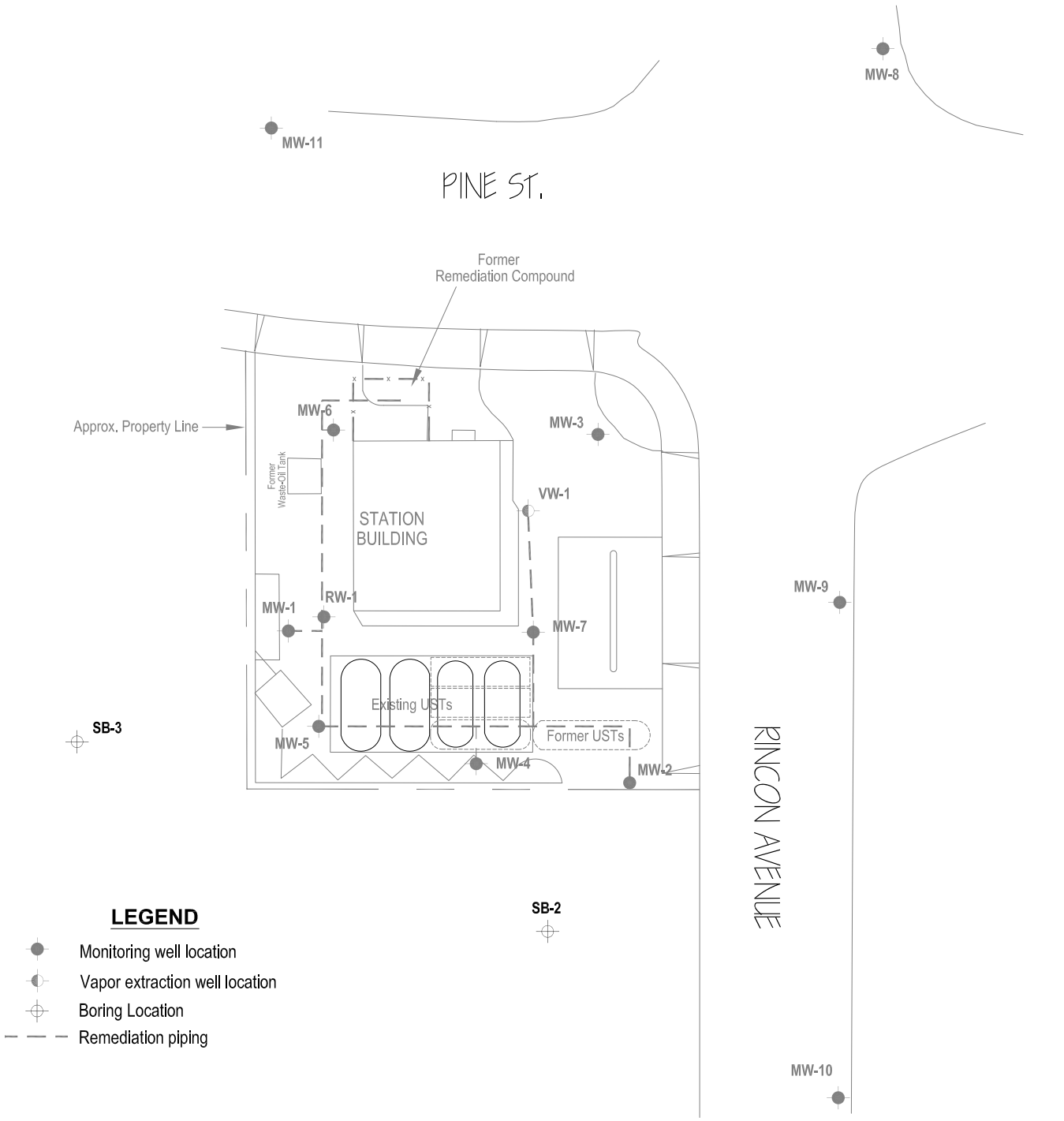


BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-82-608 Date: 7/27/2009

Station #771
899 Rincon Avenue
Livermore, California

Site Location Map

Drawing
1



LEGEND

- Monitoring well location
- Vapor extraction well location
- Boring Location
- Remediation piping

N

0 40 80

SCALE (ft)

NOTE: SITE MAP ADAPTED FROM URS FIGURES.SITE DIMESIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California Project No.: 06-82-608 Date: 4/28/2011	Station #771 899 Rincon Avenue Livermore, California	Site Map with Soil Boring Locations

Drawing 2

Table 1. Summary of Soil Sample Analytical Data
Station #771, 899 Rincon Avenue, Livermore, California

Soil Boring Identification*	Sample ID	Date Collected	GRO mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	MTBE mg/kg	Comments
SB-2									
	SB-2-10'	3/25/2011	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
	SB-2-30'	3/25/2011	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
SB-3									
	SB-3-10'	3/25/2011	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
	SB-3-30'	3/25/2011	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
ESLs	--	--	83	0.044	2.9	3.3	2.3	0.023	

Abbreviations & Symbols:

* = See Drawing 2 for soil boring locations.

GRO: Gasoline range organics.

Calscience Environmental Laboratories, Inc.: GRO (C6-C12)

GRO analyzed using EPA method 8015B

Benzene, Toluene, Ethylbenzene, Total Xylenes, and MTBE analyzed using EPA method 8260B.

mg/kg = Milligrams per kilogram.

ESLs = Environmental Screening Levels for deep soil (>3 meters bgs) where groundwater is a current or potential source of drinking water (San Francisco Bay Regional Water Quality Control Board, 2008).

bgs = Below ground surface

Notes:

1,2-dibromoethane (EDB), 1,2-dichloroethane (1,2 DCA), tert-butyl alcohol (TBA), Di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), ter-amyl methyl ether (TAME), and ethanol were not detected at or above their respective laboratory reporting limit.

The last number in each Sample ID denotes the depth at which the sample was collected in feet bgs (i.e., SB-2 10' was collected at a depth of 10 feet bgs)

Table 2. Summary of Groundwater Sample Analytical Data
Station #771, 899 Rincon Avenue, Livermore, California

Sample ID*	Sample Depth (ft. bgs)	Date Collected	GRO µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	Comments
SB-2									
	30 - 35	3/25/2011	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
SB-3									
	30 - 35	3/25/2011	**81**	<0.50	<0.50	<0.50	<0.50	**3.8**	LW
ESLs	--	--	100	1.0	40	30	20	5	

Abbreviations & Symbols:

* = See Drawing 2 for soil boring locations.

GRO: Gasoline range organics.

Calscience Environmental Laboratories, Inc.: GRO (C6-C12)

GRO analyzed using EPA method 8015B

Benzene, Toluene, Ethylbenzene, Total Xylenes, and MTBE analyzed using EPA method 8260B.

µg/L = Micrograms per liter.

ESLs = Environmental Screening Levels where groundwater is a current or potential source of drinking water (San Francisco Bay Regional Water Quality Control Board, 2008).

bgs = Below ground surface

Footnotes:

LW = Quantitation of unknown hydrocarbon(s) in sample based on gasoline.

Notes:

1,2-dibromoethane (EDB), 1,2-dichloroethane (1,2 DCA), tert-butyl alcohol (TBA), Di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), ter-amyl methyl ether (TAME), and ethanol were not detected at or above their respective laboratory reporting limit.

APPENDIX A

ZONE 7 WATER AGENCY PERMIT

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306
E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 783 Rincon Ave.
Livermore, CA

Coordinates Source _____ ft. Accuracy∀ _____ ft.
LAT. _____ ft. LONG: _____ ft
APN 98-351-6-5

CLIENT
Name Atlantic Richfield Company
Address P.O. Box 1257 Phone (925) 275-3803
City San Ramon Zip 94583

APPLICANT
Name Broadbent and Associates (Jason Duda)
Email jduda@broadbentinc.com Fax (530) 566-1401
Address 1324 Mangrove Ave, Ste. 212 Phone (530) 566-1400
City Chico Zip 95926

TYPE OF PROJECT:

Well Construction	__	Geotechnical Investigation	
Well Destruction	__	Contamination Investigation	X
Cathodic Protection	__	Other _____	__

PROPOSED WELL USE:

Domestic	__	Irrigation	__
Municipal	__	Remediation	__
Industrial	__	Groundwater Monitoring	__
Dewatering	__	Other _____	__

DRILLING METHOD:
Mud Rotary __ Air Rotary __ Hollow Stem Auger X
Cable Tool __ Direct Push __ Other _____

DRILLING COMPANY RSF Drilling
DRILLER'S LICENSE NO 802334

WELL SPECIFICATIONS:
Drill Hole Diameter _____ in. Maximum
Casing Diameter _____ in. Depth _____ ft.
Surface Seal Depth _____ ft. Number _____

SOIL BORINGS:
Number of Borings 2 Maximum
Hole Diameter 8 in. Depth 40 ft.

ESTIMATED STARTING DATE 3-24-11
ESTIMATED COMPLETION DATE 3-25-11

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No 73-68.

APPLICANT'S SIGNATURE Jason Duda Date 3-10-11

ATTACH SITE PLAN OR SKETCH

FOR OFFICE USE

PERMIT NUMBER 2011020
WELL NUMBER _____
APN 098-0351-006-05

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller
3. Permit is void if project not begun within 90 days of approval date.
4. **Notify Zone 7 at least 24 hours before the start of work**

B. WATER SUPPLY WELLS
1. Minimum surface seal diameter is four inches greater than the well casing diameter
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements
5. A sample port is required on the discharge pipe near the wellhead.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie

(D) GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached

(G.) SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report **Including all soil and water laboratory analysis results**

Approved Wyman Hong Date 3/23/11
Wyman Hong

Revised. January 4, 2010

APPENDIX B

BAI INVESTIGATIVE ACTIVITIES DATA
(Includes Field Sheets and Boring Logs)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

DAILY REPORT

Project: BP 771 Project No.: 06-82-608

Field Representative(s): JD Day: Thurs. Date: 3-24-11

Time Onsite: From: _____ To: _____; From: _____ To: _____; From: _____ To: _____

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

___ UST Emergency System Shut-off Switches Located X Proper Gloves

X Proper Level of Barricading X Other PPE (describe) Hearing Protection

Weather: Cold, Rainy, Windy

Equipment In Use: Air Knife Rig

Visitors: _____

TIME:	WORK DESCRIPTION:
9:40 ~~10:00~~	Arrive @ site. Check USA markings. Call Pac Bell + Comcast since no markings. Utiliquest came out and said locations are clear of utilities.
10:00	KST arrive @ site. Conduct safety Mtg.
10:50	Setup on SB-3
11:00	Begin jack hammer + air knife of SB-3
11:45	Cleared SB-3 to 6.5' bgs. Move to SB-2.
12:00	Begin jack hammer + air knife of SB-2
12:40	Finish clearing SB-2
13:10	Offsite

Signature: Jon Dirks

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

DAILY REPORT
Page 1 of 2

Project: BP 7271 Project No.: 06-82-608

Field Representative(s): JO + SB Day: Fri. Date: 3-25-11

Time Onsite: From: _____ To: _____; From: _____ To: _____; From: _____ To: _____

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

___ UST Emergency System Shut-off Switches Located X Proper Gloves

X Proper Level of Barricading X Other PPE (describe) Hearing Protection

Weather: Cloudy, Scattered Showers

Equipment In Use: HSA Drill Rig

Visitors: _____

TIME:	WORK DESCRIPTION:
7:00	Arrive onsite, Sam already onsite,
7:40	RSI arrives after picking up delineators + snow fencing
7:50	Conduct safety meeting + prep. paperwork
8:45	Setup on SB-3
9:35	Begin drilling SB-3. (SB-3-10')
9:50	Collect soil sample @ 10', No odors, PID=0
	Due to air knifing, little recovery from 0-5'
10:00	Collect soil sample @ 15' (SB-3-15'), No odors, PID=0
10:05	Collect soil sample @ 20' (SB-3-20'), No odors, PID=0
10:10	Collect soil sample @ 25' (SB-3-25'), No odors, PID=0
	Looking fairly wet, will check for H_2O after 30'
10:15	Collect soil sample @ 30' (SB-3-30'), No odors, PID=0
	Very little H_2O - decide to advance to 35'
10:35	~~collect~~ Core from 30-35' definite evidence of H_2O, no
	sample collected from saturated zone. PID @ 35' = 0
10:45	Collect water sample from SB-3 @ 10:45, no odors
	Wait for Wyman Hong w/ Zone 7 to conduct grout
	inspection

Signature: Jon Mark

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

DAILY REPORT

Project: _____ Project No.: _____

Field Representative(s): _____ Day: _____ Date: _____

Time Onsite: From: _____ To: _____; From: _____ To: _____; From: _____ To: _____

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

___ UST Emergency System Shut-off Switches Located ___ Proper Gloves

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

Weather: _____

Equipment In Use: _____

Visitors: _____

TIME:	WORK DESCRIPTION:
11:15	Wyman arrives. Begin grouting SB-3. Free fall grout through augers. Clean up, complete surface + move to SB-2.
12:50	Begin drilling SB-2.
13:05	Collect sample @ 10' (SB-2-10'), No odors, PID=0
	No sample collected @ 5' due to poor recovery from air knifing
13:10	Collect soil sample @ 15' (SB-2-15'), No odors, PID=0
13:20	Collect soil sample @ 20' (SB-2-20'), No odors, PID=0
13:25	Collect soil sample @ 25' (SB-2-25'), No odors, PID=0
13:30	Collect soil sample @ 30' (SB-2-30') No odors, PID=0
13:40	Collect soil sample @ 33' (SB-2-33') No odors, PID=0
	Saturated below 33'
13:45	Collect GW sample @ SB-2, No odors
	Prep. to grout borehole SB-2
15:00	Done w/ grouting, cleanup + surface completions.

Signature: _____

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

LITHOLOGIC AND SOIL BORING LOG

PROJECT NAME: BP/ARCO 771 | SITE ADDRESS: 899 Rincon Ave., Livermore, CA

PROJECT NUMBER: 06-82-608 | LEGAL DESC: | APN:

LOGGED BY: Sam Barkley | FACILITY ID OR WAIVER: | NOI NUMBER:

DATE: 3/25/11 | START: 1245 | DRILLING COMPANY: RSI | DRILLER: Jorge Morales

WELL ID: SB-2 | STOP: 1335 | DRILLING METHOD: HSA | SAMPLE METHOD: Core Barrel

DEPTH (FEET)	Soil Boring	SAMPLE ID	PID	MOISTURE	COLOR	CONSISTENCY	GRAIN SIZE	CLASSIFICATION	ODORS
2–6	GROUT								
6–8				Dry	Lt. brown	Loose			
10		SB-2-10'	0.0 ppm	Slightly moist					None
14		SB-2-15'	0.0 ppm						None
16–18							Gravelly sand with silt - 35% gravel, 45% sand and 20% fines; sub-rounded gravel up to 3 inches.	GM	
20		SB-2-20'	0.0 ppm						None
22				Moist					
24		SB-2-25'	0.0 ppm						None
28				Moist	Lt. brown	Soft	Silty clay about 3 inches thick	CL	
30		SB-2-30'	0.0 ppm		Lt. brown	Loose	Gravelly sand with silt - 35% gravel, 45% sand and 20% fines; sub-rounded gravel up to 3 inches.	GM	
32–34		SB-2-33'	0.0 ppm	Wet			Gravelly sand with silt - 10% gravel, 60% sand and 30% fines; gravel up to $\frac{1}{2}$ inch.		
36–40									

TOTAL BORING DEPTH: 35.0' | PAGE NO: 1 OF 1 | ESTIMATED GROUNDWATER DEPTH: 33'

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

LITHOLOGIC AND SOIL BORING LOG

PROJECT NAME: BP/ARCO 771 | SITE ADDRESS: 899 Rincon Ave., Livermore, CA

PROJECT NUMBER: 06-82-608 | LEGAL DESC: | APN:

LOGGED BY: Sam Barkley | FACILITY ID OR WAIVER: | NOI NUMBER:

DATE: 3/25/11 | START: 0930 | DRILLING COMPANY: RSI | DRILLER: Jorge Morales

WELL ID: SB-3 | STOP: 1035 | DRILLING METHOD: HSA | SAMPLE METHOD: Core Barrel

DEPTH (FEET)	Soil Boring	SAMPLE ID	PID	MOISTURE	COLOR	CONSISTENCY	GRAIN SIZE / CLASSIFICATION	CLASS	ODORS
2–6	GROUT								
8				Dry	Lt. brown	Loose	Gravelly sand with silt - 35% gravel, 40% sand and 25% fines; sub-rounded gravel up to 3 inches.		
10		SB-3-10'	0.0 ppm						None
12–14				Slightly moist					
14		SB-3-15'	0.0 ppm						None
16–18									
20		SB-3-20'	0.0 ppm				Gravelly sand with silt - 35% gravel, 35% sand and 30% fines; gravel up to 3 inches.	GM	None
22–24				Moist					
24		SB-3-25'	0.0 ppm						None
26–28									
30		SB-3-30'	0.0 ppm						None
32				Wet					
34			0.0 ppm						None
36–40									

TOTAL BORING DEPTH: 35.0' | PAGE NO: 1 OF 1 | ESTIMATED GROUNDWATER DEPTH: 31'

APPENDIX C

CERTIFIED LABORATORY ANALYTICAL REPORT WITH CHAIN-OF-CUSTODY DOCUMENTATION

Calscience
Environmental
Laboratories, Inc.

April 12, 2011

Jason Duda
Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Subject: **Calscience Work Order No.: 11-03-2026**
Client Reference: ARCO 771

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/30/2011 and analyzed in accordance with the attached chain-of-custody.

Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.	Date Received: 03/30/11
1324 Mangrove Ave, Ste 212	Work Order No: 11-03-2026
Chico, CA 95926-2642	Preparation: EPA 5030C
	Method: EPA 8015B (M)

Project: ARCO 771

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**11-03-2026-1-E**	**03/25/11 13:45**	**Aqueous**	**GC 4**	**04/01/11**	**04/02/11 03:48**	**110410B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	74	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3	**11-03-2026-2-E**	**03/25/11 10:45**	**Aqueous**	**GC 4**	**04/01/11**	**04/02/11 01:39**	**110410B02**

Comment(s): -LW Quantitated against gasoline.

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	81	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	75	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-1,049**	**N/A**	**Aqueous**	**GC 4**	**04/01/11**	**04/02/11 01:06**	**110410B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	73	38-134	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: 03/30/11
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ARCO 771

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-10'	**11-03-2026-3-A**	**03/25/11 13:05**	**Solid**	**GC 4**	**03/31/11**	**03/31/11 14:22**	**110331B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	78	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-30'	**11-03-2026-4-A**	**03/25/11 13:30**	**Solid**	**GC 4**	**03/31/11**	**03/31/11 16:31**	**110331B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	80	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-10'	**11-03-2026-5-A**	**03/25/11 09:50**	**Solid**	**GC 4**	**03/31/11**	**03/31/11 17:04**	**110331B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	78	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-30'	**11-03-2026-6-A**	**03/25/11 10:15**	**Solid**	**GC 4**	**03/31/11**	**03/31/11 17:36**	**110331B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	74	42-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: 03/30/11
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ARCO 771

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-697-303**	**N/A**	**Solid**	**GC 4**	**03/31/11**	**03/31/11 12:13**	**110331B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	0.50	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	70	42-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.	Date Received:	03/30/11
1324 Mangrove Ave, Ste 212	Work Order No:	11-03-2026
Chico, CA 95926-2642	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L

Project: ARCO 771

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2	**11-03-2026-1-A**	**03/25/11 13:45**	**Aqueous**	**GC/MS BB**	**03/30/11**	**03/30/11 19:33**	**110330L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	101	80-128			Dibromofluoromethane	101	80-127		
Toluene-d8	103	80-120			1,4-Bromofluorobenzene	99	68-120		

SB-3	**11-03-2026-2-A**	**03/25/11 10:45**	**Aqueous**	**GC/MS BB**	**03/30/11**	**03/30/11 20:02**	**110330L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	3.8	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	101	80-128			Dibromofluoromethane	98	80-127		
Toluene-d8	103	80-120			1,4-Bromofluorobenzene	99	68-120		

Method Blank	**099-12-703-1,668**	**N/A**	**Aqueous**	**GC/MS BB**	**03/30/11**	**03/30/11 14:14**	**110330L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	102	80-128			Dibromofluoromethane	103	80-127		
Toluene-d8	103	80-120			1,4-Bromofluorobenzene	99	68-120		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.		Date Received:	03/30/11
1324 Mangrove Ave, Ste 212		Work Order No:	11-03-2026
Chico, CA 95926-2642		Preparation:	EPA 5030C
		Method:	EPA 8260B
		Units:	mg/kg
Project: ARCO 771			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-10'	**11-03-2026-3-A**	**03/25/11 13:05**	**Solid**	**GC/MS LL**	**03/30/11**	**03/31/11 18:25**	**110331L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	87	63-141			1,2-Dichloroethane-d4	86	62-146		
Toluene-d8	95	80-120			1,4-Bromofluorobenzene	97	60-132		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-2-30'	**11-03-2026-4-A**	**03/25/11 13:30**	**Solid**	**GC/MS LL**	**03/30/11**	**03/31/11 20:25**	**110331L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	89	63-141			1,2-Dichloroethane-d4	84	62-146		
Toluene-d8	95	80-120			1,4-Bromofluorobenzene	95	60-132		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-10'	**11-03-2026-5-A**	**03/25/11 09:50**	**Solid**	**GC/MS LL**	**03/30/11**	**03/31/11 20:54**	**110331L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	89	63-141			1,2-Dichloroethane-d4	87	62-146		
Toluene-d8	96	80-120			1,4-Bromofluorobenzene	96	60-132		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Broadbent & Associates, Inc.	Date Received:	03/30/11
1324 Mangrove Ave, Ste 212	Work Order No:	11-03-2026
Chico, CA 95926-2642	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	mg/kg

Project: ARCO 771

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SB-3-30'	**11-03-2026-6-A**	**03/25/11 10:15**	**Solid**	**GC/MS LL**	**03/30/11**	**03/31/11 21:23**	**110331L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	86	63-141			1,2-Dichloroethane-d4	87	62-146		
Toluene-d8	95	80-120			1,4-Bromofluorobenzene	91	60-132		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-709-486**	**N/A**	**Solid**	**GC/MS LL**	**03/31/11**	**03/31/11 14:33**	**110331L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0010	1		Xylenes (total)	ND	0.0010	1	
1,2-Dibromoethane	ND	0.0010	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0010	1	
1,2-Dichloroethane	ND	0.0010	1		Tert-Butyl Alcohol (TBA)	ND	0.010	1	
Ethylbenzene	ND	0.0010	1		Diisopropyl Ether (DIPE)	ND	0.0020	1	
Ethanol	ND	0.10	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0020	1	
Toluene	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0020	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	100	63-141			1,2-Dichloroethane-d4	104	62-146		
Toluene-d8	98	80-120			1,4-Bromofluorobenzene	96	60-132		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: 03/30/11
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project ARCO 771

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-3	**Aqueous**	**GC 4**	**04/01/11**	**04/02/11**	**110410S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	94	93	38-134	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: 03/30/11
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project ARCO 771

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-2-10'	**Solid**	**GC 4**	**03/31/11**	**03/31/11**	**110331S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	102	96	42-126	6	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: 03/30/11
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8260B

Project ARCO 771

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
11-03-2014-1	**Aqueous**	**GC/MS BB**	**03/30/11**	**03/30/11**	**110330S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	110	110	76-124	1	0-20	
Carbon Tetrachloride	92	96	74-134	4	0-20	
Chlorobenzene	104	106	80-120	2	0-20	
1,2-Dibromoethane	98	99	80-120	1	0-20	
1,2-Dichlorobenzene	99	99	80-120	0	0-20	
1,2-Dichloroethane	111	111	80-120	0	0-20	
Ethylbenzene	101	103	78-126	2	0-20	
Toluene	109	110	80-120	0	0-20	
Trichloroethene	107	108	77-120	1	0-20	
Methyl-t-Butyl Ether (MTBE)	99	96	67-121	2	0-49	
Tert-Butyl Alcohol (TBA)	131	116	36-162	12	0-30	
Diisopropyl Ether (DIPE)	107	106	60-138	1	0-45	
Ethyl-t-Butyl Ether (ETBE)	107	105	69-123	2	0-30	
Tert-Amyl-Methyl Ether (TAME)	104	103	65-120	1	0-20	
Ethanol	118	137	30-180	15	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: 03/30/11
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8260B

Project ARCO 771

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SB-2-10'	**Solid**	**GC/MS LL**	**03/30/11**	**03/31/11**	**110331S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	100	61-127	1	0-20	
Chloroform	92	91	80-120	0	0-20	
1,1-Dichloroethane	92	90	80-120	2	0-20	
1,2-Dichloroethane	89	90	80-120	1	0-20	
1,1-Dichloroethene	95	93	47-143	2	0-25	
Ethanol	73	74	17-167	2	0-47	
Tetrachloroethene	115	103	80-120	11	0-20	
Toluene	101	102	63-123	1	0-20	
Trichloroethene	100	100	44-158	0	0-20	
Methyl-t-Butyl Ether (MTBE)	98	96	57-123	2	0-21	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: N/A
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ARCO 771

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-1,049	**Aqueous**	**GC 4**	**04/01/11**	**04/02/11**	**110410B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	104	104	78-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: N/A
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8015B (M)

Project: ARCO 771

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-697-303	**Solid**	**GC 4**	**03/31/11**	**03/31/11**	**110331B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	99	105	70-118	6	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: N/A
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8260B

Project: ARCO 771

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-1,668	**Aqueous**	**GC/MS BB**	**03/30/11**	**03/30/11**	**110330L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	112	114	80-120	73-127	2	0-20	
Carbon Tetrachloride	101	104	74-134	64-144	3	0-20	
Chlorobenzene	106	107	80-120	73-127	1	0-20	
1,2-Dibromoethane	99	100	79-121	72-128	1	0-20	
1,2-Dichlorobenzene	99	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	110	110	80-120	73-127	0	0-20	
Ethylbenzene	104	105	80-120	73-127	1	0-20	
Toluene	111	111	80-120	73-127	1	0-20	
Trichloroethene	108	110	79-127	71-135	2	0-20	
Methyl-t-Butyl Ether (MTBE)	97	106	69-123	60-132	9	0-20	
Tert-Butyl Alcohol (TBA)	118	109	63-123	53-133	8	0-20	
Diisopropyl Ether (DIPE)	106	109	59-137	46-150	3	0-37	
Ethyl-t-Butyl Ether (ETBE)	101	105	69-123	60-132	4	0-20	
Tert-Amyl-Methyl Ether (TAME)	97	100	70-120	62-128	2	0-20	
Ethanol	128	128	28-160	6-182	0	0-57	

Total number of LCS compounds : 15
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: N/A
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8260B

Project: ARCO 771

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-486	**Solid**	**GC/MS LL**	**03/31/11**	**03/31/11**	**110331L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	106	107	78-120	71-127	1	0-20	
Bromobenzene	107	108	80-120	73-127	1	0-20	
Bromochloromethane	102	99	80-120	73-127	3	0-20	
Bromodichloromethane	108	109	80-120	73-127	0	0-20	
Bromoform	109	110	80-120	73-127	0	0-20	
Bromomethane	93	93	80-120	73-127	0	0-20	
n-Butylbenzene	113	116	77-123	69-131	3	0-25	
sec-Butylbenzene	112	114	80-120	73-127	2	0-20	
tert-Butylbenzene	110	111	80-120	73-127	1	0-20	
Carbon Disulfide	99	98	80-120	73-127	1	0-20	
Carbon Tetrachloride	109	105	49-139	34-154	3	0-20	
Chlorobenzene	107	108	79-120	72-127	1	0-20	
Chloroethane	106	105	80-120	73-127	1	0-20	
Chloroform	105	103	80-120	73-127	1	0-20	
Chloromethane	101	103	80-120	73-127	2	0-20	
2-Chlorotoluene	106	107	80-120	73-127	1	0-20	
4-Chlorotoluene	108	109	80-120	73-127	0	0-20	
Dibromochloromethane	113	112	80-120	73-127	1	0-20	
1,2-Dibromo-3-Chloropropane	112	116	80-120	73-127	3	0-20	
1,2-Dibromoethane	108	109	80-120	73-127	1	0-20	
Dibromomethane	106	107	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	106	109	75-120	68-128	3	0-20	
1,3-Dichlorobenzene	108	112	80-120	73-127	3	0-20	
1,4-Dichlorobenzene	105	108	80-120	73-127	3	0-20	
Dichlorodifluoromethane	111	111	80-120	73-127	0	0-20	
1,1-Dichloroethane	105	103	80-120	73-127	2	0-20	
1,2-Dichloroethane	106	106	80-120	73-127	1	0-20	
1,1-Dichloroethene	109	108	74-122	66-130	1	0-20	
c-1,2-Dichloroethene	108	104	80-120	73-127	4	0-20	
t-1,2-Dichloroethene	107	105	80-120	73-127	2	0-20	
1,2-Dichloropropane	106	108	79-115	73-121	2	0-25	
1,3-Dichloropropane	109	110	80-120	73-127	1	0-20	
2,2-Dichloropropane	109	105	80-120	73-127	4	0-20	
1,1-Dichloropropene	109	106	80-120	73-127	2	0-20	
c-1,3-Dichloropropene	112	112	80-120	73-127	0	0-20	
t-1,3-Dichloropropene	119	119	80-120	73-127	0	0-20	
Ethylbenzene	110	111	76-120	69-127	1	0-20	
Isopropylbenzene	112	113	80-120	73-127	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Broadbent & Associates, Inc.
1324 Mangrove Ave, Ste 212
Chico, CA 95926-2642

Date Received: N/A
Work Order No: 11-03-2026
Preparation: EPA 5030C
Method: EPA 8260B

Project: ARCO 771

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-709-486	**Solid**	**GC/MS LL**	**03/31/11**	**03/31/11**	**110331L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
p-Isopropyltoluene	111	115	80-120	73-127	4	0-20	
Methylene Chloride	102	99	80-120	73-127	2	0-20	
Naphthalene	121	127	80-120	73-127	5	0-20	
n-Propylbenzene	109	110	80-120	73-127	0	0-20	
Styrene	112	113	80-120	73-127	1	0-20	
Ethanol	110	82	56-140	42-154	29	0-20	RB
1,1,1,2-Tetrachloroethane	107	107	80-120	73-127	1	0-20	
1,1,2,2-Tetrachloroethane	105	106	80-120	73-127	1	0-20	
Tetrachloroethene	129	137	80-120	73-127	6	0-20	
Toluene	105	105	77-120	70-127	0	0-20	
1,2,3-Trichlorobenzene	109	111	80-120	73-127	2	0-20	
1,2,4-Trichlorobenzene	111	114	80-120	73-127	3	0-20	
1,1,1-Trichloroethane	105	104	80-120	73-127	2	0-20	
1,1,2-Trichloroethane	107	108	80-120	73-127	1	0-20	
Trichloroethene	109	112	80-120	73-127	2	0-20	
Trichlorofluoromethane	107	103	80-120	73-127	3	0-20	
1,2,3-Trichloropropane	105	106	80-120	73-127	1	0-20	
1,2,4-Trimethylbenzene	113	114	80-120	73-127	1	0-20	
1,3,5-Trimethylbenzene	112	111	80-120	73-127	0	0-20	
Vinyl Acetate	108	98	80-120	73-127	10	0-20	
Vinyl Chloride	107	109	68-122	59-131	1	0-20	
Xylenes (total)	111	112	80-120	73-127	1	0-20	
Methyl-t-Butyl Ether (MTBE)	108	108	77-120	70-127	0	0-20	
Tert-Butyl Alcohol (TBA)	100	102	68-122	59-131	3	0-20	
Diisopropyl Ether (DIPE)	110	107	78-120	71-127	2	0-20	
Ethyl-t-Butyl Ether (ETBE)	113	111	78-120	71-127	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	108	110	75-120	68-128	2	0-20	

Total number of LCS compounds : 65
Total number of ME compounds : 1
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 11-03-2026

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
ET	Sample was extracted past end of recommended maximum holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

2026

BP/ARC Project Name: ARCO 771 **Req Due Date (mm/dd/yy):** STD-TAT **Rush TAT:** Yes ___ No X

BP/ARC Facility No: 771 **Lab Work Order Number:**

Lab Name:	Cal Science	BP/ARC Facility Address:	899 Rincon Avenue	Consultant/Contractor:	Broadbent & Associates, Inc.
Lab Address:	7440 Lincoln Way	City, State, ZIP Code:	Livermore, CA 94551	Consultant/Contractor Project No:	06-82-608-616-881
Lab PM:	Richard Villafania	Lead Regulatory Agency:	ACEH	Address:	1324 Mangrove Ave. Ste. 212, Chico, CA 95926
Lab Phone:	714-895-5494 / 714-895-7501 (fax)	California Global ID No.:	T0600100113	Consultant/Contractor PM:	Jason Duda
Lab Shipping Accnt:	9255	Enfos Proposal No:	005ZP-0001	Phone:	530-566-1400 / 530-566-1401 (fax)
Lab Bottle Order No:		Accounting Mode:	Provision X OOC-BU ___ OOC-RM ___	Email EDD To:	jduda@broadbentinc.com
Other Info:		Stage:	OM&M/Other (60) Activity: Project Spend (81)	Invoice To:	BP/ARC X Contractor ___

BP/ARC EBM: Chuck Carmel
EBM Phone: 925-275-3803
EBM Email: charles.carmel@bp.com

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO (8015M)	BTEX / 5 Oxys (8260)	EDB / 1,2-DCA (8260)	EtOH (8260)							Report Type & QC Level: Comments
1	SB-2	3/25/2011	13:45		X			6				X			X	X	X	X							
2	SB-3	3/25/2011	10:45		X			6				X			X	X	X	X							
3	SB-2-10'	3/25/2011	13:05	X				1	X						X	X	X	X							
4	SB-2-30'	3/25/2011	13:30	X				1	X						X	X	X	X							
5	SB-3-10'	3/25/2011	9:50	X				1	X						X	X	X	X							
6	SB-3-30'	3/25/2011	10:15	X				1	X						X	X	X	X							
7	TB - 771 - 110325	3/25/2011	18:00		X			2				X													ON HOLD

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Report Type & QC Level: Standard X; Full Data Package ___

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	Jason Duda						
Sampler's Company:	BAI	Jason Duda / BAI	3-29-11	15:00	GSO	3-29-11	
Shipment Method:	GSO Ship Date: 3-29-11						
Shipment Tracking No:	107158249					3/30/11	1045

Special Instructions: Please cc results to bpedf@broadbentinc.com

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

DATE 3-24-11

COMPANY Broadbent and Associates

ADDRESS 1324 Mangrove Ave

ADDRESS STE/ ROOM [illegible]

CITY Chico ZIP CODE [illegible]

SENDERS NAME [illegible] PHONE NUMBER (530) 566-1400

COMPANY CALSCIENCE

NAME [illegible] PHONE NUMBER 714-895-5494

ADDRESS [illegible] LINCOLN WAY

ADDRESS STE/ ROOM

CITY GARDEN GROVE ZIP CODE [illegible]

YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE 06-82-[illegible]

CIAL RUCTIONS

GSO GOLDEN STATE OVERNIGHT

1-800-322-5555

WWW.GSO.COM

SHIPPING AIR BILL

PACKAGE LABEL

4 PACKAGE INFORMATION

- [ ] LETTER (MAX 8 OZ)
- [x] PACKAGE (WT) ________
- [ ] DECLARED VALUE $________
- [ ] COD AMOUNT $________ (CASH NOT ACCEPTED)

5 **DELIVERY SERVICE**

- [x] PRIORITY OVERNIGHT BY 10:30 AM
- [ ] EARLY PRIORITY BY 8:00 AM
- [ ] SATURDAY DELIVERY

*DELIVERY TIMES MAY BE LATER IN SOME AREAS • CONSULT YOUR SERVICE GUIDE OR CALL GOLDEN STATE OVERNIGHT.

6 **RELEASE SIGNATURE** ________

SIGN TO AUTHORIZE DELIVERY WITHOUT OBTAINING SIGNATURE

7

8 **PICK UP INFORMATION** ________ TIME DRIVER # ROUTE #

107158249 PEEL OFF HERE

107158249

9 **GSO TRACKING NUMBER**

2026

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 11-03-2026

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Broadbent DATE: 03/30/11

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 4.4 °C + 0.5 °C (CF) = 4.9 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter Initial: JP

CUSTODY SEALS INTACT:

☑ Cooler	☐_____	☐ No (Not Intact)	☐ Not Present	☐ N/A	Initial: JP
☐ Sample	☐_____	☐ No (Not Intact)	☑ Not Present		Initial: YC

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☑	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (S) ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☑VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® **Other:** ☐_____ **Trip Blank Lot#:** 100913C **Labeled/Checked by:** YC

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** AL

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** AL

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 11-03-2026

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS:

Comments:

- ☐ **Sample(s)/Container(s) NOT RECEIVED but listed on COC**
- ☐ **Sample(s)/Container(s) received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s) used** – list test
- ☐ **Improper preservative used** – list test
- ☐ **No preservative noted on COC or label** – list test & notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☐ **Sample label(s) do not match COC** – Note in comments
  - ☐ **Sample ID**
  - ☐ **Date and/or Time Collected**
  - ☐ **Project Information**
  - ☐ **# of Container(s)**
  - ☐ **Analysis**
- ☐ **Sample container(s) compromised** – Note in comments
  - ☐ **Water present in sample container**
  - ☐ **Broken**
- ☐ **Sample container(s) not labeled**
- ☐ **Air sample container(s) compromised** – Note in comments
  - ☐ **Flat**
  - ☐ **Very low in volume**
  - ☐ **Leaking (Not transferred - duplicate bag submitted)**
  - ☐ **Leaking (transferred into Calscience Tedlar® Bag*)**
  - ☐ **Leaking (transferred into Client's Tedlar® Bag*)**
- ☐ **Other:** _____

HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis
7	AB	2							

Comments: _____

*Transferred at Client's request.

Initial / Date: YC 03/30/11

APPENDIX D

GEOTRACKER UPLOAD CONFIRMATION RECEIPT

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 - Soil and Water Investigation Report**
Submittal Title:	**Off-Site Soil and Groundwater Laboratory Analytical Data**
Facility Global ID:	**T0600100113**
Facility Name:	**ARCO #00771**
File Name:	**11032026 corrected.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**4/29/2011 11:06:24 AM**
Confirmation Number:	**5426951110**

VIEW QC REPORT

VIEW DETECTIONS REPORT