

Atlantic Richfield Company

Shannon Couch
Operations Project Manager

PO Box 1257
San Ramon, CA 94583
Phone: (925) 275-3804
Fax: (925) 275-3815
E-Mail: shannon.couch@bp.com

RECEIVED

8:10 am, Feb 02, 2012

Alameda County
Environmental Health

January 31, 2012

Re: Fourth Quarter 2011 Status Report
Former BP Service Station #11104
1716 Webster Street
Alameda, California
ACEH Case #RO0000281

"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,



Shannon Couch
Operations Project Manager

Attachment

**FOURTH QUARTER 2011
STATUS REPORT
FORMER ARCO STATION #11104, ALAMEDA, CALIFORNIA**

Broadbent & Associates, Inc. (Broadbent) is pleased to present this *Fourth Quarter 2011 Status Report* on behalf of Atlantic Richfield Company (ARC, a BP affiliated company) for former ARCO Station #11104 located in Alameda, Alameda County, California. Monitoring activities at the site were performed in accordance with the reporting requirements issued by the Alameda County Environmental Health (ACEH). Details of work performed, discussion of results, and recommendations are provided below.

Facility Name / Address:	<u>Station #11104 / 1716 Webster Street, Alameda, California</u>
Client Project Manager / Title:	<u>Ms. Shannon Couch, Remediation Management Project Manager</u>
Broadbent Contact:	<u>Tom Sparrowe, P.G., (707) 455-7290</u>
Broadbent Project No.:	<u>06-88-644</u>
Primary Regulatory Agency / ID No.:	<u>ACEH / Case #RO0000281</u>
Current phase of project:	<u>Monitoring</u>
List of Acronyms / Abbreviations:	<u>See end of report text for list of acronyms/abbreviations used in report.</u>

WORK PERFORMED THIS QUARTER (Fourth Quarter 2011):

1. Submitted *Third Quarter 2011 Monitoring Report* on October 6, 2011.
2. No environmental field activities were scheduled for Fourth Quarter 2011.

WORK SCHEDULED FOR NEXT QUARTER (First Quarter 2012):

1. Submit *Fourth Quarter 2011 Status Report* (contained herein).
2. Conduct First Quarter 2012 groundwater monitoring/sampling.

GROUNDWATER MONITORING PLAN SUMMARY:

Groundwater level gauging:	<u>MW-1 through MW-5 and RW-1</u>	(1Q & 3Q)
Groundwater sample collection:	<u>MW-1 through MW-5 and RW-1</u>	(1Q)
	<u>MW-1 and RW-1</u>	(3Q)
Biodegradation indicator parameter monitoring:	<u>None</u>	

QUARTERLY RESULTS SUMMARY:

LNAPL

LNAPL observed this quarter:	<u>N/A</u>	(yes/no)
LNAPL recovered this quarter:	<u>N/A</u>	(gal)
Cumulative LNAPL recovered:	<u>N/A</u>	(gal)

Groundwater Elevation and Gradient:

Depth to groundwater:	<u>N/A</u>	(ft below TOC)
Gradient direction:	<u>N/A</u>	(compass direction)
Gradient magnitude:	<u>N/A</u>	(ft/ft)
Average change in elevation:	<u>N/A</u>	(ft since last measurement)

Laboratory Analytical Data

Summary:	<u>No environmental activities were conducted for Fourth Quarter 2011.</u>
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DISCUSSION:

No environmental field activities were conducted by Broadbent & Associates at the Site during the Fourth Quarter of 2011. The most recent groundwater monitoring/sampling occurred during the Third Quarter of 2011, the results of which are contained within the *Third Quarter 2011 Monitoring Report* (Broadbent, 10/06/11). For immediate reference, a site location map is provided as Drawing 1 and a groundwater elevation and analytical summary map, dated July 5, 2011, is provided as Drawing 2.

LIMITATIONS:

The findings presented in this report are based upon observations of field personnel, points investigated, results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California), and our understanding of ACEH requirements. 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 the Atlantic Richfield Company. 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, Station #11104, 1716 Webster Street, Alameda, California
- Drawing 2: Groundwater Elevation Contours and Analytical Summary Map, July 5, 2011, Station #11104, 1716 Webster Street, Alameda, California

LIST OF COMMONLY USED ACCRONYMS/ABBREVIATIONS:

ACEH:	Alameda County Environmental Health	ft/ft:	feet per foot
Broadbent:	Broadbent & Associates, Inc.	gal:	Gallons
BTEX:	Benzene, Toluene, Ethylbenzene, Total Xylenes	GRO:	Gasoline-Range Organics
1,2-DCA:	1,2-Dichloroethane	LNAPL:	Light Non-Aqueous Phase Liquid
DIPE:	Di-Isopropyl Ether	MTBE:	Methyl Tertiary Butyl Ether
DO:	Dissolved Oxygen	NO ₃ :	Nitrate as Nitrogen
DRO:	Diesel-Range Organics	ppb:	parts per billion
EDB:	1,2-Dibromomethane	SO ₄ :	Sulfate
Eh:	Oxidation Reduction Potential	TAME:	Tert-Amyl Methyl Ether
EPA:	Environmental Protection Agency	TBA:	Tertiary Butyl Ether
ETBE:	Ethyl Tertiary Butyl Ether	TOC:	Top of Casing
Fe ²⁺ :	Ferrous Iron	µg/L:	micrograms per liter

DRAWINGS

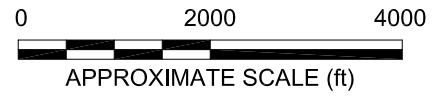
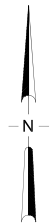
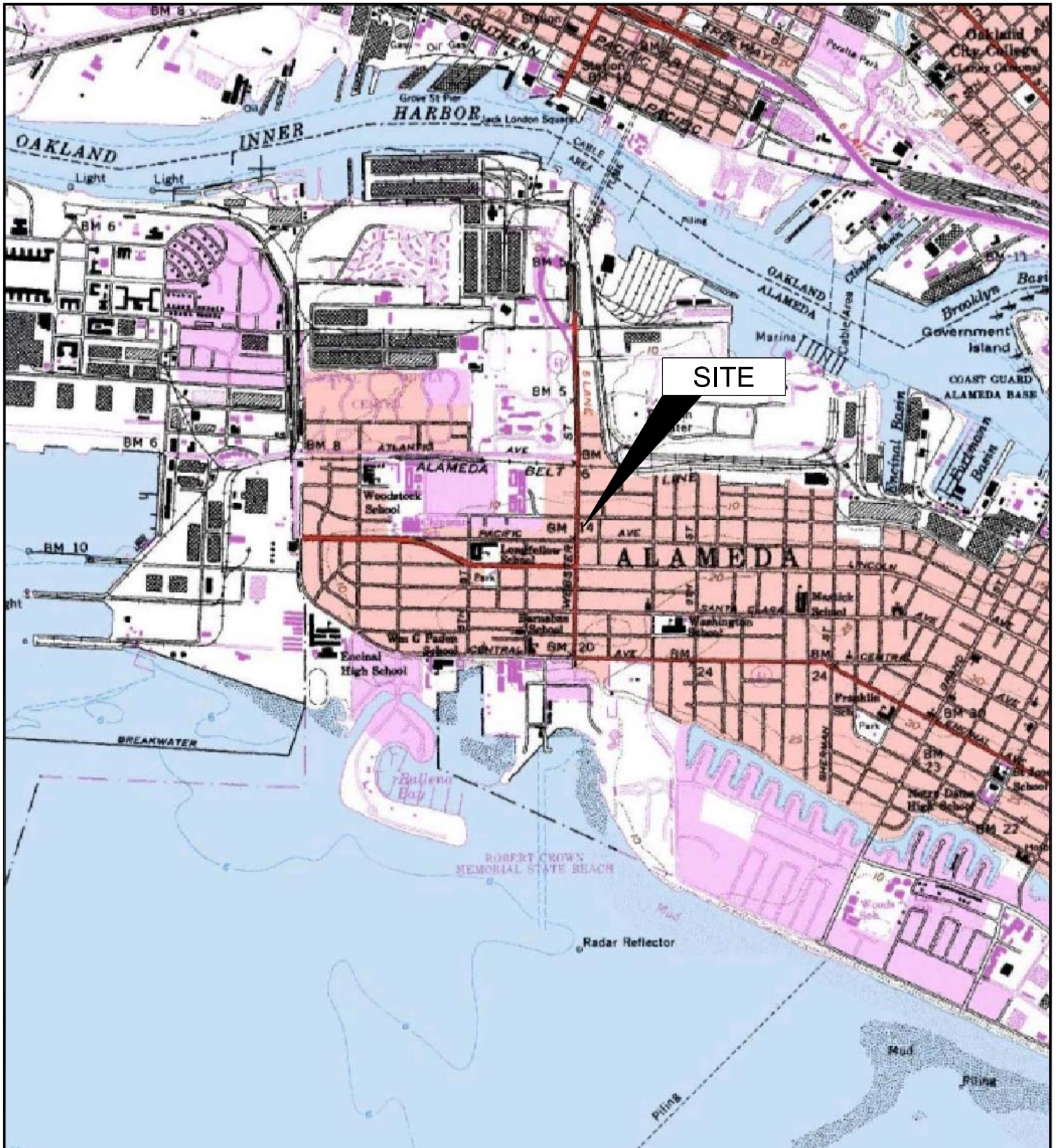


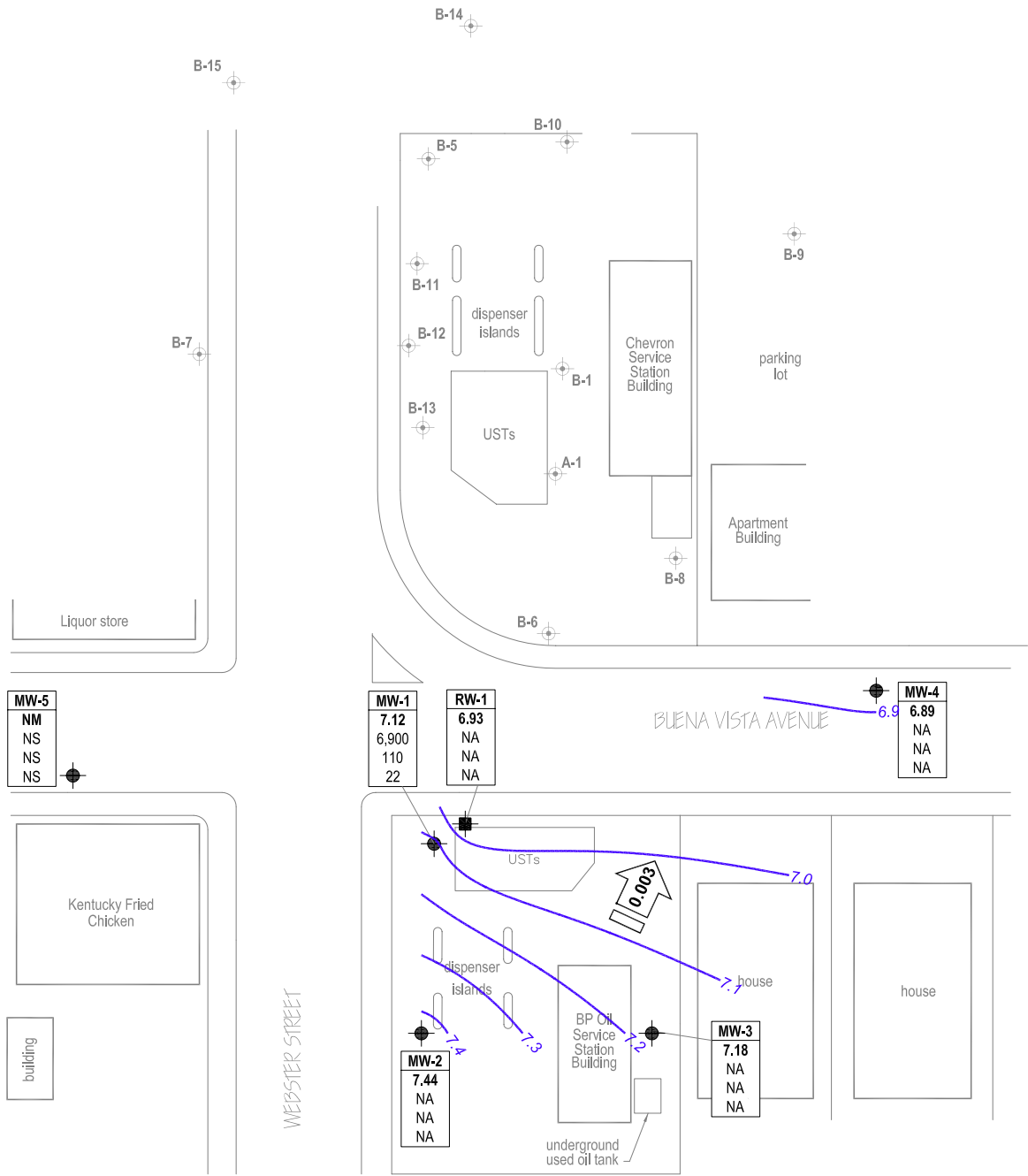
IMAGE SOURCE: USGS

BROADBENT & ASSOCIATES, INC.
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
 1324 Mangrove Ave. Suite 212, Chico, CA 95926
 Project No.: 06-88-644 Date: 9/1/09

Station #11104
 1716 Webster Street
 Alameda, California

Site Location Map

Drawing
1

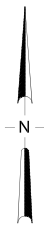


LEGEND

- Monitoring well
- Groundwater recovery well
- Chevron monitoring well
- Groundwater flow direction and gradient (ft/MSL)
- Groundwater elevation contour (Feet above site datum)

Well	Well designation
ELEV	Groundwater elevation (ft/MSL)
GRO	GRO, Benzene and MTBE concentrations in ground water (µg/L)
Benzene	
MTBE	
<	Not detected at or above laboratory reporting limits
NM/NS	Not Measured/Not sampled
NA	Not Analyzed
*	Elevation not used for contouring

NOTE: SITE MAP ADAPTED FROM CAMBRIA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.



BROADBENT & ASSOCIATES, INC.
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
 875 Cotting Lane Suite G, Vacaville, California
 Project No.: 06-88-644 Date: 8/10/2011

Station #11104
 1716 Webster Street
 Alameda, California

Groundwater Elevation Contour and
 Analytical Summary Map
 July 5, 2011