# Atlantic Richfield Company

Shannon Couch Remediation Management Project Manager

#### RECEIVED

#### 3:50 pm, Nov 08, 2011

Alameda County Environmental Health

October 31, 2011

Mr. Paresh Khatri Alameda County Health Care Agency Department of Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94502

Re: SENSITIVE RECEPTOR SURVEY ARCO Station No. 2162 15135 Hesperian Boulevard San Leandro, California 94578 ACEH Case No. RO0000190

Dear Mr. Khatri:

I declare, that to the best of my knowledge at the present time, that the information contained in the attached document is true and correct.

Regards,

Shannon Couch Remediation Management Project Manager Atlantic Richfield Company, a BP-affiliated company

Enclosure: Sensitive Receptor Survey



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



October 31, 2011

Mr. Paresh Khatri Alameda County Health Care Agency Department of Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94502

#### RE: SENSITIVE RECEPTOR SURVEY ARCO Station No. 2162 15135 Hesperian Boulevard San Leandro, California 94578 ACEH Case No. RO0000190

Dear Mr. Khatri:

On behalf of Atlantic Richfield Company (ARCO), Closure Solutions, Inc. (Closure Solutions) has prepared this *Sensitive Receptor Survey* (Survey) for the ARCO Service Station No. 2162, located at 15135 Hesperian Boulevard, San Leandro, California (Site). Closure Solutions performed the Survey to identify the presence of water wells within a 0.5-mile radius of the Site. The Site setting, information on groundwater depth, groundwater flow direction, survey methods, and survey results are presented below. Additional information, including sensitive land uses is not included in this report.

### 1.0 SITE SETTING

The Site is located on the southwest corner of the intersection between Hesperian Boulevard and Ruth Court in San Leandro, California. The Site is currently an active ARCO service station and is located in a mixed commercial and residential area. Current Site facilities include a service station building, four dispenser islands covered by a canopy, and four 10,000 gallon underground storage tanks.

### 2.0 GROUNDWATER DEPTH AND FLOW DIRECTION

Groundwater monitoring and sampling has been conducted at the Site since 1992. Based on information contained in historical Site reports, depth to groundwater beneath the Site is approximately 8 feet below ground surface. Groundwater flow direction is predominately to the southwest.

### 3.0 WELL SURVEY METHODS

To obtain information on the type and location of wells within a 0.5-mile radius of the Site, Closure Solutions requested a signed authorization form from the Alameda County Health Care Agency to access confidential well information. The signed authorization was then provided to the Department of Water Resources (DWR) for access to all available well completion reports for wells installed in the vicinity of the Site. The DWR furnished 216 well completion reports for wells installed in the Site vicinity. These wells were located in Section 31 in Township 02S, Range 02W, Section 1 in Township 03S, Range 03W, and Section 6 in Township 03S, Range 02W, Mount Diablo Meridian.

To assemble the survey information, Closure Solutions grouped the reports into the following categories:

- Reports that referenced well locations by current street addresses that could be verified using online resources (Google Earth or equivalent);
- Reports that referenced well locations by distance from a current street, intersection, or other known location such as a creek or park;
- Reports that referenced well locations by distance from a corner of a map Section;
- Reports that referenced well locations by outdated street addresses, route numbers, or street names/intersections that were changed/no longer existed;
- Reports that were illegible; and
- Reports for wells that had been destroyed.

Well locations referenced by current street addresses or by distances from a known location or street intersection were verified on a map to obtain distance from the Site. If the well location was within 0.5 mile of the Site, the well location was plotted on the survey map. Wells located outside the 0.5 mile radius were not plotted.

For wells that were referenced by distance from a corner of a Section, Closure Solutions accessed Montana State University's Graphical Locater website and the Earthpoint website to obtain maps of the referenced Section within the Township and Range. Once this information was obtained and verified, wells identified within 0.5 miles of the Site were plotted on the well survey map.

In cases where well completion reports contained street names or route numbers that no longer existed, either available Township, Range, and Section information was used to plot locations, or additional research was conducted to obtain information on historical street and route names. In a few cases, well locations could not be verified using the referenced locations or addresses provided, or the report was illegible. These wells were not included on the well survey map.

## 4.0 WELL SURVEY RESULTS

Based on Closure Solutions' review of information provided by the DWR, seven wells were identified within a 0.5-mile radius of the Site, as described below:

- One well was identified as an irrigation well, was installed in 1956, and is located approximately 2,250 feet west-southwest (down-gradient) of the Site;
- One well was identified as an irrigation well, was installed in 1977, and is located approximately 2,350 feet west-southwest (down-gradient) of the Site;
- One well was identified as an irrigation well, was installed in 1977, and is located approximately 1,050 feet northwest (cross-gradient) of the Site;
- One well was identified as an irrigation well, was installed in 1977, and is located approximately 1,100 feet northwest (cross-gradient) of the Site;
- One well was identified as an irrigation well, was installed in 1977, and is located approximately 2,250 feet northwest (cross-gradient) of the Site;
- One well was identified as a domestic well, was installed in 1977, and is located approximately 2,350 feet northwest (cross-gradient) of the Site;
- One well was identified as an irrigation well, was installed in 1977, and is located approximately 2,500 feet north-northeast (up-gradient) of the Site;

The approximate locations of the wells identified above within a 0.5-mile radius of the Site are presented on Figure 1. Please note that for the purposes of this well survey, cathodic protection wells and wells associated with environmental cases are not included in the results.

Well information including map ID, approximate distance and direction from the Site, well type, installation date, and screen interval is summarized in Table 1. Due to privacy concerns, the DWR well completion reports or specific information regarding the wells, including exact well location, are not included in any copy of this document.

### 5.0 SURFACE WATER

The nearest surface water body is the Estudillo Canal, a concrete-lined drainage channel, which is located approximately 800 feet to the southeast (cross-gradient) of the Site. This channel ultimately connects to the San Francisco Bay, which is located approximately three miles west-southwest (down-gradient) of the Site.

If you have any questions or comments regarding this report, please contact Charlotte Evans at (925) 566-8567, or by e-mail at cevans@closuresolutions.com.

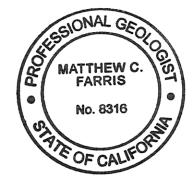
Sincerely, Closure Solutions, Inc.

Bans

Charlotte Evans Project Geologist

famo

Matthew Farris, P.G. Project Geologist



#### Attachments:

Figure 1

Approximate Well Locations Within a 0.5-Mile Radius of the Site

Table 1Wells Located Within a 0.5-Mile Radius of the Site

cc: Ms. Shannon Couch, Atlantic Richfield Company

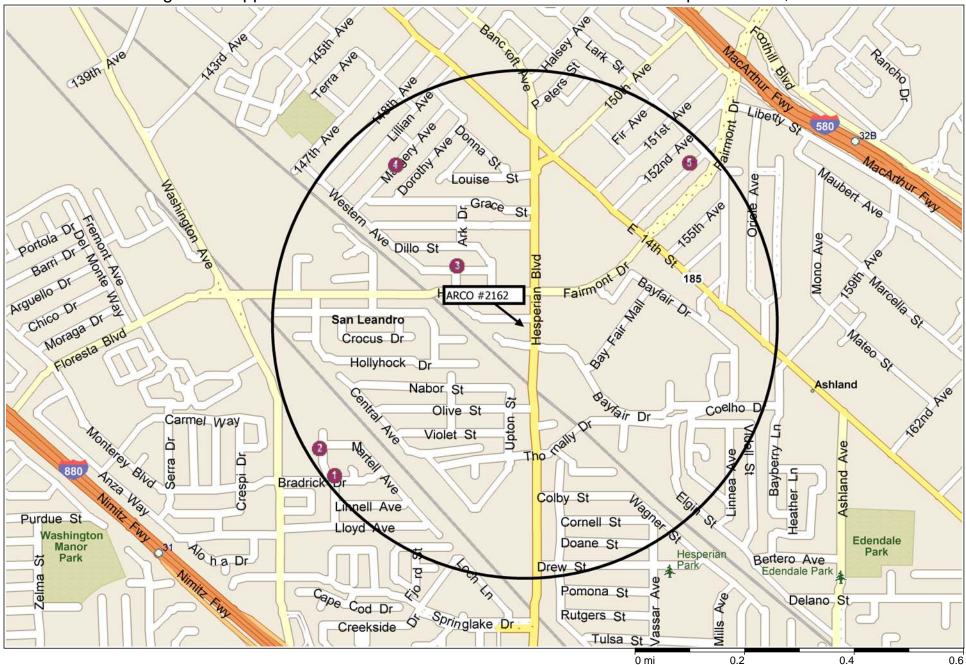


Figure 1 - Approximate Well Locations ARCO #2162 - 15135 Hesperian Blvd., CA

Copyright © and (P) 1988–2010 Microsoft Corporation and/or its suppliers. All rights reserved. http://www.microsoft.com/streets/ Certain mapping and direction data © 2010 NAVTEQ. All rights reserved. The Data for areas of Canada includes information taken with permission from Canadian authorities, including: © Her Majesty the Queen in Right of Canada, © Queen's Printer for Ontario. NAVTEQ and NAVTEQ ON BOARD are trademarks of NAVTEQ. © 2010 Tele Atlas North America, Inc. All rights reserved. Tele Atlas and Tele Atlas North America are trademarks of Tele Atlas, Inc. © 2010 by Applied Geographic Systems. All rights reserved

#### Table 1 - Wells Located Within 0.5-Mile Radius

ARCO Service Station No. 2162 15135 Hesperian Boulevard San Leandro, California

Map ID No.	Approximate Distance from Site	Well Type	Installation Date	Screen Interval
1	2,250 ft. WSW	irr	Aug-56	15-30 ft.
2	2,350 ft. WSW	irr	Nov-77	20-60 ft.
3	1,050 ft. NW	irr	Mar-77	20-40 ft.
3	1,100 ft. NW	irr	Mar-77	17-37 ft.
4	2,250 ft. NW	irr	May-77	20-48 ft.
4	2,350 ft. NW	dom	May-77	25-45 ft.
5	2,500 ft. NNE	irr	Aug-77	10-30 ft.

Abbreviations:

ft = feet N = North S = South E = East W = West dom = domestic well irr = irrigation well mun = municipal well pub = public well unk = unknown