## **Atlantic Richfield Company**

Chuck Carmel

Environmental Business Manager

## RECEIVED

8:42 am, Apr 13, 2010

Alameda County Environmental Health

April 12, 2010

Re: Soil and Groundwater Investigation Work Plan Addendum Atlantic Richfield Company Service Station #498 286 South Livermore Avenue, Livermore, California ACEH Case No. RO0002873

"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,

Im

Chuck Carmel Environmental Business Manager

Attachment



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



April 12, 2010

Project No. 08-82-603

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

Attn.: Mr. Chuck Carmel

## Re: Soil and Ground-Water Investigation Work Plan Addendum, Atlantic Richfield Company (a BP affiliated company) Station #498, 286 South Livermore Avenue, Livermore, California. Case No. RO0002873.

Dear Mr. Carmel:

Provided herein is an addendum to Broadbent and Associates, Inc. (BAI) August 28, 2009 *Soil and Ground-Water Investigation Work Plan* (herein referred to as the Work Plan). In response to the Work Plan, Alameda County Environmental Health (ACEH) issued the February 10, 2010 letter stating that justification for the proposed monitoring well locations for MW-6 and MW-7 is needed in order to adequately characterize the off-site groundwater contaminant plume. The letter also recommended that direct push borings be used for characterization rather than the installation of permanent monitoring points.

The location chosen for the installation of proposed monitoring wells MW-6 and MW-7 coincides with flow directions measured at the former Shell Station located across 3<sup>rd</sup> Street and from data collected on the Property during the First Quarter 2009 groundwater monitoring event, which both indicate a northwesterly flow direction. The flow direction calculated from data collected on November 9, 2009 during the Fourth Quarter 2009 monitoring event improperly utilized the groundwater elevation measured in well MW-1, which appears to be anomalous and possibly screened across a localized perched groundwater zone. Proposed well MW-5 will be installed adjacent to existing well MW-1 in order to determine the possible presence of a perched water bearing zone. Based on this data, the previously proposed locations for wells MW-6 and MW-7 should adequately characterize the potential migration of an off-site groundwater contaminant plume. A site map depicting the proposed well and/or boring locations is included as Drawing 1.

As discussed in the original Work Plan, difficult drilling conditions encountered during completion of the 2005 investigation rule out the use of a direct push drilling technique and collection of grab ground-water samples. In order to comply with ACEH's recommendations, it is still proposed to utilize a hollow stem auger drill rig for the collection of groundwater samples and/or well installation to avoid potential refusal. However, it is proposed to abandon the off-site borings rather than conduct permanent well installations if photo-ionization detector (PID) readings taken from soil samples collected at approximate five foot intervals do not indicate the presence of hydrocarbon impacts. If the soil sample PID readings demonstrate the presence of impacted soil, a permanent groundwater monitoring well will be installed as described within the Work Plan at each location. If impact is not detected in the soil via PID readings, the abandoned borings will be sealed with neat cement grout and completed to match existing surface surroundings.

Soil and groundwater sampling procedures and potential well installation details are provided in the original Work Plan, which will be followed during field activities with the addition of the revisions discussed above. Once ACEH has approved this addendum, access agreement negotiations with the neighboring property owner will be initiated. With a signed access agreement in place, BAI will execute the proposed field work. If a signed access agreement is not in place 90 days following approval of this Work Plan by ACEH, assistance with access agreement negotiations from ACEH will be requested.

Upon completion of field work and receipt of laboratory analytical reports, BAI will complete a soil and ground-water investigation report for submittal to ACEH. It is recommended that the deadline for submittal of the report be set to 90 days following receipt of a signed property access agreement. Should you have any questions, please do not hesitate to contact us at (530) 566-1400.

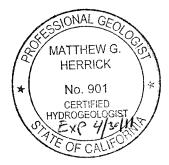
Sincerely, BROADBENT & ASSOCIATES, INC.

Moson Righ

Jason Duda Project Scientist

cc:

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



Attachment: Drawing 1: Site Map with Historic Sample and Proposed Well/Boring Locations

Mr. Paresh Khatri, Alameda County Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502 (Submitted via ACEH ftp Site) GeoTracker

