Atlantic Richfield Company
(a BP affiliated company)

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Alameda County
Environmental Health

28 May 2009

Re: Addendum Work Plan for Soil & Ground-Water Investigation
Former Richfield Oil Company Station No.472
6415 International Boulevard, Oakland, California
ACEH Case #RO0002982

"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:

Paul Supple
Environmental Business Manager

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

28 May 2009

Project No. 09-88-601

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

Attn.: Mr. Paul Supple

Re: Addendum Work Plan for Soil & Ground-Water Investigation, Former Richfield Oil Company Station No. 472, 6415 International Boulevard, Oakland, California; ACEH Case No. RO0002982

Dear Mr. Supple:

Provided herein is an Addendum to the *Work Plan for Soil & Ground-Water Investigation, Former Richfield Oil Company Service Station No. 472* (herein referred to as the *Work Plan*) originally submitted on 30 March 2009 by Broadbent & Associates, Inc. (BAI), on behalf of Atlantic Richfield Company. The *Work Plan* recommended installation of three monitoring wells in order to initially characterize the extent of contamination at the property, presumed to be from the former gasoline underground storage tank (UST) complex, historic dispenser island, and/or associated piping. In response to the *Work Plan*, the Alameda County Environmental Health (ACEH) issued the 16 April 2009 letter expressing concern regarding the proposed screened intervals in the monitoring well construction, the location of the proposed monitoring wells and the lack of a detailed site map.

In the ACEH letter dated 16 April 2009, Mr. Paresh Khatri interpreted the boring logs to portray first encountered ground water at 21 feet below ground surface (ft bgs). BAI interprets the boring logs differently to indicate that first groundwater was initially encountered at approximately nine ft bgs, and later stabilized at approximately two to three feet above the total depth explored in the borings that encountered ground water. However, BAI does recognize that in general, a gravelly clay unit extends from approximately seven to 12 ft bgs, underlain by a less permeable clay unit to approximately 21 ft bgs, underlain by silty clay with interbedded clayey fine sand. Therefore, BAI proposes to amend the *Work Plan* by targeting the screened intervals from seven to 17 ft bgs in each monitoring well. However, conditions encountered in the field will influence the final well construction details including the total depth and screen interval, with the primary objective of securing an adequate water column for monitoring/sampling throughout the year and the secondary objective of minimizing the screen length.

In the ACEH letter dated 16 April 2009, Mr. Khatri expressed concern about the monitoring well locations, specifically that a "source area well(s) may be necessary." BAI

generally concurs with this statement. However, at this time the source area is not defined due to the lack of records concerning the removal of the former USTs. However, historical aerial photos clearly show a light-colored area to the northwest of the Station building that resembled a concrete hold-down slab for USTs. Furthermore, as previous soil boring SB-5 indicated approximately ten feet of fill, it can be reasonably inferred that the former UST pit was at this location. As can be seen in the Amended Site Map with Proposed Monitoring Well Locations, proposed well MW-2 is located just a short distance from the edge of the suspected former UST pit in the presumed downgradient direction. Therefore, BAI believes that this well location is adequate for the purpose.

Finally, in the ACEH letter dated 16 April 2009, Mr. Khatri noted that the site figure in the *Work Plan* did not illustrate the location of the former USTs. To the extent that is known, the Amended Site Map with Proposed Monitoring Well Locations indicates the suspected location of the former UST pit. BAI also generally concurs that the figure does not completely depict site features in relation to adjacent and neighboring properties. In the *Work Plan*, BAI declares that the site map was adapted from figures prepared by Geocon, the consultant who performed the Phase II investigation, and that site dimensions and facility locations are not verified. However, in the *Work Plan*, BAI states that the Site will be mapped after the proposed monitoring wells are constructed by a California-licensed Professional Land Surveyor to create a detailed base map. The site survey will map features on the site and adjacent properties, monitoring well top of casing elevations with respect to mean sea level and lateral positions using Northings and Eastings per NAD'88, consistent for use with GeoTracker. BAI believes that it would not be cost-effective to survey the Site before and after well construction. BAI does not propose conducting an aerial survey with engineered horizontal ground control.

We trust that the above modifications/explanations to the *Work Plan* will satisfy the concerns expressed by ACEH in their letter dated 16 April 2009. Once ACEH has approved this *Addendum Work Plan for Soil & Ground-Water Investigation*, Stratus Environmental Inc. (Stratus) will be directed to execute the proposed scope of work. Upon completion of field work, Stratus will prepare a certified data packet summarizing field activities and including copies of the necessary permits, boring logs/well construction records, and laboratory analytical reports. BAI will complete a soil and ground-water investigation report for submittal to ACEH within 60 days after completion of field work.

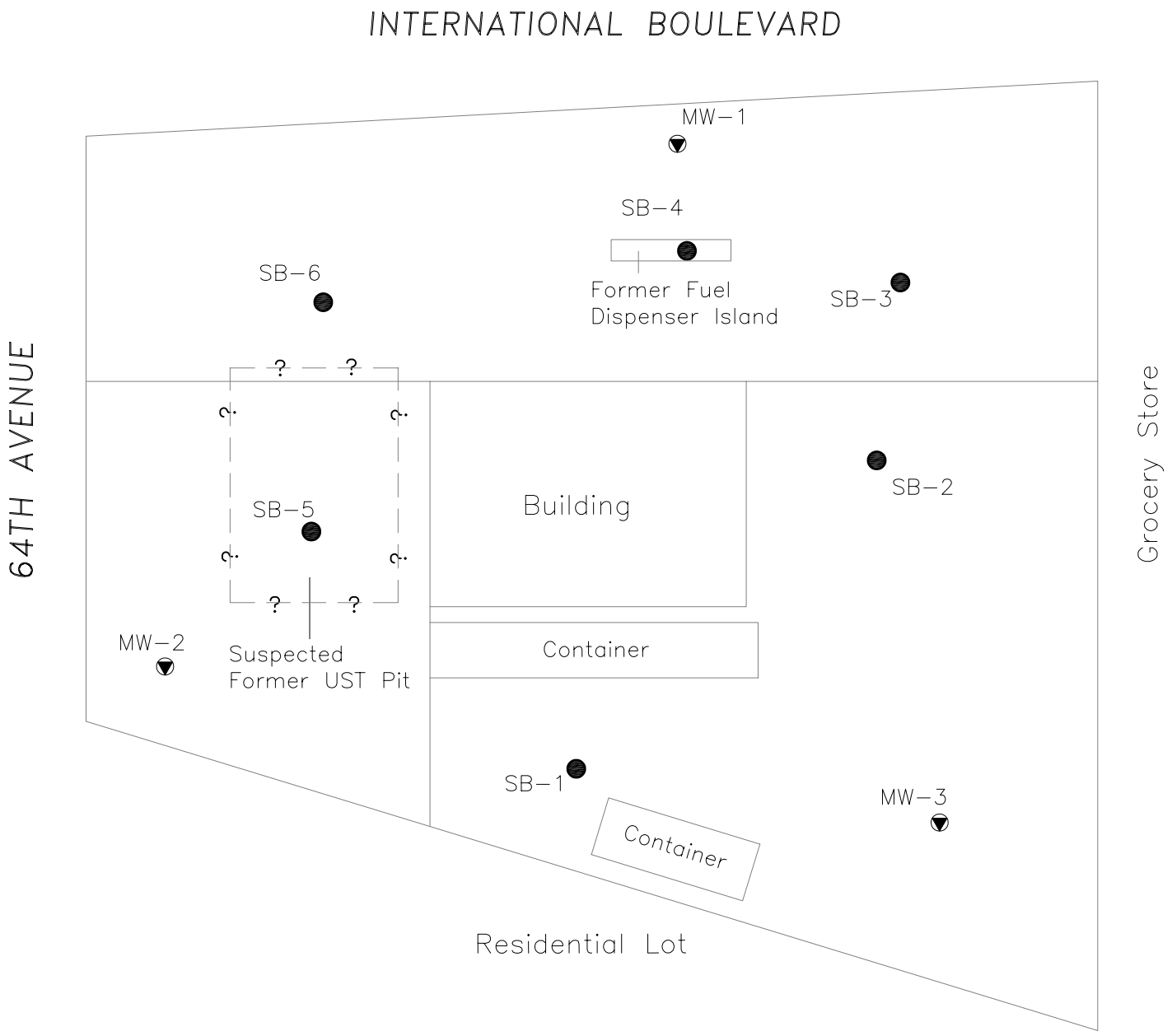
Should you have any questions or concerns, please do not hesitate to contact me at (530) 566-1400.

Sincerely,
BROADBENT & ASSOCIATES, INC.

Thomas A. Venus, P.E.
Senior Engineer

Attachment

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp Site)
Electronic copy uploaded to GeoTracker



LEGEND

- Proposed Monitoring Well
- Phase II Soil Boring

NOTES: SITE MAP ADAPTED FROM GEOCON FIGURES.
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California Project No.: 09-88-601 Date: 5/26/09	Former Service Station #472 6415 International Boulevard Oakland, California	Amended Site Map with Proposed Monitoring Well Locations Drawing 2