

ROZSF

Alameda County

JUN 9 2005

Environmental Health



Shaw Shaw Environmental, Inc.

4005 Port Chicago Hwy
Concord, California 94520

June 7, 2005

Mr. Robert Schultz
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Work Plan – Sensitive Receptor Survey**
76 Service Station #6034
4700 First Street
Livermore, CA

Dear Mr. Schultz:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please call me at (916) 558-7609.

Sincerely,

Shelby Suzanne Lathrop
Project Manager
Shaw Environmental, Inc.
Approved service provider of ConocoPhillips -Risk Management & Remediation
Cell: 707-592-1146

Client Contact Information:
ConocoPhillips
76 Broadway
Sacramento, California 95818
Client office: 916-558-7609
Client fax: 916-558-7639

Attachment
cc: Liz Sewell, ConocoPhillips



6602 Owens Dr. Suite 100
Pleasanton, California 94588
www.atc-enviro.com
925.460.5300
Fax 925.463.2559

June 6, 2005

Robert Schultz
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

*Alameda County
June 8, 2005
to Robert Schultz*

Re: Work Plan – Sensitive Receptor Survey
ATC Job Number 75.75118.1525 / 75W02
76 Service Station No. 6034 / WNO 1525
4700 First Street
Livermore, California

Dear Mr. Schultz:

ATC Associates Inc. (ATC) has prepared this Work Plan on behalf of ConocoPhillips Company for the above referenced property, (Figure 1). The proposed scope of services presented herein includes the completion of a sensitive receptor survey within a ½-mile radius of the site. This information will be used to prepare a comprehensive site closure request document.

SITE DESCRIPTION

The subject site is an active gasoline station. The site is located adjacent to and northwest of the Arroyo Seco (an intermittent drainage stream). Additionally, the site is located approximately 9,000 feet northwest of the Lawrence Livermore National Laboratory and the University of California. Two other gasoline stations are located adjacent to the site.

SITE BACKGROUND AND ACTIVITY

August 1989: Two underground storage tanks (USTs), one waste oil UST, and the product piping were removed. Petroleum hydrocarbon levels in soil samples collected beneath the fuel USTs were non-detect to moderate. The fuel UST pit was subsequently over excavated to a depth of 17.5 feet below ground surface (bgs), where groundwater was encountered, in order to remove hydrocarbon impacted soil. Petroleum hydrocarbon levels in soil samples collected beneath the waste oil UST were non-detect.

In October 1989, four monitoring wells (MW-1 through MW-4) were installed to depths ranging from 26 to 29 feet bgs. Groundwater was encountered at depths ranging from 14.5 to 17.5 feet bgs.

In April 1991, three additional monitor wells (MW-5 through MW-7) were installed to an average depth of 25 feet bgs. Groundwater was initially encountered at depth of approximately 16 feet bgs.

In August 1995, an oxygen-releasing compound (magnesium peroxide) was placed in well MW-2 to enhance biodegradation of petroleum hydrocarbons. Also, a non-attainment zone status was sought from the regulatory agencies.

On October 30, 2003, five soil borings (SB-1 through SB-5) were completed to a depth of 20 feet bgs. Adsorbed-phase MtBE was detected in two of the four samples analyzed in concentrations ranging from 0.042 to 0.064 mg/kg, which exceed the applicable Tier 1 Environmental Screening Level (ESL) of the San Francisco Bay Regional Water Quality Control Board of 0.023 mg/kg. MtBE in groundwater collected from SB-3 was detected at 13 µg/l which exceeded the applicable ESL of 5 µg/l.

Groundwater samples collected from MW-2 over the past several quarters have dissolved MtBE concentrations ranging from 5.9 – 6.6 µg/l.

SITE GEOLOGY AND HYDROGEOLOGY

Review of the Groundwater Level Report produced by the Alameda County Flood Control and Water Conservation District indicates that the subject site is located near the northeastern corner of the Mocho Subbasin, and near the boundary with Spring Subbasin, where the regional groundwater flow direction is toward the northwest.

Based on review of the regional geologic maps (“Preliminary Geologic Map of the Livermore Quadrangle, Alameda and Contra Counties”, 1980), and on the results of previous subsurface investigations, the subject site is underlain by Quaternary-age alluvium to at least 28.5 feet bgs. The alluvium generally consists of a gravelly unit at the surface varying from about 5 to 7 feet thick that is underlain by a clay unit to depths below grade of 11 to 13 feet. A second gravelly unit is recognized beneath the clay unit but varies significantly in thickness from about 6.5 to 8 feet thick near MW-1 and MW-2 to about 12.5 feet thick in the vicinity of MW-3. The second gravelly unit is underlain by a second clay unit which locally contains sandy and gravelly lenses and extends from depths below grade of about 23.5 to 25 feet to the maximum depth explored (26 to 28.5 feet bgs). Adjacent hillside areas northwest and southwest of the site are mapped as being underlain by the Pleistocene-age Livermore Gravel formation. The Livermore Gravel is typically composed of light red-gray cobble-pebble gravel, pebbly sand, silt and clay. Uplifted Livermore Gravels may locally be the source of the coarser-grained lenses in the alluvium.

PROPOSED SCOPE OF WORK

- Agency water well search within a ½-mile radius of the site;
- Sensitive receptor survey of water bodies (including streams, rivers, etc.) and facilities such as buildings with basements, hospitals, day care facilities, schools, etc.; and
- The Arroyo Seco (intermittent drainage stream) located in the vicinity of the site will also be investigated as a possible receptor source of the hydrocarbon plume.

SENSITIVE RECEPTOR SURVEY

A sensitive receptor survey will be conducted and will include a search for known domestic or municipal wells within a 2,000-foot radius of the site and identification of the nearest surface water bodies, land

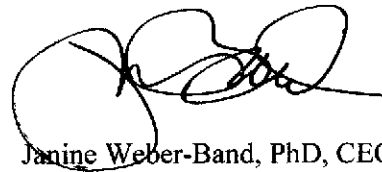
usage, basements, hospitals, schools, and day care facilities within the survey radius. A Water Well Driller's report will be obtained from the Water Resources Board, and an attempt will be made to visually verify the identified wells, where applicable. The Water Well Driller's report should document all registered irrigation, industrial, municipal and domestic wells in the City of Alameda. A door to door field survey will be conducted of properties within the survey radius. An attempt will be made to contact the resident or employee of the properties which were identified in the agency database search as having a well. This process will be completed through the use of a standardized survey questionnaire. Additionally, a visual search will be conducted of all municipal wells, surface water bodies or any potential receptor to groundwater within the survey area. This information will be compiled in a report with the associated backup material. The report will summarize the potential sensitive receptors (if any) and provide recommendations for the next phase of investigation.

If you have any questions regarding the contents of this work plan, please give me a call at (925) 225-7817. Ms. Shelby Lathrop, the ConocoPhillips Site Manager, may also be contacted at (916) 558-7609 for additional questions.

Sincerely,
ATC ASSOCIATES INC.



David A. Evans
Senior Project Manager

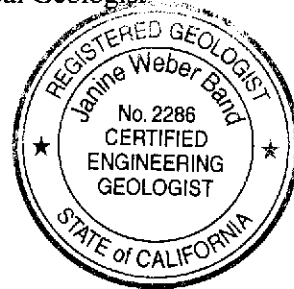


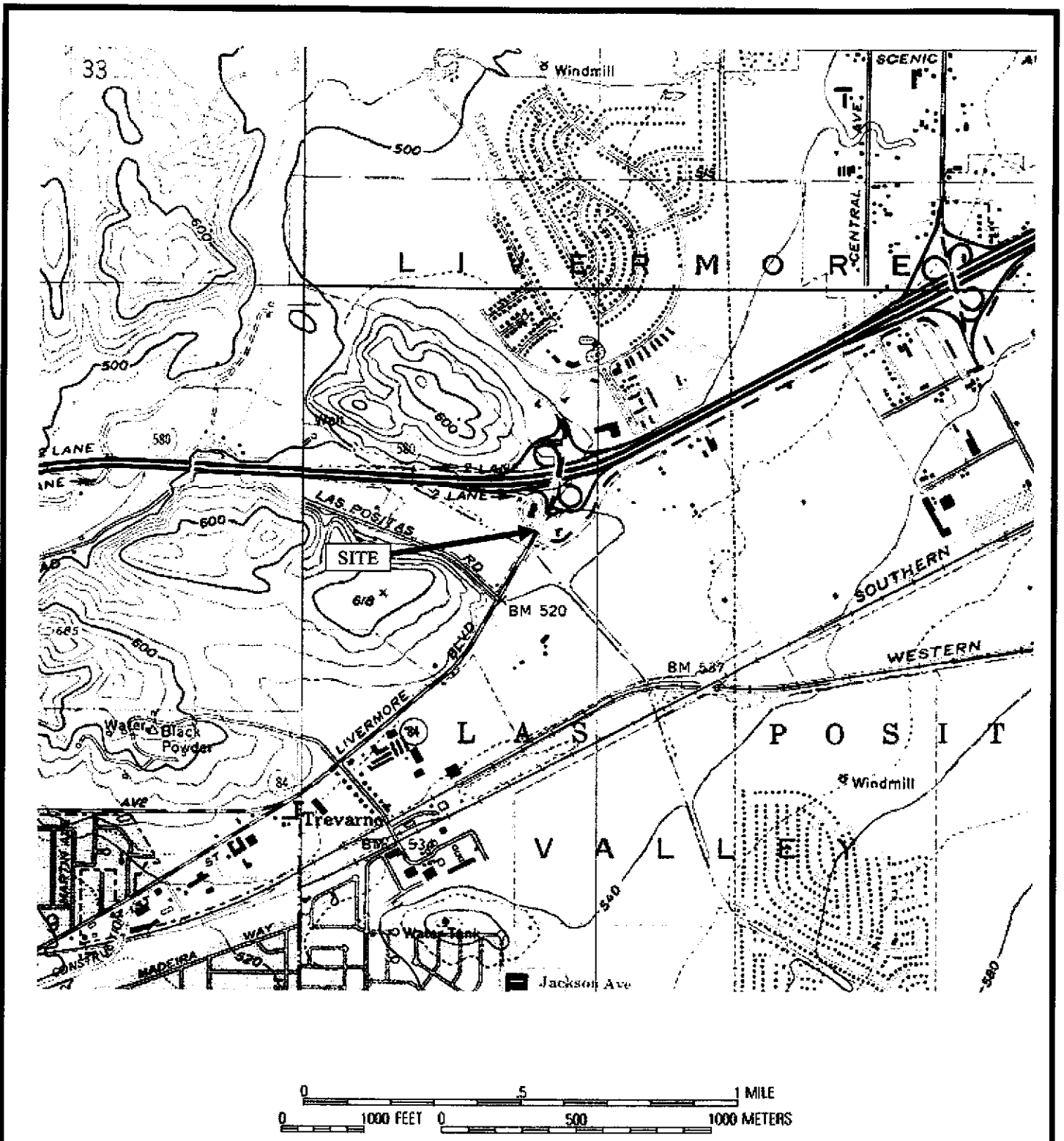
Janine Weber-Band, PhD, CEG #2286
Principal Geologist

Cc: Shelby Lathrop – ConocoPhillips (electronic copy)

Attachments:

Figure 1 – Site Vicinity Map
Figure 2 – Site Map





SOURCE: USGS ALTAMONT QUADRANGLE, CALIFORNIA (7.5 MINUTE SERIES) TOPOGRAPHIC MAP. OBTAINED FROM THE 2000 NATIONAL GEOGRAPHIC TOPO! SOFTWARE.

FIGURE 1
SITE VICINITY MAP


76 STATION 6034
 4700 FIRST STREET
 LIVERMORE, CALIFORNIA

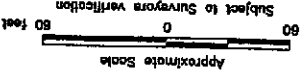


6602 Owens Drive, Suite 100
 Pleasanton, CA 94588
 (925) 460-5300

PROJECT NO: 75.75118.1525

DESIGNED BY: DE	SCALE: N/A	REVIEWED BY: DE
DRAWN BY: EC	DATE: 04/05	FILE: 6034 SITE VIC

DESIGNED	DRAWN BY:	PROJECT NO.	FIGURE
DA	EC	75.75118.1525	2
LOCATION	76 STATION 6034 4700 FIRST STREET LIVERMORE, CALIFORNIA		
CLIENT	CONOCOPHILLIPS		
SITE MAP			
SCALE	AS SHOWN	DRAWING DATE	ACAD FILE
		04/19/05	6034-site plan
 DATC ASSOCIATES INC. 6502 Owens Drive, Suite 100 Livermore, CA 94550 (925) 480-5300			
BASE MAP REFERENCE: MODIFIED FROM SITE PLAN SUPPLIED BY GETTLER-TYAK, NOVEMBER 2000.			



- LEGEND**
- PROPERTY BOUNDARY
 - ⊕ MW-7 GROUNDWATER MONITORING WELL (TOSCO)
 - ⊕ C-21 GROUNDWATER MONITORING WELL (CHEVRON)
 - ⊕ C-18 ABANDONED WELL

