Ian Robb
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6111 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 543-2375
Fax (925) 543-2324
irobb@chevron.com

Mr. Jerry Wickham
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Texaco Service Station No. 21-1253
5280 Hopyard Road
Pleasanton, CA

I have reviewed the attached report dated June 19, 2009.

I agree with the conclusions and recommendations presented in the referenced report. This information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga Rovers Associates, upon who assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Ian Robb
Project Manager

Attachment: Report

CONESTOGA-ROVERS
& ASSOCIATES

5900 Hollis Street, Suite A
Emeryville, California 94608
Telephone: (510) 420-0700 Fax: (510) 420-9170
http://www.craworld.com

June 19, 2009 Reference No. 060058

Mr. Jerry Wickham
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Response to Request for Pilot Test Work Plan or Draft Corrective Action Plan
Former Texaco Service Station 21-1253
930 Springtown Boulevard
Livermore, California
Fuel Leak Case RO0000189

Dear Mr. Wickham:

Conestoga-Rovers & Associates (CRA) is submitting this response to the request for a Pilot Test Work Plan or Draft Corrective Action Plan (CAP) on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. Alameda County Environmental Health Services (ACEH) has requested a pilot test work plan or draft CAP that addresses remediation of remaining residual petroleum hydrocarbon impact in soil and groundwater as outlined in the ACEH letters dated December 4, 2008 and April 10, 2009 (Attachment A). CRA understands ACEH's request, however we believe it necessary to determine current groundwater conditions beneath the site prior to performing remedial pilot testing or evaluating potential remedial alternatives. In June 2009, CRA is scheduled to install the eight groundwater monitoring wells proposed in the February 26, 2009 *Work Plan for Monitoring Well Installation*. Presented below are the site background and our technical comments to your request for a pilot test work plan.

SITE BACKGROUND

The site is a former Texaco service station located on the corner of Springtown Boulevard and Lassen Road in Livermore, California (Figure 1). In the summer of 1985, Texaco sold the site. The underground storage tanks (USTs) and product lines were removed concurrent with the construction of a 7-Eleven convenience store at the site. The site is still occupied by a 7-Eleven convenience store, which is surrounded by a paved parking area (Figure 2).

A total of 13 soil borings have been advanced, and 10 groundwater monitoring wells, 1 soil vapor extraction well, 1 air sparge well, and 1 groundwater extraction well have been installed at the site. In

2002, all previous site wells were subsequently destroyed based on ACEH and the San Francisco Regional Water Quality Board (RWQCB) concurrence that no further action was required. No remedial action completion certificate was ever issued by the RWQCB. In 2007, ACEH requested investigative work to fill data gaps prior to issuing case closure. A summary of environmental investigations conducted at the site is included as Attachment B.

SITE GEOLOGY AND HYDROGEOLOGY

The site geology consists of a heterogeneous mixture of alluvial and colluvial silty clays, clayey silts, sandy silts, silty sands, and gravelly sands of Holocene age. These sediments have a maximum thickness in the region of approximately 150 feet. The Pliocene-aged Tassajara Formation, described by California Department of Water Resources (DWR), consists of sandstone, shale and limestone, and forms the bedrock beneath the site.

The site is located in the Mocho II sub-basin of the Main Basin in the Livermore Valley, as defined by the DWR and the Zone 7 Water Agency. The Mocho II sub-basin is defined by the Livermore Fault on the west, thinning Quaternary alluvium on the east, the Livermore Uplands to the south and the Tassajara Formation to the north. General groundwater gradient in the basin is to the west; however, hills near the site appear to affect the groundwater flow direction. Groundwater from the Main Basin is currently used as a drinking water resource. The nearest surface water bodies to the site are Arroyo Seco and Arroyo Las Positas, which converge approximately one mile west of the site. Historically, the depth to the first encountered shallow water-bearing zone has ranged from approximately 6.5 feet below grade (fbg) to 19.5 fbg at the site. Historical groundwater flow has varied from west to north, with flow predominantly to the northwest, parallel to Springtown Boulevard.

TECHNICAL COMMENTS

In letters dated December 4, 2008 and April 10, 2009, ACEH requested that a Pilot Test Work Plan or Draft CAP be submitted to address residual hydrocarbon impact in soil and groundwater beneath the site. As stated in the April 10, 2009 letter, ACEH believes the hydraulic gradient and range of seasonal water level fluctuations are known from previous monitoring wells at the site and data from nearby sites,; therefore, it is not necessary to monitor the proposed wells for four quarters prior to submitting pilot test work plan or draft CAP. In addition, this letter states that the monitoring wells that will be installed at the end of June 2009 are generally proposed at locations where previous borings have been advanced to characterize the site stratigraphy and define the extent of soil and groundwater contamination (Figure 3). Any new monitoring wells will provide limited new information. CRA respectfully disagrees with this view and believes that current hydrologic data is necessary to thoroughly evaluate all remedial options.

ACEH has requested monitoring wells to be screened in multiple zones: 5-15 fbg, 22-27 and 25-30 fbg, 32-37 fbg and 42-47 fbg. All previous well data was based on groundwater monitoring wells screened in the same interval of approximately 5-25 fbg. It is necessary to assess groundwater conditions in these deeper zones that have not been previously monitored. In addition, no monitoring well data has been collected in over seven years. To select an appropriate remedial option that may need to address hydrocarbon concentrations at varying depths it is critical that we collect the following data:

- Groundwater flow direction at varying depths;
- Horizontal and vertical groundwater gradients;
- Hydrocarbon concentration data from properly developed monitoring wells from each zone;
- Distribution of dissolved-phase petroleum hydrocarbons in each zone;
- Determine if light non-aqueous phase liquid is present near borings CPT-1 and CPT-7;
- Bioparameter data and hydrocarbon degradation rates in each zone; and
- Current seasonal groundwater depth fluctuations.

This new data may rule out some remedial options that do not merit feasibility testing or determine that each zone requires a different remedial option. In addition, without this data we will be unsure how to scale the appropriate equipment or inject the correct chemical or quantities of chemical to successfully complete a feasibility test. Therefore, it is still necessary to monitor and sample the new monitoring wells for at least four quarters. After four quarters of groundwater data is collected, CRA will further evaluate the appropriate remedial options and recommend an appropriate feasibility test. The Monitoring Well Installation Report will be submitted to ACEH by August 19, 2009.

CONESTOGA-ROVERS & ASSOCIATES

June 19, 2009 Reference No. 060058

CLOSING

We appreciate the opportunity to work with you on this project. If you determine that the proposed scope of work is not appropriate based on your request, please contact Ms. Charlotte Evans at (510) 420-3351 or Mr. Ian Robb at (925) 543-2375 so that we may discuss the proposed work.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Charlotte Evans Brandon S. Wilken, P.G. # 7564

CE/doh/3

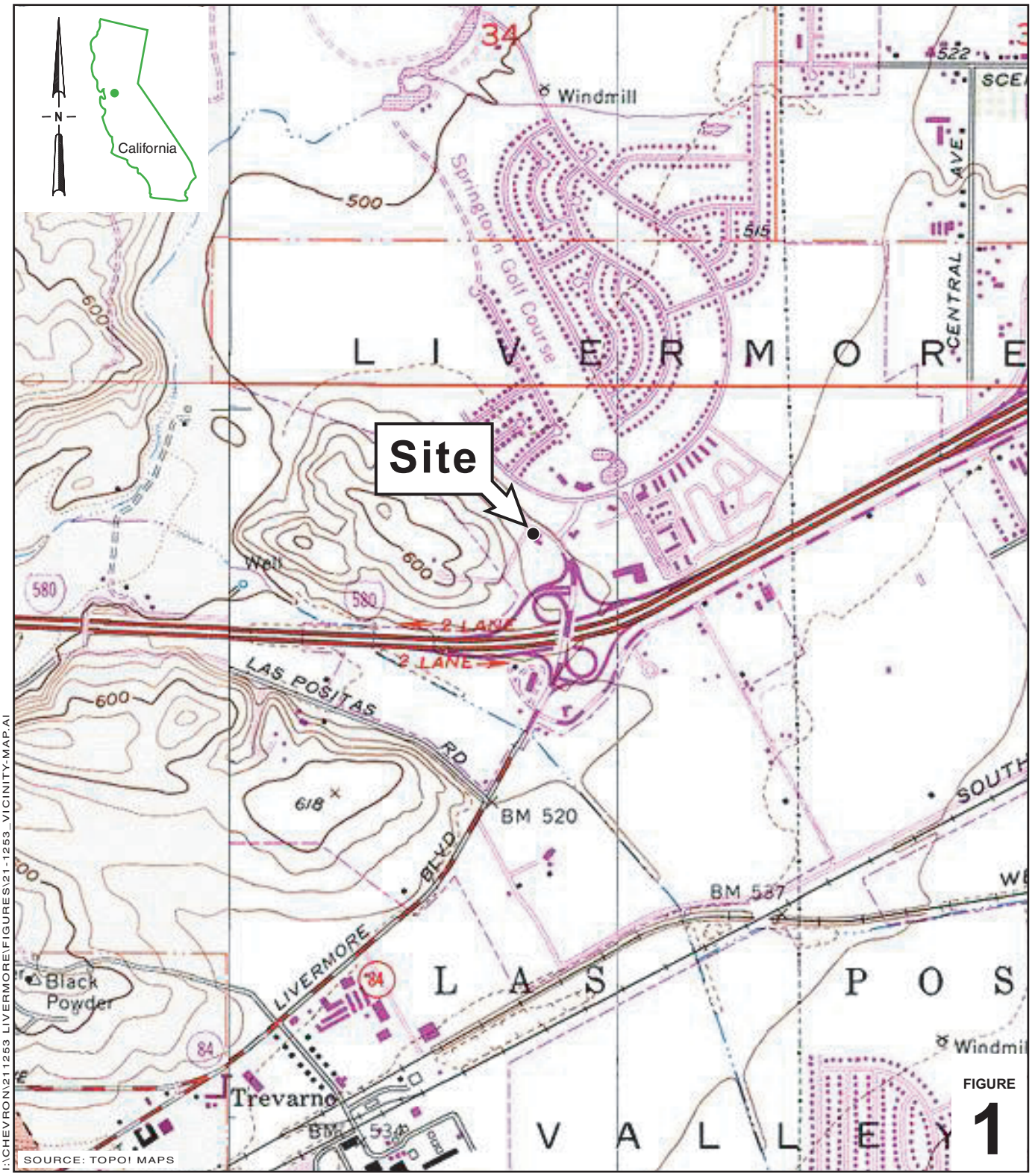
Enc.

Figure 1	Site Vicinity Map
Figure 2	Site Plan
Figure 3	Site Plan with Proposed Wells
Attachment A	ACEH December 4, 2008 and April 10, 2009 Letters
Attachment B	Summary of Previous Environmental Work

cc: Mr. Ian Robb, Chevron Environmental Management Company
Mr. Ken Hilliard, Environmental Services, 7-Eleven, Inc.
Mr. Kirk Sniff, Strasburger & Price, LLP

FIGURES

04/06/07



I:\CHEVRON\211253 LIVERMORE\FIGURES\21-1253_VICINITY-MAP.AI

FIGURE 1

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Former Texaco Service Station

930 Springtown Boulevard

Livermore, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

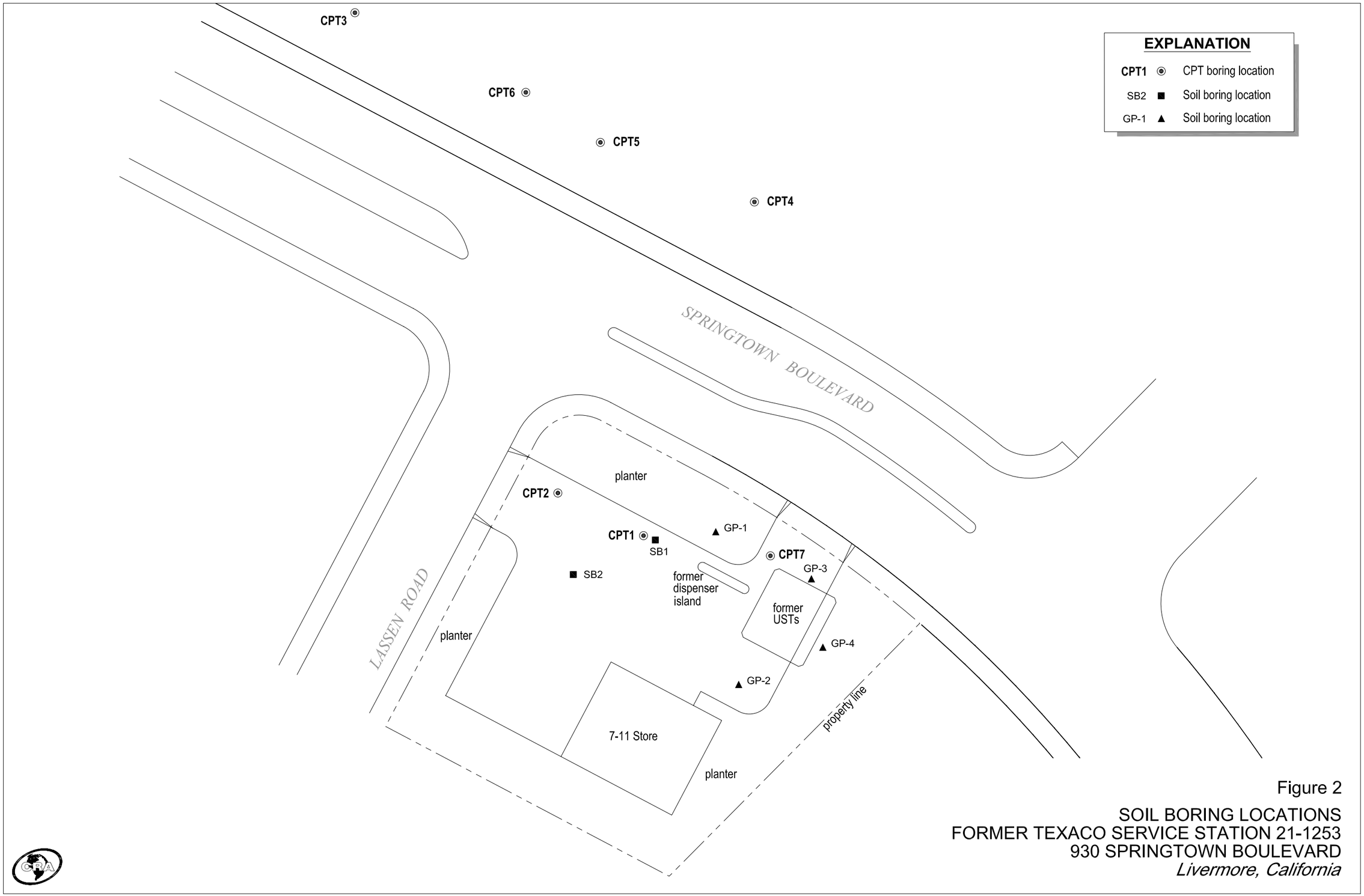


Figure 2

SOIL BORING LOCATIONS
FORMER TEXACO SERVICE STATION 21-1253
930 SPRINGTOWN BOULEVARD
Livermore, California

I:\Chevron\0600--\060058 21-1253 Livermore\060058-FIGURES\060058-SITEPLAN.DWG

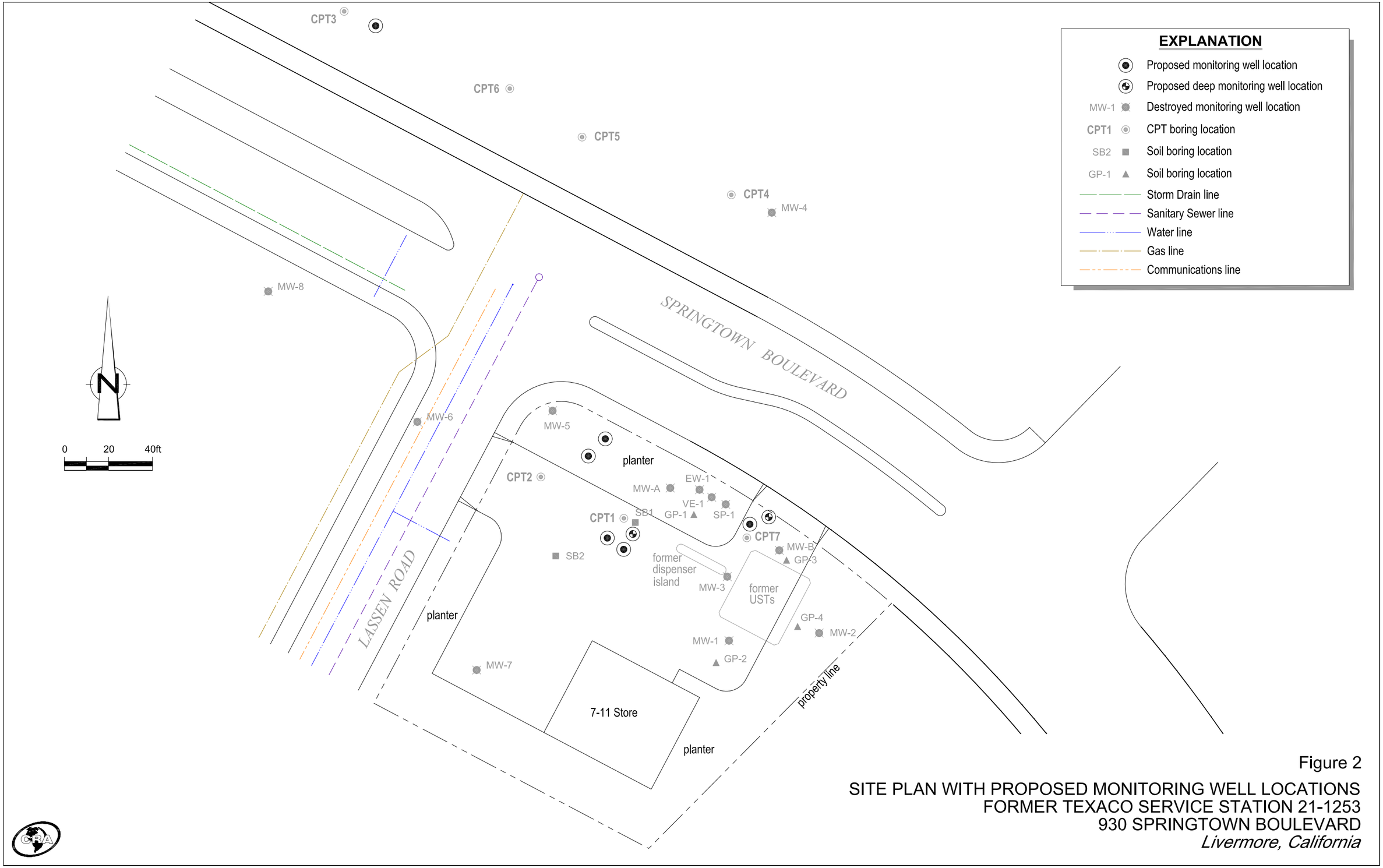


Figure 2

SITE PLAN WITH PROPOSED MONITORING WELL LOCATIONS
FORMER TEXACO SERVICE STATION 21-1253
930 SPRINGTOWN BOULEVARD
Livermore, California

I:\Chevron\0600--\060058 21-1253 Livermore\060058-FIGURES\060058-SITEPLAN_PROP-WELLS.DWG

APPENDIX A

ACEH DECEMBER 4, 2008 AND APRIL 10, 2009 LETTERS

Recd Dec. 8 2008

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-93

December 4, 2008

Mr. Ian Robb
Chevron Environmental Management Company
6001 Bollinger Canyon Rd., K2256
San Ramon, CA 94583-2324

Mr. Ken Hilliard
Environmental Services
7-Eleven, Inc.
One Arts Plaza, 1722 Routh St., Suite 1000
Dallas, TX 75201

Subject: Fuel Leak Case No. RO0000189 and Geotracker Global ID T0600101353, Chevron #21-1253/Texaco, 930 Springtown Boulevard, Livermore, CA 94550

Dear Mr. Robb and Mr. Hilliard:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the document entitled, "*Subsurface Investigation Report*," dated August 13, 2008. The "*Subsurface Investigation Report*," presents the results from several phases of cone penetration test (CPT) soil borings in 2007 and 2008. Soil and grab groundwater samples were collected from each of seven CPT borings. Total petroleum hydrocarbons as gasoline (TPHg) and benzene were detected in groundwater at maximum concentrations of 160,000 and 4,200 micrograms per liter (µg/L), respectively.

In correspondence dated March 8, 2002, Alameda County Environmental Health (ACEH) staff indicated that ACEH and the San Francisco Regional Water Quality Board had reviewed the case closure summary and concurred that no further action related to the underground storage tank release is required at this time. The March 8, 2002 correspondence went on to request that the nine monitoring wells at the site be decommissioned, if they will no longer be monitored. Subsequent review of the case file by ACEH staff in 2007, which is documented in correspondence dated January 31, 2007, identified data gaps that need to be addressed prior to considering the case for closure. The seven CPT borings advanced in 2007 and 2008 were implemented to address these data gaps.

The August 13, 2008 "*Subsurface Investigation Report,*" concludes that all data gaps identified in the ACEH letter dated January 31, 2007 have been addressed. The Report goes on to conclude that current site conditions are similar to conditions upon which ACEH and the Water Board concurred that no further action was necessary. No rationale for case closure is presented other than current conditions are believed to be similar to previously referenced conditions. A document entitled, "*Request for Closure,*" dated December 10, 2001 is referenced and included as Attachment G to the "*Subsurface Investigation Report.*" Based upon our review of the case file including the August 13, 2008 "*Subsurface Investigation Report,*" December 10, 2001 "*Request*

for Closure," and the August 13, 2001, "*Vadose Zone Investigation and Risk-Based Corrective Action (RBCA) Analysis*," we do not concur that current site conditions are similar to previously referenced conditions. Please see technical comments 1 through 4 for descriptions of specific differences.

Based upon our review of the case file, site conditions are significantly different than cited and represented in documents previously used to evaluate the site for case closure. The volume and concentration of residual soil and groundwater contamination at the site requires that the site be remediated. Therefore, we request that you submit a Work Plan for pilot testing or a Draft Corrective Action Plan **by February 26, 2009**.

TECHNICAL COMMENTS

1. **Plume Extent.** Our January 31, 2007 directive letter requested that you investigate the potential for the plume to have migrated off-site to the northwest, possibly along a preferential pathway. The four CPT borings were advanced off-site to the north and northwest to address this data gap. TPHg was detected at a concentration of 1,700 micrograms per liter (µg/L) in a grab groundwater sample collected from a sand layer at a depth of approximately 24 feet bags in boring CPT3. Boring CPT-3 is more than 300 feet from the former USTs and approximately 190 feet from the northern corner of the property. Therefore, we do not understand the conclusion in the August 13, 2008, "*Subsurface Investigation Report*," that the plume is limited to the northern property boundary. It appears that the plume extends off-site and is significantly larger than previously considered.

2. **Vertical Delineation.** In our January 31, 2007 directive letter, the vertical extent of contamination was identified as a data gap for the site based on the potential for downward migration of contamination at the site due to long-term water level fluctuations and the observation of fuel hydrocarbons at the lowest depths investigated. The CPT borings included depth-discrete soil and grab groundwater sampling that provided data on the vertical distribution of contamination to address this data gap. In the three CPT borings where the highest concentrations of petroleum hydrocarbons were detected, the grab groundwater samples collected below a depth of 20 feet bags contained the highest concentration of TPHg. In boring CPT-1, the concentration of TPHg in the grab groundwater sample collected at a depth of 24 feet bags (160,000 µg/L) was nearly two orders of magnitude higher than the concentration of TPHg in the shallower grab groundwater sample collected at 16 feet bags (1,700 µg/L). In the five (of total seven) CPT borings where petroleum hydrocarbons were detected in groundwater, the highest concentrations of TPHg were generally detected in grab groundwater samples collected between 24 and 43 feet bags. Groundwater monitoring wells MW-A and MW-B, which were directly downgradient from the former USTs, only extended to a depth of 16 feet bags. Wells MW-A and MW-B were the primary wells used to delineate the extent of contamination and trends in concentration over time. The 2007 and 2008 CPT investigation shows that the vertical extent and concentrations of petroleum hydrocarbons are significantly greater than previously assumed in 2002.

3. **Grab Groundwater Results.** The August 13, 2008, "*Subsurface Investigation Report*," appears to discount the grab groundwater sampling results by stating that, "grab groundwater

samples are often one to two orders of magnitude higher than stabilized groundwater monitoring well samples." The basis for this statement is not provided. However, data from both types of sampling are available for this site and can be readily compared. Boring CPT-7 is adjacent to former well MW-B and boring CPT-1 is adjacent to former well MW-A. During the last monitoring well sampling event on January 4, 2002, the groundwater sample from well MW-B contained 10,000 µg/L of TPHg and 11 µg/L of benzene. Former well MW-B was screened from approximately 4 to 16 feet bgs; therefore, the results can be compared to the grab groundwater sample collected at a depth of 13 feet bgs from adjacent boring CPT-7. The grab groundwater sample collected at a depth of 13 feet bgs from boring CPT-7 contained 3,600 µg/L of TPHg and 21 µg/L of benzene. The TPHg concentration in the sample from the monitoring well is higher than the grab groundwater sampling result. At the second location, the results from monitoring well MW-A can be compared to the grab groundwater sample collected at a depth of 16 feet bgs from boring CPT-1 (monitoring well was screened from approximately 4 to 16 feet bgs). During the last monitoring well sampling event on January 4, 2002, the groundwater sample from well MW-A contained 9,100 µg/L of TPHg and 4.1 µg/L of benzene. In comparison, the grab groundwater sample collected at a depth of 16 feet bgs from boring CPT-1 contained 1,700 µg/L of TPHg and 7 µg/L of benzene. Again, the concentration of TPHg was higher in the groundwater sample from the monitoring well than in the comparable grab groundwater sample. These results do not fit with the stated conclusion that grab groundwater sampling results are one to two orders of magnitude higher than results from monitoring wells. As discussed in technical comment 2, the depth at which the grab groundwater samples were collected is a much more significant factor for this site than the sampling method.

4. **Comparison of Current Conditions to Conditions Cited in Request for Closure.** The August 13, 2008, "*Subsurface Investigation Report*," concludes that, "current site conditions are similar to conditions upon which ACEHS and RWQCB-SFB originally based their no further action determination" and requests that a remedial action completion certificate be issued. In order to evaluate this conclusion, we have compared the current site conditions to those described in the December 10, 2001 "*Request for Closure*," and in the August 13, 2001 "*Vadose Zone Investigation and Risk-Based Corrective Action (RBCA) Analysis*." Case closure was requested in the December 10, 2001 "*Request for Closure*," based on the following facts:

Basis for Case Closure Request in December 10, 2001 "*Request for Closure*"	**Current Conditions**
The USTs were removed in June 1985 and the site is currently a 7-Eleven convenience store	No changes.
Graphs show the effectiveness of SVE system in removing petroleum hydrocarbons from vadose zone soil	The graphs show that the SVE system performance declined over time but does not provide an indication of the mass removed or the effectiveness of the SVE system to remediate the vadose zone. Moreover, much of the contamination at this site is below the water table and not affected by SVE. Therefore, even if it

	could be assumed that SVE was effective in removing petroleum hydrocarbons from the vadose zone, site cleanup is necessary to address deeper contamination.
The effectiveness of the SVE system was confirmed by analysis of soil samples in June 2001. TPHg was detected in two samples at concentrations of 11 and 14 milligrams per kilogram (mg/kg), respectively.	TPHg and benzene were detected in vadose zone soil samples collected in 2008 at concentrations up to 1,700 and 2.5 mg/kg, respectively. This is a significant difference from the 2001 assumed conditions.
The dissolved petroleum plume is small (0.1 acres) and was assumed to be largely on site.	TPHg was detected in a grab groundwater sample from CPT-3 at a concentration of 1,500 micrograms per liter (µg/L). CPT3 is off-site more than 300 feet from the former USTs. This is a significant difference from the 2001 assumed conditions.
MTBE was not detected in groundwater samples during recent sampling events.	No changes
No registered water supply wells were identified within 1/2.-mile of the site.	No changes
Current conditions do not pose a threat to human health based on a 2001 RBCA analysis	The RBCA analysis was based on data that has been superseded by data from the 2007 and 2008 CPT investigation. Maximum concentrations from the 2007 and 2008 CPT investigation exceed the site-specific target levels in the 2001 RBCA. This is a significant difference from the 2001 assumed conditions.

Based upon the differences noted in the table above and the greater horizontal and vertical extent of contamination discussed in technical comments 1 and 2 above, there are significant differences between the conditions encountered during the 2007 and 2008 CPT investigation and the conditions described in the December 10, 2001 "*Request for Closure.*"

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **February 26, 2009** – Pilot Test Work Plan or Draft Corrective Action Plan

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Cheryl Dizon, QIC 80201, Zone 7 Water Agency, 100 North Canyons Parkway
Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street
Pleasanton, CA 94566

Charlotte Evans, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A,
Emeryville, CA 94608

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-93

April 10, 2009

Mr. Ian Robb
Chevron Environmental Management Company
6001 Bollinger Canyon Rd., K2256
San Ramon, CA 94583-2324

Mr. Ken Hilliard
Environmental Services
7-Eleven, Inc.
One Arts Plaza, 1722 Routh St., Suite 1000
Dallas, TX 75201

Subject: Fuel Leak Case No. RO0000189 and Geotracker Global ID T0600101353, Chevron #21-1253/Texaco, 930 Springtown Boulevard, Livermore, CA 94550

Dear Mr. Robb and Mr. Hilliard:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the recently submitted document entitled,"*Work Plan for Monitoring Well Installation*," dated February 26, 2009 (Work Plan). In correspondence dated December 4, 2008, ACEH requested that you prepare a Pilot Test Work Plan or Draft Corrective Action Plan to initiate site cleanup. The February 26, 2009 Work Plan, which was prepared on Chevron's behalf by Conestoga-Rovers & Associates, proposes installation of six monitoring wells and sampling of the wells for four quarters prior to considering site cleanup. The proposal to install monitoring wells at the site is generally acceptable; however, we do not concur with the proposal to sample the wells for four quarters before considering site cleanup.

The monitoring wells are generally proposed at locations where previous borings have been advanced to characterize the site stratigraphy and define the extent of soil and groundwater contamination. The hydraulic gradient and range of seasonal water level fluctuations are known from previous monitoring wells at the site and data from nearby sites. Therefore, the proposed monitoring wells will provide only limited new information, which does not justify delaying site cleanup for four quarters. We request that you submit the previously requested Pilot Test Work Plan or Draft Corrective Action Plan **no later than June 19, 2009**.

Installation of the proposed monitoring wells may be implemented at this time provided that the technical comments below are incorporated during well installation. We request that you address the following technical comments, perform the proposed work, and send us the reports requested below.

TECHNICAL COMMENTS

1. **Well Locations.** The proposed well locations are generally acceptable; however, we request that the proposed wells adjacent to CPT-1 and CPT-7 be moved short distances to locations that are more likely to be within the interior of the plume based on the locations of the former USTs and dispensers and the hydraulic gradient. We request that the proposed wells adjacent to CPT-1 be moved to locations immediately north of CPT-1 and the proposed wells adjacent to CPT-7 be moved to locations immediately south of CPT-7. The proposed well locations in the planter area and adjacent to CPT-3 are acceptable. However, please see the requested modifications and additional wells requested in technical comment 3.

2. **Proposed Depths of Well Screens.** Since 5 of the 6 proposed wells are in locations adjacent to CPT borings, we have compared the proposed depths of the well screen intervals to the CPT logs. Based on this comparison, we request the following modifications:

Proposed Well and Well Screen Interval	Requested Well Screen Interval
Shallow well adjacent to CPT-1: 5-15 feet bgs	No change.
Deeper well adjacent to CPT-1: 25-30 feet bgs	Install well screen within sand where highest concentration of TPH and BTEX was detected from 22-27 feet bgs. We also request that a third well be installed at this location with a screen interval from 32 to 37 feet bgs to monitor a lower sand layer where elevated concentrations of TPH and BTEX were detected in a grab groundwater sample from CPT-1.
Shallow well adjacent to CPT-7: 5-15 feet bgs	No change.
Deeper well adjacent to CPT-7: 25-30 feet bgs	No sand layer is present in CPT-7 log near depths of 25-30 feet bgs. We request that the well be screened in a lower sand layer observed on CPT-7 log from 42-47 feet bgs.
Shallow well in planter area north of CPT-1: 5-15 feet bgs.	No change.
Planter Area north of CPT-1: no deeper wells proposed	We request that an additional well with a screen interval from 22-27 feet bgs be installed within the Planter Area.
Shallow well adjacent to CPT-3: 5-20 feet bgs	We request that the well be screened within sand layer from 25-30 feet bgs.

Please present the results of the well installation in the Monitoring Well Installation Report requested below.

3. **Proposed Soil Sampling.** The Work Plan proposes collection of soil samples for laboratory analysis at 5-foot intervals, obvious changes in soils, and where hydrocarbon staining or odors are observed to the bottoms of the borings. Since the proposed wells are generally adjacent to previous boring locations where soil samples have already been collected at 5-

foot intervals using these criteria, we do not concur with the proposed soil sample collection. Therefore, we do not request laboratory analysis of soil samples from the well borings. Please present the results of the well installation in the Monitoring Well Installation Report requested below

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **June 19, 2009** – Pilot Test Work Plan or Draft Corrective Action Plan
- **August 19, 2009** – Monitoring Well Installation Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Cheryl Dizon, QIC 80201, Zone 7 Water Agency, 100 North Canyons Parkway Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street Pleasanton, CA 94566

Charlotte Evans, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A, Emeryville, CA 94608

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	ISSUE DATE: July 5, 2005
	REVISION DATE: December 16, 2005
	PREVIOUS REVISIONS: October 31, 2005
ECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

ffective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require ıbmission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. ıe electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and ɔmpliance/enforcement activities.

EQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection.** (*Please do not submit reports as attachments to electronic mail.*)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- *Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.*
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

dditional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

ubmission Instructions

) Obtain User Name and Password:
  a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    i) Send an e-mail to dehloptoxic@acgov.org
    or
    ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
  b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses,** and the **Case Numbers (RO# available in Geotracker) you will be posting for.**

:) Upload Files to the ftp Site
  a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
    (i) Note: Netscape and Firefox browsers will not open the FTP site.
  b) Click on File, then on Login As.
  c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

ı) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
  b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
  c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload)

APPENDIX B

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

1984 Initial Investigation: In September 1984, J.H. Kleinfelder and Associates (Kleinfelder) discovered approximately 1-inch of light non-aqueous phase liquid hydrocarbons during underground storage tank (UST) removal. No additional information from this report is available.

1985 Hydrocarbon Investigation and UST/Product Line Removal: Groundwater Technology Incorporated (GTI) likely installed monitoring wells MW-1 through MW-3 adjacent to the UST pit to assess the extent of hydrocarbons detected by Kleinfelder. Groundwater monitoring wells MW-A and MW-B were supposedly installed prior to this investigation, but no records were available. Subsequent reports state that four monitoring wells were installed during this investigation. GTI also collected soil confirmation samples and observed the UST and product piping removal during the decommissioning of the Texaco station. The maximum hydrocarbon concentrations detected in soil were 3.2 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg) and 0.58 mg/kg benzene. GTI conducted a ½-mile well survey through the Alameda Flood Control and Water Conservation District and no registered water supply wells were identified. A sensitive receptor survey did not identify any other sensitive receptors near the site. More information is available in GTI's August 1985 *Hydrocarbon Investigation Report*.

1987 Monitoring Well Installation: In March 1987, GTI installed wells MW-5 and MW-6. The highest hydrocarbon concentrations detected in soil were 2.1 mg/kg TPHg and 0.030 mg/kg benzene from MW-5 at 14 feet below grade (fbg). The new wells were surveyed and GTI began monthly monitoring of groundwater levels at the site. More information is available in GTI's March 23, 1987 *Status Report*.

1990 Additional Site Assessment: In April 1990, GTI advanced four soil borings, two of which were converted to monitoring wells MW-7 and MW-8. No soil results are available from this report. The highest hydrocarbon concentrations detected in groundwater were 39,000 micrograms per liter (µg/L) TPHg and 2,700 µg/L benzene in wells MW-A and MW-B. No hydrocarbon concentrations were detected in wells MW 1, MW 4, MW-7 and MW-8. More information is available in GTI's April 10, 1990 *Report of Additional Environmental Site Assessment*.

Comment [b1]: Do we know the other two boring names.

1993 Extraction Well Installation and Feasibility Testing: In January 1993, Weiss Associates (WA) advanced soil borings B-1 and B-2, and installed groundwater extraction well EW-1, vapor extraction well VE-1, and air sparge well SP-1. The highest hydrocarbon concentration detected in soil was 1,200 mg/kg TPHg, just below the water table at 14.4 fbg in boring B-1. WA developed, sampled and conducted a 24 hour aquifer test on EW-1. WA concluded that the extraction well would likely capture most of the dissolved hydrocarbons and limit offsite migration. WA also conducted a vapor extraction test on vapor extraction well VE-1, groundwater extraction well EW-1, and existing monitoring wells MW-A, MW-B and MW-5. WA concluded that soil vapor extraction (SVE) could effectively remove vapors from a majority of the impacted vadose zone. WA conducted an air sparging and SVE pilot test from the air sparge well SP-1 and vapor extraction wells VE-1, and concluded that air sparging with vapor extraction would effectively remove hydrocarbons from saturated sediments. More information is available in WA's January 5, 1993 *Extraction Well Installation and Feasibility Testing*.

1994 Remediation System Start-Up: GTI started operation of an SVE system in November 1994. GTI's March 1995 report diagrams the remediation system and presents startup testing and sampling activities. More information is available in GTI's March 10, 1995 *Remediation System Start-up/Air Monitoring and Sampling Report*.

1996 Well Destruction Report: In February 1996, Kaprealian Engineering Incorporated (KEI) destroyed monitoring wells MW-6 and MW-7 by overdrilling them to 25 fbg and backfilling the borings with grout. More information is available in KEI's January 22, 1996 *Report of Destruction of Monitoring Wells*.

1997 Tier 2 RBCA Input Summary: In December 1997, KEI submitted a summary of the input parameters to be used for a subsequent Tier 2 Risk-Based Corrective Action (RBCA) analysis, including subsurface soil and groundwater sample analytic results. More information is available in KEI's October 31, 1997 *Risk-Based Corrective Action Analysis*.

2001 Vadose Zone Investigation and RBCA Analysis: In August 2001, KHM Environmental Management (KHM) submitted a RBCA analysis indicating that current conditions did not pose a threat to human health or the environment and no further active remediation was required. Their analysis was based on soil and soil vapor sample results collected from borings GP-1 through GP-4 in June 2001. In September 2001, KHM prepared an addendum in response to

comments received by email from ACEHS. More information is available in KHM's August 13, 2001 *Vadose Zone Investigation and Risk-Based Correction Action (RBCA) Analysis*.

2001 Closure Request: In December 2001, KHM submitted a case closure request summarizing the site background, and soil, groundwater, and soil vapor data collected. More information is available in KHM's December 10, 2001 letter requesting closure.

2003 Well Destruction Report: In December 2002, with approval from the ACEHS, KHM destroyed wells MW-1 through MW-5, MW-A, MW-B, EW-1, VE-1, and SP-1 by pressure grouting. More information is available in KHM's January 7, 2003 *Well Destructions – MW-1 through MW-5, MW-8, MW-A, MW-B, EW-1, VE-1 and SP-1*.

2007/2008 Subsurface Investigation: In 2007 and 2008, to re-evaluate the site for case closure, CRA advanced cone penetration testing (CPT) borings CPT-1 through CPT-7 on- and offsite. The highest hydrocarbon concentrations detected were 1,700 mg/kg TPHg and 2.5 mg/kg benzene in boring CPT7 at 10.5 fbg. No TPHg or BTEX were detected in soil from CPT2 through CPT6. No fuel oxygenates, including MTBE, were detected in soil. Multiple grab-groundwater samples were collected from each boring to investigate current hydrocarbon concentrations in groundwater. Maximum hydrocarbon concentrations of 160,000 µg/L TPHg and 4,200 µg/L benzene were detected in boring CPT1 at 24 fbg. Groundwater from CPT7 at 42 fbg also contained 11,000 µg/L TPHg and 3 µg/L benzene. Except for 4.0 µg/L 1,2-dibromoethane, no MTBE or other fuel oxygenates were detected in groundwater. More information is available in CRA's August 13, 2008 *Subsurface Investigation Report*.