Atlantic Richfield Company

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February 12, 2014

Re: Work Plan for Vapor Intrusion Investigation
Atlantic Richfield Company Service Station #601
712 Lewelling Boulevard, San Leandro, California
ACEH Case #RO0000309

"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,

Chuck Carmel

Remediation Management Project Manager

Attachment

WORK PLAN FOR
VAPOR INTRUSION INVESTIGATION

Atlantic Richfield Oil Company Station #601
712 Lewelling Boulevard
San Leandro, Alameda County, California
ACEH Case #RO0000309

Prepared for:

Mr. Chuck Carmel
Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583

Prepared by:

Broadbent & Associates, Inc.
875 Cotting Lane, Suite G
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February 12, 2014

Project No. 06-88-605

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CREATING SOLUTIONS. BUILDING TRUST.

February 12, 2014

Project #06-88-605

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

Attn.: Mr. Chuck Carmel

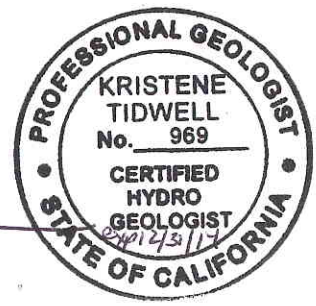
Re: Work Plan for Vapor Intrusion Investigation, Atlantic Richfield Oil Company Station #601, 712 Lewelling Boulevard, San Leandro, Alameda County ACEH Case #RO0000309

Dear Mr. Carmel:

Broadbent & Associates, Inc. (Broadbent) is pleased to submit this *Work Plan for Vapor Intrusion Investigation* (Work Plan) on behalf of Atlantic Richfield Company (a BP affiliated company), for Atlantic Richfield Oil Company Station #601 located at 712 Lewelling Boulevard, San Leandro, Alameda County, California (Site). This Work Plan presents a description of proposed activities to perform a vapor intrusion assessment in order to evaluate residual onsite petroleum hydrocarbon contamination. This Work Plan is in response to the ACEH directive dated December 9, 2013.

Please do not hesitate to contact me at (707) 455-7290.

Sincerely,
BROADBENT & ASSOCIATES, INC.



Kristene Tidwell, P.G., C. Hg.
Senior Geologist

cc: Mr. Jerry Wickham, PG, CEG, and CHG, Alameda County Environmental Health (submitted via ACEH ftp site)
Electronic copy uploaded to GeoTracker

WORK PLAN FOR
VAPOR INTRUSION INVESTIGATION
Atlantic Richfield Oil Company Station #601
712 Lewelling Boulevard, Oakland, Alameda County, California
Fuel Leak Case #RO0000309

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WORK PLAN FOR
VAPOR INTRUSION INVESTIGATION

Atlantic Richfield Oil Company Station #601
712 Lewelling Boulevard
San Leandro, Alameda County, California

1.0 INTRODUCTION

Broadbent & Associates, Inc. (Broadbent) has prepared this *Work Plan for Vapor Intrusion Investigation* (Work Plan) on behalf of the Atlantic Richfield Company (ARC) – a BP affiliated company, for Atlantic Richfield Oil Company Station #601 located at 712 Lewelling Boulevard in San Leandro, Alameda County, California (Site). A Site Location Map is presented as Drawing 1.

In a letter dated December 9, 2013, Alameda County Environmental Health (ACEH) requested the completion of a vapor intrusion investigation. The *Conceptual Site Model and Case Closure Request (*Broadbent, 2013*)*, submitted by Broadbent on January 31, 2013, was reviewed by ACEH and ACEH found the case ineligible for case closure on the basis that further evaluation of the potential for vapor intrusion to the Chateau Manor Apartments, the adjacent apartment building to the Site, is needed.

This Work Plan proposes installing two new onsite soil vapor probes between or within the vicinity of monitoring well MW-3 and the Chateau Manor apartments to further assess the potential for vapor intrusion to the apartment buildings from this area. Additionally, soil samples will be collected from these new soil vapor probe borings and all existing and new soil vapor probes will be sampled to further evaluate the potential for vapor intrusion to the apartment building. A Site description, background, proposed activities, and proposed schedule are presented in the following Sections.

2.0 SITE DESCRIPTION AND BACKGROUND

The Site is located at 712 Lewelling Boulevard in San Leandro, California. It is an active ARCO-brand gasoline station (Station No. 601) with convenience store. Current structures on the Site include four 10,000-gallon underground storage tanks (USTs), two fuel dispenser islands with a total of eight dispensers, and a convenience store building with two unused vehicle service bays. The majority of the Site is paved with asphalt and concrete. The location of the Site is shown in Drawing 1. A Site Plan depicting current well locations is provided as Drawing 2.

The Site is bound by the four to six-lanes on Lewelling Boulevard to the northwest, the four to six-lanes on Washington Avenue to the east, multi-family residential dwellings of the Chateau Manor Apartments adjacent to the southwest, and a commercial building (Dentist's Office) and parking lot adjacent to the southeast. Across Washington Avenue to the east is a large parking lot and Walgreens store. Across Lewelling Boulevard to the northwest are a Speedy Smog smog check station at the corner of Washington Avenue, Salel's Mobile Home Park, and the parking lot and playground for Lewelling School further southwest. The Smog Check Station at 15275 Washington Avenue is the former Shell Gasoline Service Station #129460, an active release site (ACEH Case # RO0000372 / GeoTracker Global ID T0600101226).

The Site has operated as a gasoline fueling station since the environmental case was opened in 1989. The site is likely to remain a service station for the foreseeable future. A detailed Site history is included in Appendix A.

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Setting

The Site is located within the San Leandro Sub-Area of the East Bay Plain of the San Francisco Basin. The San Leandro Sub-Area is primarily filled with alluvial fans, but unlike the Sub-Areas to the north, the Yerba-Buena Mid extends west into the San Leandro Sub-Area. It has been proposed that a clay layer forms an extensive east-west aquitard across the basin. Historically there were municipal supply wells in this Sub-Area that produced from the upper level Alameda gravels. The San Leandro Sub-Area is distinct from the Niles Cone basin to the south, in that the alluvial fans are much smaller and produce much less groundwater.

Throughout most of the Alameda County portion of the East Bay Plain, from Hayward to Albany, groundwater level contours show that the general direction of groundwater flow is from the east to the west, from the Hayward Fault to the San Francisco Bay. Groundwater flow direction generally correlates to topography. Flow-direction and velocity are influenced by subsurface stream channels general oriented from east to west. However, near the San Leandro Sub-Area, limited regional data indicates that groundwater in the upper water-bearing zone flows to the south, with deeper groundwater flowing to the north.

3.2 Site-Specific Conditions

Based on historic groundwater monitoring data, depth-to-water (DTW) measurements have ranged from approximately 5 to 10 feet below ground surface (bgs). The groundwater gradient direction associated with the Site is to the southwest.

According to previous Site investigations, sediments encountered generally consist of silty clays and silt which encase sand lenses of varying thickness (Broadbent, 2013). Details of the geological features for the Site can be found in the *Conceptual Site Model and Closure Request*, submitted by Broadbent on January 21, 2013.

4.0 PROPOSED VAPOR INTRUSION ASSESSMENT ACTIVITIES

The purpose of this proposed investigation is to collect data in order to evaluate current subsurface Site conditions including the presence and extent of residual hydrocarbon impacts in soil vapor. The objectives are to collect high quality and representative data to achieve this purpose.

The proposed investigation is to determine whether there is a vapor intrusion risk associated with smear zone of petroleum hydrocarbons between the depths of approximately 4.75 to 7.5 feet bgs in the area of well MW-3. In order to evaluate this potential risk, a soil vapor location is proposed (Drawing 3) to have two new soil vapor probes installed (SG-15A and SG-15B) in-between or within the vicinity of MW-3 and the apartment building. Two soil samples at two depths within the upper five feet from the two new soil vapor probe borings will be taken also. In addition to sampling the new soil vapor probes, all existing soil vapor probes (SG-10 thru SG-14) will be sampled as well to further re-evaluate the vapor intrusion risk overall for the Site. Results from the previous soil vapor sampling event can be found in Appendix B. All soil vapor sampling activities will be performed in accordance with The California Department of Toxic Substances Control's (DTCS's) *Advisory – Active Soil Gas Investigations* (DTSC, 2012).

4.1 Preliminary Activities, Local Permitting, and Notification

Broadbent carry out preliminary field activities that will include obtaining the necessary permits for soil vapor probes from Alameda County Public Works Agency, the proposed work in the site-specific Health and Safety Plan (HASP), and clearing the proposed installation locations of conflicts with subsurface utilities. The utility clearance will include notifying Underground Service Alert (USA) of the pending work a minimum of 48 hours prior to initiating the field investigation, and procuring the services of a private utility locating company to confirm the absence of underground utilities at each soil vapor probe location. Soil vapor probe locations will be physically cleared using a hand auger consistent with BP's and Broadbent's Defined Practice for Ground Disturbance.

4.2 Soil Vapor Probe Borings

Two soil vapor probes will be installed at the location shown on Drawing 3: An "A" soil vapor probe will be constructed with the probe installed at 2.5 ft bgs, and a "B" soil vapor probe will be constructed with the probe installed at 3.5 ft bgs. The two depth intervals are being proposed in order to assess the potential of residual hydrocarbons in soil vapor and to avoid influencing the water table during sampling. Specific bioattenuation indicator parameters (oxygen, argon, methane, and carbon dioxide; see Section 4.4 below) will be measured in each interval to determine the presence and length of any zone of bioattenuation.

In lieu of nested multi-level wells, each soil vapor boring will be constructed to a specific depth within its own boring, thus minimizing the potential for short-circuiting. Soil vapor probes SG-15A and SG-15B will be installed in-between or within the vicinity of MW-3 and the apartment building in order to quantify risks to the apartment building residences. Each probe will be horizontally separated by at least three feet at each location. Proposed soil vapor probe boring locations are shown in Drawing 3.

4.3 Soil Vapor Probe Construction

Soil vapor probes will be constructed by attaching a 6-inch long soil vapor probe tip to a 0.125-inch diameter NylaFlow tubing extending approximately two feet above the surface. The soil vapor probe tips will be constructed of double-woven stainless steel wire screen with a 0.057-inch pore diameter, equipped with stainless-steel end fittings. Each soil vapor probe will be embedded within the middle of a one-foot thick sand filter pack of #2/12 sorted sand, topped with one-half foot of dry powdered Bentonite clay below a minimum of one-half foot of hydrated powdered Bentonite clay, and completed with a traffic-rated well vault at the surface set with neat cement concrete surface seal to match the existing grade. Care will be taken to prevent the tubing and Swagelok fittings at their ends from being damaged or kinked when coiled back into the well vaults.

4.4 Soil Vapor Probe Sampling

Sampling will occur at least one week after installation of the soil vapor probes to allow them time for the concrete to cure and the disturbed subsurface conditions to equilibrate. In addition, soil vapor sampling shall not be performed during or immediately after a rainfall event of 0.5 inches or more. If a rainfall event of this magnitude occurs within 24 hours of the scheduled soil vapor sampling activities, the field work shall be rescheduled.

After setting up a secure and barricaded work area, the soil vapor sampling train will be assembled. The Swagelok fitting at the end of the implant's tubing will be connected to an inline vacuum gauge with a tee then to a 100-cubic centimeter (cc) calibrated syringe with three-way valve at the tip. Coming off the tee for the sample will be a Tedlar bag, supplied by the laboratory. With the valve of the soil vapor probe closed and the valve to the Tedlar bag closed, the sampling train will be checked for leaks during a "shut-in" leak test by applying with the calibrated syringe a vacuum of -15 in.Hg for a period of five minutes (-15 in.Hg is fifty percent above the standard threshold of -10 in.Hg considered representative of "No Flow" conditions). When the applied vacuum does not drop during the shut-in test, the sampling train assembly will be considered leak-tested tight.

After the shut-in leak test, the closed valve of the soil vapor probe will be opened and the sampling train slowly purged of one calculated interior volume using the calibrated syringe. The calculated interior volume shall include the aboveground tubing and appurtenances and below-ground tubing and probe tip, but not the pore space within the filter pack. The main purpose in waiting to sample for at least one month after installation is to allow the soil vapor in the fine sand filter pack to equilibrate to the soil vapor in the undisturbed soil surrounding the implant location. In the tight permeability soils anticipated to be encountered at this Site, the first soil vapor drawn in from outside the implant tubing will be most representative and likely contain higher concentrations than would be encountered through excessive purging.

Following the completion of purging, a clear-plastic shroud will be setup over the sampling train to contain the chemical tracer/leak-check compound (i.e. Helium gas) that will be released within. The shroud will be placed to completely cover the soil vapor sampling implant wellhead, its above ground tubing, and the tubing, fittings, and Tedlar bag that will make up the sampling train. Once setup, Helium gas will be released via tubing under the shroud. A Radiodetection Model MGD-2002 Helium detector (or equivalent) will be used to monitor the concentration within the shroud by placing its sensor probe within. Prior to and during sampling, a positive-pressure concentration of approximately 20 percent Helium will be maintained within the shroud using the compressed gas cylinder's flow regulator. Helium concentrations within the shroud will be recorded in the field notes at one-minute intervals.

Once a positive-pressure Helium atmosphere is created under the shroud, the valve to the Tedlar bag canister will be opened and the sample collected. The sampling rates into the Tedlar Bag will be fixed by laboratory-supplied critical orifice assemblies (i.e. mini flow regulators) with a 0.0060 inch orifice allowing approximately 200 standard cc per minute (cc/min). Sample start times, end times, starting vacuums, ending vacuums, and Helium concentrations during sampling will be recorded in the field notes. Once the Tedlar bags are filled, they will be shipped overnight to the laboratory, where they will be either sampled or placed in a Summa canister within 36 hours of sampling.

4.5 Laboratory Analysis of Soil vapor Samples

Collected samples will be submitted to a state-certified analytical laboratory under standard chain-of-custody protocol. At the laboratory, soil vapor samples will be analyzed for GRO by EPA Method TO-3 and for BTEX, Naphthalene and MTBE by EPA Method TO-15. Soil vapor samples will also be analyzed for Oxygen (O_2) and Argon, Carbon Dioxide (CO_2), Methane (CH_4), and Helium (tracer/leak-check compound) by Modified ASTM D-1946. Laboratory analyses for soil vapor samples will be performed in accordance with EPA standard holding times.

5.0 INVESTIGATION REPORTING

Upon completion of field activities described above and compilation of field data, reports will be prepared and submitted to ACEH and the State GeoTracker database (including the required individual GeoTracker upload files). A *Vapor Intrusion Assessment Report* will be prepared summarizing the soil vapor probe installation and soil vapor probe sampling activities. The report will document fieldwork and analytical data and will include the following information:

- Scope of Work
- Lithologic boring/well construction logs (GEO_BORE files)
- Site map showing soil vapor probe locations (GEO_MAP file)
- Text and tabulated investigation results (GEO_WELL files)
- Laboratory reports and chain of custody records (EDFs)
- Significance of detected petroleum hydrocarbons
- Recommendations for future activities, if warranted

6.0 PROPOSED SCHEDULE

The proposed schedule for the work described above shall proceed as follows:

- Soil Vapor Probe Installation – Soil Vapor Probe installation activities will begin immediately and are anticipated to be completed within 75 calendar days following approval of this Work Plan.
- Vapor Intrusion Assessment – Soil vapor probe sampling activities will begin immediately and are anticipated to be completed within 75 calendar days following approval of this Work Plan.
- Vapor Intrusion Assessment Report – A summary report of soil vapor probe installation and sampling activities is proposed to be submitted within 45 calendar days following completion of the soil vapor probe installation activities, above (i.e., within 120 calendar days of Work Plan approval).

7.0 LIMITATIONS

Broadbent will do its best to alert the client of matters which, in the opinion of Broadbent, require immediate attention to protect public health, safety, and the environment. Broadbent will make every effort to advise the client of matters which should be reported to government regulatory agencies. However, the client is solely responsible for reporting such matters, and Broadbent shall not be held liable in the event that the proper agency is not notified. Our services will be performed in accordance with generally accepted practice at the time work commences. Results and recommendations will be based on review of available documentation and written or verbal correspondence with appropriate regulatory agencies, laboratory results, observations of field personnel, and the points investigated. No warranty is expressed or implied.

8.0 REFERENCES

Broadbent , January 21, 2013. *Conceptual Site Model and Closure Request*. Atlantic Richfield Company Station No. 601, 712 Lewelling Boulevard, San Leandro, California.

California Department of Toxic Substances Control (DTSC) April 2012. *Advisory – Active Soil Gas Investigations.*

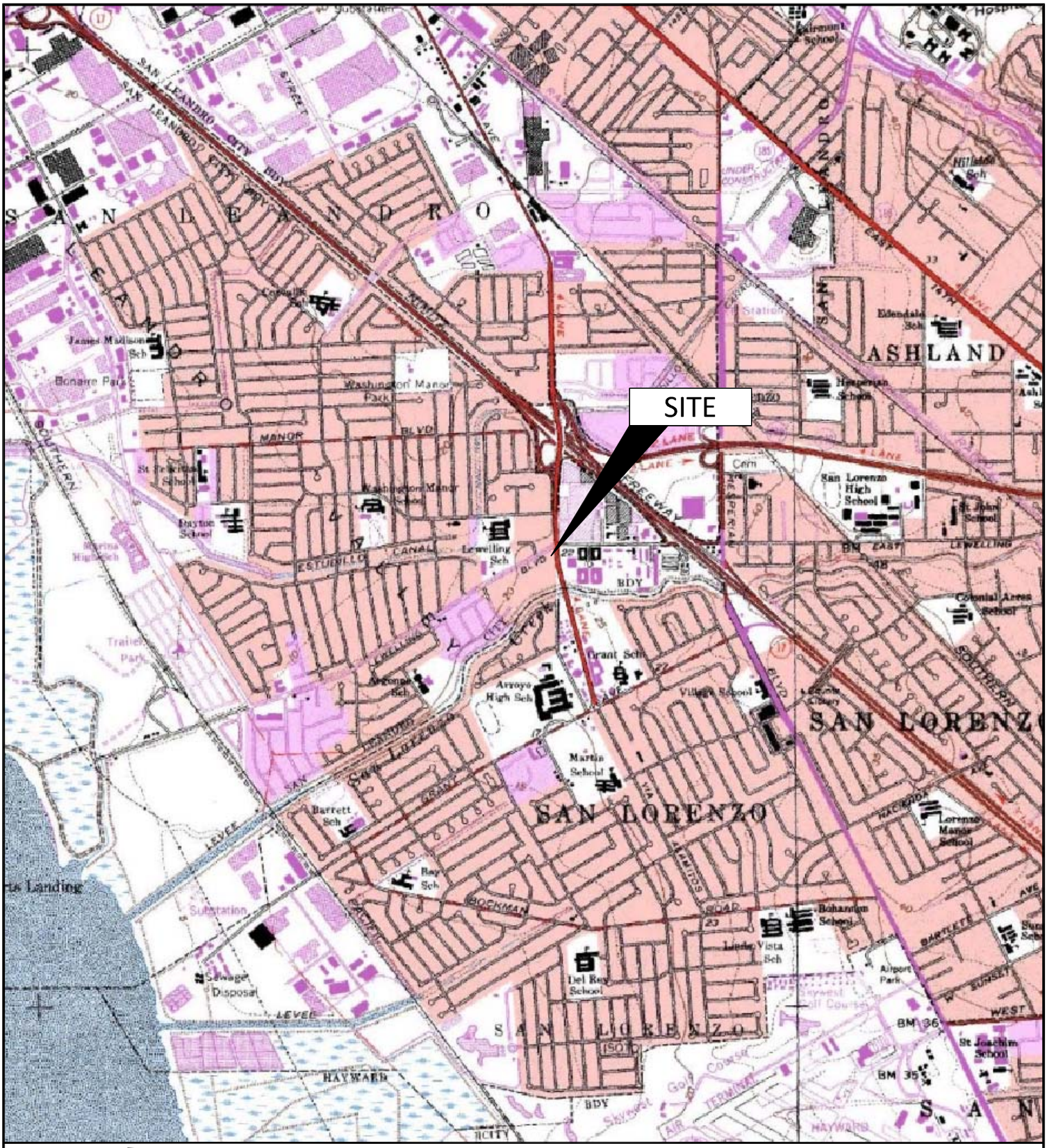
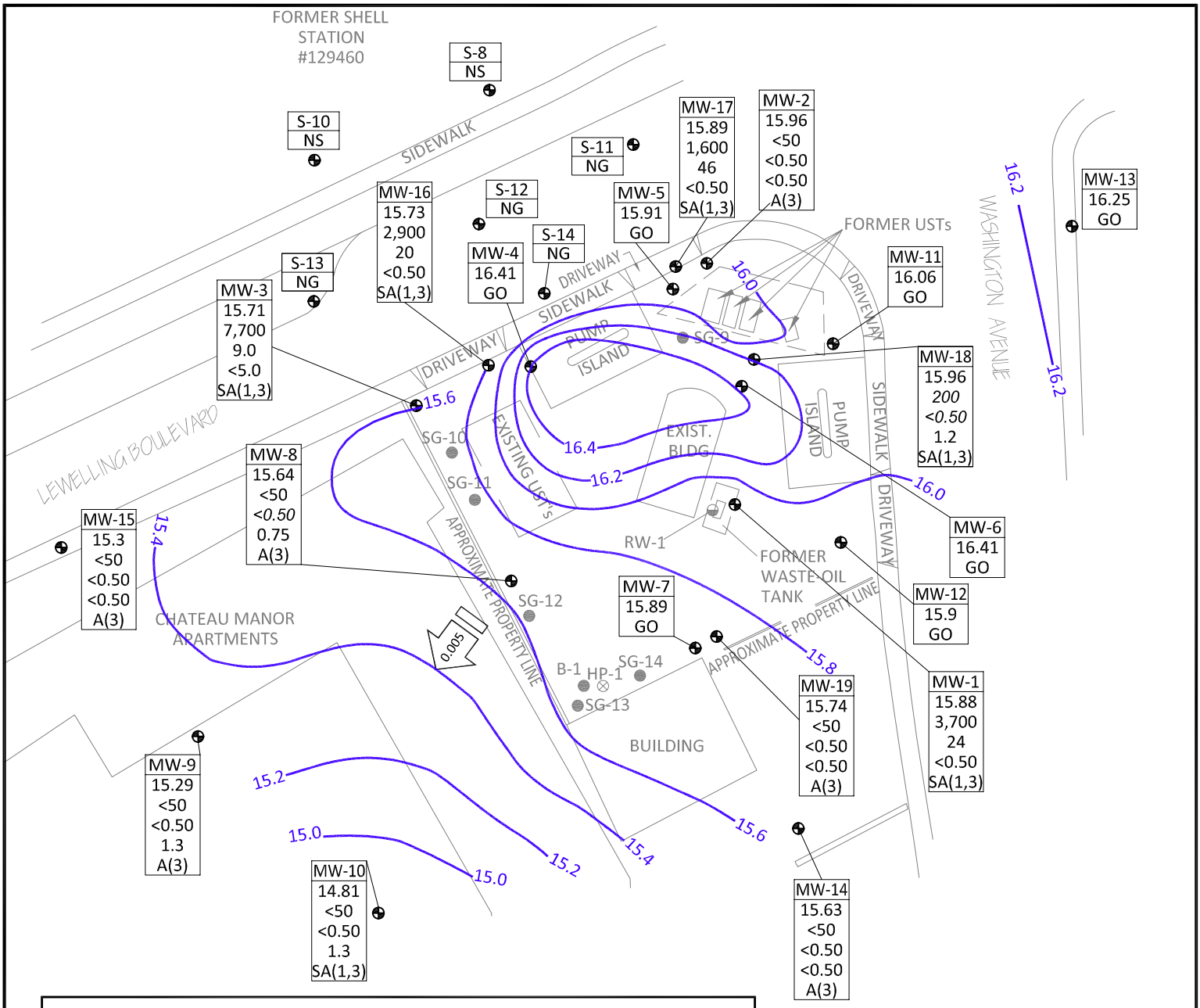


IMAGE SOURCE: USGS

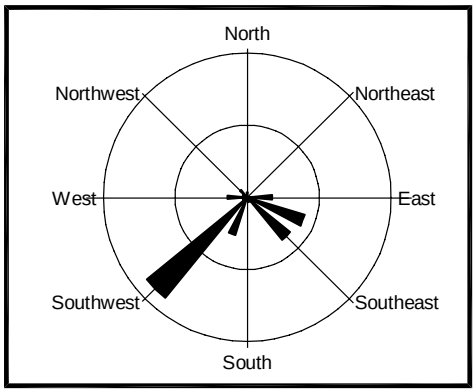
BROADBENT 1324 Mangrove Ave., Suite 212 Chico, California 95626 Project No.: 06-88-605 Date: 9/10/2013	Station № 601 712 Lewelling Boulevard San Leandro, California	Site Location Map	Drawing 1



LEGEND

- Monitoring Well Location
- Soil-Gas Boring/Temporary Vapor Implant Location
- Soil Vapor Extraction Well Location
- Hydropunch Location
- Grab-Groundwater Sample Location
- Groundwater Elevation Contour (Feet Above Site Datum)
- 0.005 Groundwater Flow Direction and Magnitude (ft/ft)

WELL	Well Designation
ELEV	Groundwater Elevation (ft)
GRO BZ MTBE	GRO, Benzene, and MTBE Concentrations (µg/L)
A/SA	Sampling Frequency
A(1)	Sampled Annually, 1st Quarter
A(3)	Sampled Annually, 3rd Quarter
SA(1,3)	Sampled Semi-Annually, 1st and 3rd Quarter
GO/NG	Gauge Only/Not Gauged
NS	Not Sampled



N

0 60 120

SCALE (ft)

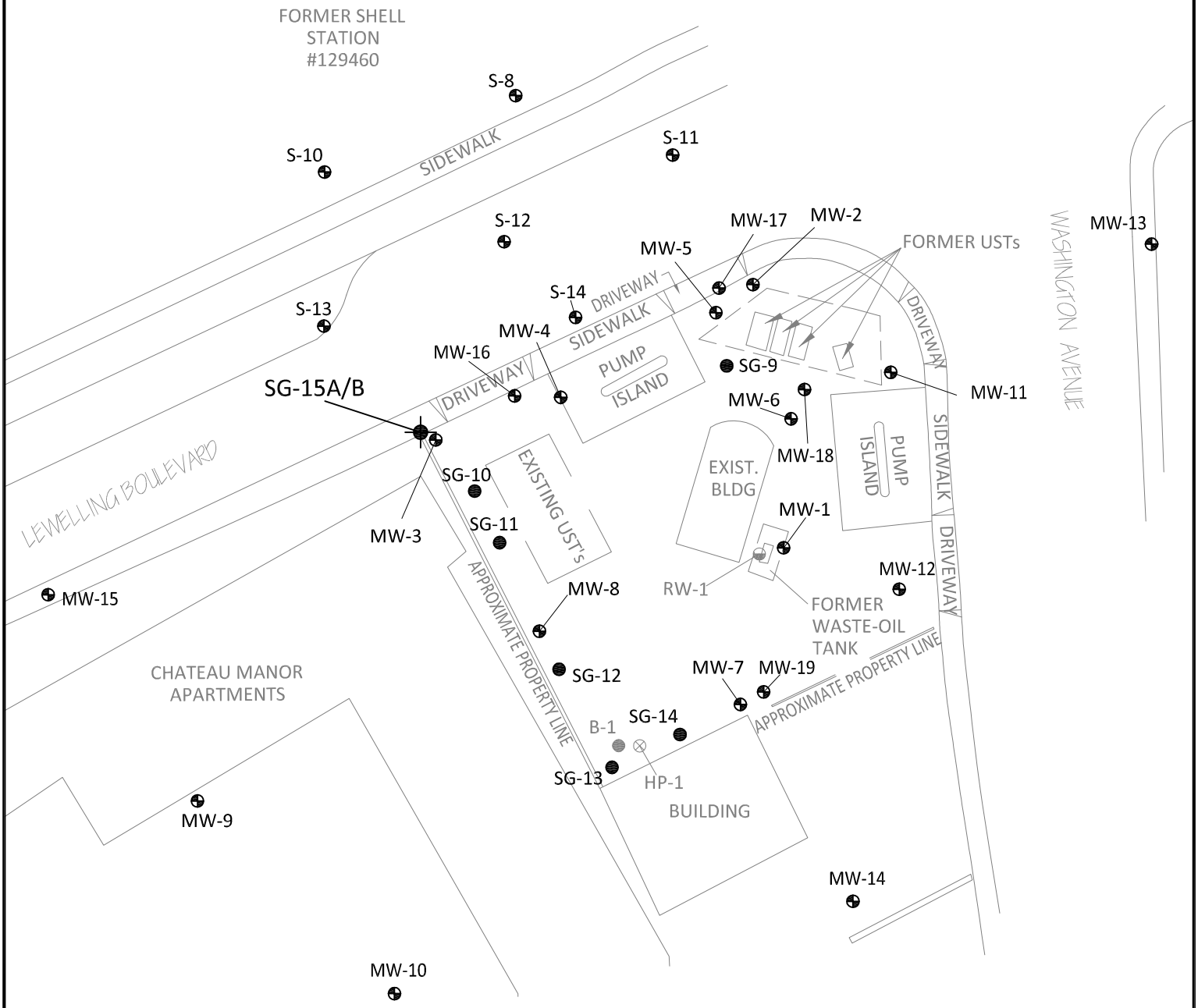
NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT
1324 Mangrove Ave., Suite 212
Chico, California 95626
Project No.: 06-88-605 Date: 9/03/2013

Station № 601
712 Lewelling Boulevard
San Leandro, California

Groundwater Elevation Contours and Analytical Summary Map
July 30, 2013

Drawing 2



LEGEND

- Monitor Well Location
- Soil-Gas Boring/Temporary Vapor Implant Location
- Soil Vapor Extraction Well Location
- Hydropunch Location
- Proposed Soil Vapor Borings

N

0 60 120

SCALE (ft)

NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT 1324 Mangrove Ave., Suite 212 Chico, California 95626 Project No.: 06-88-605 Date: 1/23/2014	Station #601 712 Lewelling Boulevard San Leandro, California	Site Layout Plan with Proposed Soil Vapor Borings

Drawing 3

APPENDIX A

Site History

Previous Environmental Activities at Site

In 1989, Applied GeoSystems, Inc. (AGS) conducted a subsurface evaluation in the vicinity of the then present USTs, including two 6,000-gallon and two 4,000-gallon single-walled steel gasoline USTs located in the northern corner of the Site, and one smaller waste oil UST located at the southeast corner of the Station Building (historically reported as to have been of 550-gallon, 300-gallon or 280-gallon capacity). Five soil borings (B-1 through B-5) were advanced in the vicinity of theses USTs with borings B-1 through B-4 advanced in the vicinity of the gasoline USTs and B-5 advanced near the waste oil UST. Borings B-1 through B-5 were advanced to first-encountered groundwater. In the area of the former gasoline USTs, soil samples from borings B-1 through B-4 contained Gasoline Range Organics (GRO) up to 12,000 milligrams per kilogram (mg/Kg) and Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) up to 60 mg/Kg, 450 mg/Kg, 110 mg/Kg and 660 mg/K-g, respectively. Soil samples from boring B-5 in the area of the former waste oil UST contained GRO up to 2,600 mg/Kg, Total Oil & Grease (TOG) up to 4,800 mg/Kg, and BTEX up to 10 mg/Kg, 90 mg/Kg, 21 mg/Kg, and 130 mg/Kg, respectively. No halogenated volatile organic compounds (HVOCs) were detected above the laboratory reporting limits. Reportedly, separate-phase hydrocarbons (SPH, or free product) were encountered in each of the five borings (AGS, 1989). Historical data is included in Appendix C.

In January 1990, GeoStrategies, Inc. (GSI) removed the five former USTs and product lines from the Site, which had reportedly been installed in 1974. Approximately 588 cubic yards (yd^3) of soil were removed with the former gasoline USTs and product line trenching excavation. The excavation size of approximately 35 feet by 60 feet was reportedly constrained by existing structures. Approximately 288 yd^3 of this soil contained GRO exceeding 1,000 mg/Kg, while the remaining 300 yd^3 contained GRO exceeding 100 mg/Kg. Approximately 15 yd^3 of soil were excavated during removal of the waste oil UST. Finally, approximately 950 yd^3 of soil was removed from the excavation for the replacement USTs in the southwestern portion of the Site. Reportedly the 950 yd^3 contained less than 10 mg/Kg GRO. The former excavations were reportedly backfilled with pea gravel. However, a six-inch diameter recovery well RW-1 was installed in the pea gravel backfill for the former waste oil UST (GSI, 1990). Data including m maps and tables from these activities is included in Appendix C.

In June of 1990, AGS advanced soil borings B-6 through B-8) at the Site and completed these borings as monitoring wells MW-1, MW-2 and MW-3. Thin layers (less than 1½ feet thick) of sandy clay and/or clayey sands were observed between eight and twelve feet below ground surface (feet bgs). Soil samples from boring B-6 near the former waste oil UST indicated the following maximum concentrations:

- GRO at 420 mg/Kg
- Diesel range organics (DRO) at 280 mg/Kg
- TOG at 190 mg/Kg, and
- BTEX at 6.0 mg/Kg, 27 mg/Kg, 8.8 mg/Kg, and 52 mg/Kg, respectively
- Naphthalene at 2.9 mg/Kg
- 2-methylnaphthalene at 2.6 mg/Kg
- HVOCs were not detected above reporting limits.

Soil samples from boring B-7 contained maximum concentrations GRO at 9.3 mg/Kg, and maximum BTEX concentrations at 0.99 mg/Kg, 0.71 mg/Kg, 0.50 mg/Kg and 1.3 mg/Kg, respectively. Soil samples from boring B-8 in the southwest corner of the Site contained a maximum GRO of 620 mg/Kg, maximum BTEX concentrations of 11 mg/Kg, 30 mg/Kg, 16 mg/Kg and 82 mg/Kg, respectively. Wells MW-1 through MW-3 were developed on July 11, 1990 and sampled on July 17, 1990. Samples from these wells were not analyzed due to the presence of SPH (AGS, 1990). Data including m maps and tables from these activities is included in Appendix C.

In May of 1991, RESNA Industries, Inc. (RESNA)/AGS advanced six soil borings onsite (B-9 through B-13 plus B-11A), and completed five into wells MW-4 through MW-8. Maximum GRO concentration were reported at 2,700 mg/Kg in boring B-10 (MW-5) located immediately west of the former USTs. Samples of groundwater were collected from wells MW-2, MW-5 and MW-8. Wells MW-1 and MW-3 were not sampled due to the presence of SPH, and remaining wells were not sampled due to insufficient water. A soil vapor extraction test was performed from wells MW-1 through MW-6. The results of this test indicated that vapor extraction efficiency was limited by the thin vadose zone and low permeability soils. A well search conducted to a half-mile radius found 69 wells: two domestic (both upgradient), one cathodic protection (upgradient at an Exxon Station), 27 monitoring wells, 32 irrigation wells (most to the west and northwest), four test wells (three to the north and one to the south), two abandoned wells (north and south), and one of unidentified use (to the northeast). Finally, records research for possible secondary sources of contamination found Shell Station #129460 at 15275 Washington Avenue, Greenhouse Plaza at 699 Lewelling Boulevard, GASCO Station #798 at 15201 Washington Avenue, and a Mobil Station at 15119 Washington Avenue, and California Department of Transportation site at 600 Lewelling Boulevard (Located across Lewelling Boulevard upgradient across intersection).

RESNA oversaw field activities where where onsite borings and (B-16, B-17, and B-20 through B-22) and two offsite borings (B-18 and B-19) were advanced. Onsite borings B-16 and B-17 were advanced in October 1992 and converted into wells MW-11 and MW-12. Subsequently offsite borings B-18 and B-19 were advanced and completed as monitoring wells MW-13 and MW-14, respectively. RESNA reported lithology comprised of interbedded sand within silty clay (RESNA, 1993), which was consistent with previous data.

Also in October 1992, RESNA as a result of petroleum-impacted soil being observed by Pacific Gas & Electric Company (PG&E) during a trenching operation to replace gas lines in the public right of way along the northwestern border of the Site. Nine soil borings (B-23 through B-31) were advanced in Lewelling Boulevard adjacent to the Site. Lithology observed in these borings included native silts and clays, with the exception of boring B-23 were sandy trench backfill was encountered. A limited number of sand lenses encountered above the water table appeared to contain perched groundwater. Subsurface soils in the vadose zone contained low concentrations of GRO at maximum concentration of 20 mg/Kg, and BTEX up to 2.7 mg/Kg in borings B-23 through B-28 and B-31. Subsurface soils in the capillary fringe zone, above first encountered ground water (depths of seven to ten feet bgs) in borings B-24, B-27 and B-31 contained GRO concentrations greater than 100 mg/Kg. Borings B-29 and B-30 appeared to have delineated the lateral extent of subsurface contamination. The vertical extent of contamination was delineated

to a depth of 15½ feet bgs (RESNA, 1993). The locations of these borings are presented in Drawings 2 and 8.

In December 1992, the California Regional Water Quality Control Board (RWQCB) issued Cleanup and Abatement Order # 92-147 (CAO 92-147) to Atlantic Richfield Company and Mr. John J. Sullivan, owner of the adjacent downgradient property. This order required an access agreement be made between Atlantic Richfield Company and Mr. Sullivan for the purpose of allowing the required additional investigation of ground water and soil downgradient of the Site, or for Mr. Sullivan to submit a work plan to conduct the investigation himself.

In March 1993, RESNA advanced offsite borings B-32A and B-32B, and completed boring B-32B into monitoring well MW-15. In May 1993, RESNA advanced offsite borings B-33 and B-34 on the Sullivan property downgradient from the Site. Borings B-33 and B-34 were competed as wells MW-10 and MW-9, respectively. The results of this investigation delineated GRO concentrations in soil to less than 1.0 mg/Kg offsite to the east, southeast, west, and southwest, and onsite in the southeastern portion of the Site. A review of all previous data and the March 1993 investigation indicated that soil was delineated to less than 100 mg/kg at a depth of about 15 feet beneath the Site in the silty clay confining layer beneath thin, water-bearing sandy layers. RESNA also performed step-drawdown pumping tests on wells MW-8 and MW-12, and performed two 12-hour pumping tests on well MW-8 at different pumping rates. Based on their findings from the pumping tests, RESNA concluded that pump and treat would not be a viable technology for groundwater remediation at the Site.

In 1997, EMCON conducted a soil gas investigation and risk-based corrective action (RBCA) analysis. Seven soil gas borings were collected at 1½ feet bgs and 4 feet bgs. No BTEX were detected at 1½ feet bgs. Benzene was detected at 0.5 milligrams per cubic meter (mg/m^3) at 4 feet bgs behind the station building. The RBCA evaluation was reportedly conducted consistent with guidelines then established by the American Society of Testing and Materials (ASTM). EMCON concluded that the results showed that concentrations of BTEX detected in soil and ground water at the Site did not exceed concentrations that correspond to acceptable levels of risk (EMCON, 1997).

In May 2002, Delta Environmental Consultants, Inc. (Delta) advanced three hand-auger borings (HB-2 through HB-4) to approximately 10½ feet bgs adjacent to the Oro Loma sanitary sewer pipeline within Lewelling Boulevard. Upgradient hand-auger boring HB-1 was not advanced due to potential conflict with the traffic signal. Grab samples of water collected from HB-2, HB-3, and HB-4 contained GRO at 28,000 micrograms per liter (µg/L), 38,000 µg/L, and 630 µg/L, respectively. Benzene was detected in HB-2, HB-3, and HB-4 samples at 570 µg/L, 1,200 µg/L, and 62 µg/L, respectively. Methyl-Tertiary Butyl Ether (MTBE) was detected in the sample from HB-4 at a concentration of 160 µg/L (Delta, 2002).

In June 2003, Wilcon Builders removed the dispensers and product piping and excavated soils in their vicinity. URS Consultants, Inc. (URS) reported no obvious soil staining at the soil sample locations. Slight hydrocarbon odors were reported beneath the pipelines at sample locations PL-2, PL-7 and PL-13. Strong hydrocarbon odors were reported at dispenser sample location D-6 with photo-ionization detector (PID) measurements up to 685 parts per million (ppm) at D-6. Eight soil samples designated D-1 through D-8 were collected between 4-5 feet bgs.

Sample D-6 contained BTEX at 7 mg/Kg, 230 mg/Kg, 55 mg/Kg, and 350 mg/Kg, respectively. Twelve soil samples designated PL-1 through PL-4, and PL-7 through PL-14 were collected between four to six feet bgs. Samples PL-2 and PL-3 contained very low concentrations of BTEX. No MTBE was detected in soil samples. Groundwater was encountered during dewatering of the pit and stored in a 21,000 gallon Baker tank. A sample of water from the Baker tank did not contain BTEX above the laboratory reporting limits, but did contain MTBE at 290 µg/L (URS, 2003).

In 2004, URS administered an oxygen release compound (ORC) to onsite wells MW-2, MW-3, MW-5, and MW-8.

In November 2006, Stratus Environmental, Inc. (Stratus), under direction from BAI, advanced one soil boring and one Hydropunch boring both to a depth of 58 feet bgs in the southern portion of the for vertical characterization and delineation of hydrocarbons in soil and groundwater. The lithology encountered included thin layers of clayey sand at 24½-26½ feet bgs, 46½-47 feet bgs, and 53-54 feet. Sand with clay was encountered from 55-58 feet bgs (the total depth). Samples collected from the sand layers did not contain BTEX, MTBE, GRO or Oil-Range Organics (ORO) above the laboratory reporting limits. Low concentrations of a contaminant reported in the Diesel Range Organics (C10-C28) were detected, however, the laboratory reported that the chromatogram profiles did not resemble the referenced fuel standard (BAI, 2007).

An *Initial Site Conceptual Model with Soil & Groundwater Investigation Work Plan* was submitted to ACEH on March 24, 2009 per request in a letter dated November 14, 2008. In June 2009, six soil vapor sampling wells (SG-9 through SG-14) were installed at the Site (Drawing 2) to assess vapor intrusion as a potential migration pathway. One minor concentration of Toluene (0.0033 milligrams per cubic meter) was detected in soil vapor sampling point SG-11. No other constituents were detected above their respective laboratory reporting limits. The detected Toluene concentration was below the Environmental Screening Level (ESL) established by the San Francisco Regional Water Quality Control Board (SFRWQCB). Oxygen and Carbon Dioxide were also detected in the soil gas at levels indicating subsurface biodegradation was occurring. A detailed description of field activities and results associated with this vapor intrusion assessment can be found in the *Vapor Intrusion Assessment and Soil & Groundwater Investigation Report* (BAI, 2009a).

In June 2009, four soil borings were advanced onsite and completed as wells MW-16 through MW-19 to replace existing wells MW-4 through MW-7, which were often observed to be dry. A total of 24 soil samples were collected. GRO concentrations were detected above laboratory reporting limits in 15 of the 24 soil samples collected. Minimal BTEX concentrations were also observed in several of the soil samples collected. A detailed description of field activities and results associated with this soil and ground-water investigation can be found in the *Vapor Intrusion Assessment and Soil & Groundwater Investigation Report* (BAI, 2009b).

In March 2011, BAI oversaw the advancement of four direct-push technology (DPT) borings (identified as SB-1 through SB-4) on the Site to evaluate potential residual petroleum hydrocarbon impacts to soil and groundwater (Drawing 9). Soil samples were collected as each borehole was advanced. When first groundwater was encountered a grab-groundwater sample was collected from each borehole. Concentrations of GRO were detected above the laboratory

reporting limits in 11 of the 12 soil samples collected, with concentrations a maximum concentration of 250 mg/Kg in boring SB-2 at 9.0 feet bgs. BTEX, MTBE, TBA, TAME, 1,2-DCA, EDB, DIPE, ETBE and Ethanol were not detected above their respective laboratory reporting limit all other soil samples. In grab-groundwater samples, residual petroleum compounds were reported as follows:

- GRO in all four samples ranging from 9,400 µg/L in SB-3 to 140,000 µg/L in SB-2
- Benzene in three samples, from 2.5 µg/L in SB-3 to 380 µg/L in SB-2
- Toluene in one sample, at 2.3 µg/L in SB-3
- Ethylbenzene in four samples, from 1.9 µg/L in SB-3 to 130 µg/L in SB-2
- Total Xylenes in one sample at 3.4 µg/L in SB-3
- MTBE in two samples collected, from 2.1 µg/L in SB-3 to 2.2 µg/L in SB-
- TBA in one sample at of 250 µg/L in SB-2

Concentrations of TAME, 1,2-DCA, EDB, DIPE, ETBE and Ethanol were not detected above their respective laboratory reporting limits for each sample. Details of this investigation are presented in BAI's *Soil & Groundwater Investigation and First Quarter 2011 Monitoring Report* dated April 6, 2011 (BAI, 2011).

Quarterly ground-water monitoring at the Site was initiated in June 1990. Recent ground-water monitoring data is provided in Tables 1-5. Historic groundwater and soil analytical data, are included in Appendix C.

Previous Environmental Activities at Adjacent Former Shell Station

As mentioned in Above, the Site is located south of Former Shell Station #129460, an active release site (ACEH Case # RO0000372 / GeoTracker Global ID T0600101226). The former Shell Station is located immediately north of Lewelling Boulevard, on the northwest corner of Lewelling Boulevard and Washington Avenue at 15275 Washington Avenue. Background and specific historical information useful with respect to the Site is summarized below.

According to GeoTracker, the leak at the former Shell Station was discovered on in July 1985 reported in August 1986, and stopped in June 1987. In November 1988, several additional monitoring wells were installed to support subsurface characterization associated with the former Shell Station, including wells S-8, S-10, S-11 and S-12. In March 1989, several additional monitoring wells were including wells S-13 and S-14 adjacent to the Site. Monitoring wells S-8 and S-10 are located just northwest of Lewelling Boulevard, across the street from Station No. 601. Monitoring wells S-11, S-12 and S-13 are located near the center of Lewelling Boulevard, between the former Shell Station and Station No. 601. Well S-14 is located within the southeastern side of Lewelling Boulevard, just northwest of Station No. 601. Locations of Shell wells S-8, S-10, S-11, S-12, S-13, and S-14 are exhibited in Drawings 2 and 3.

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BAI, March 24, 2009. *Initial Site Conceptual Model With Soil and Ground-Water Investigation Work Plan, Atlantic Richfield Company Station #601, 712 Lewelling Boulevard, San Leandro, California.*

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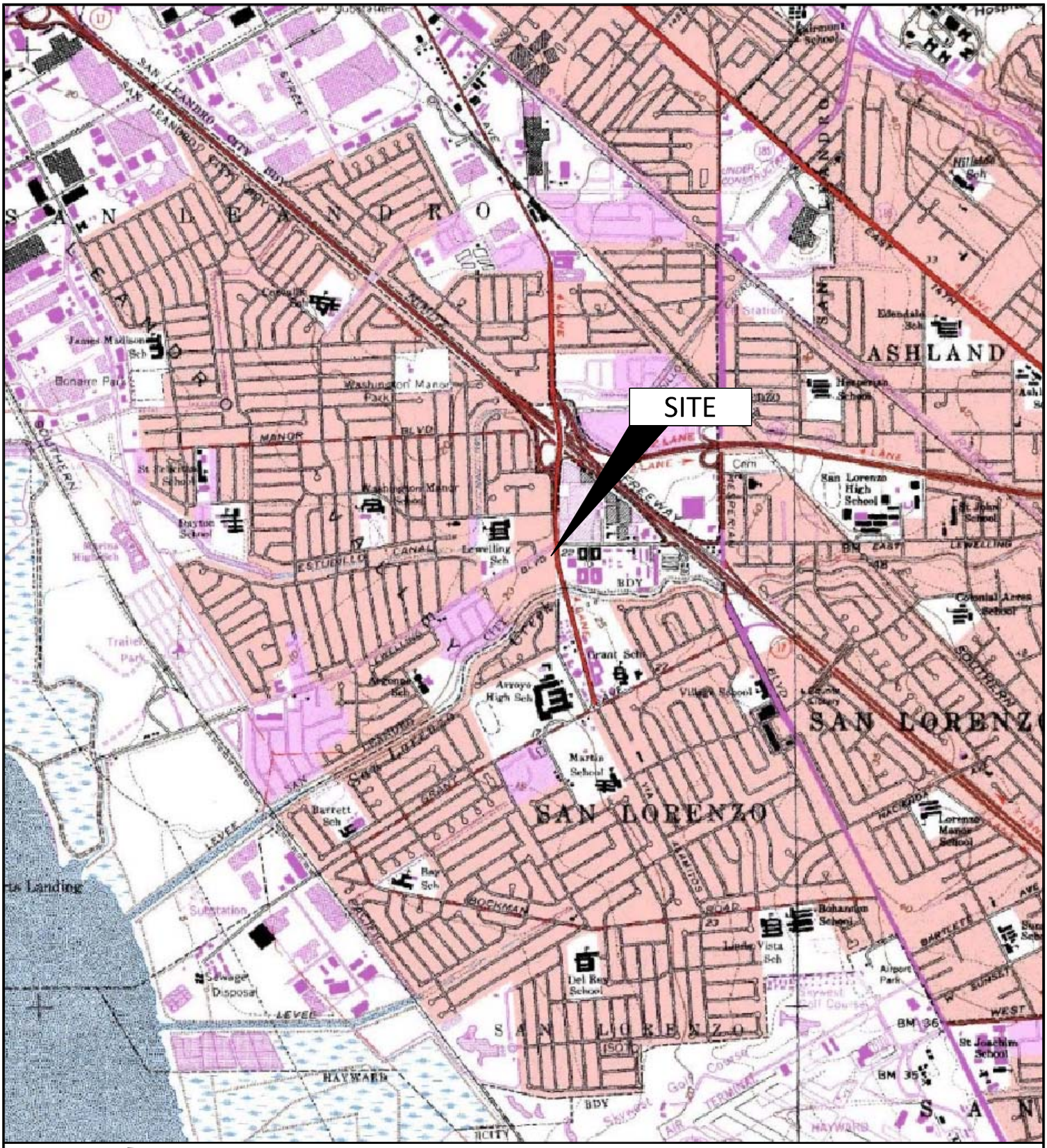
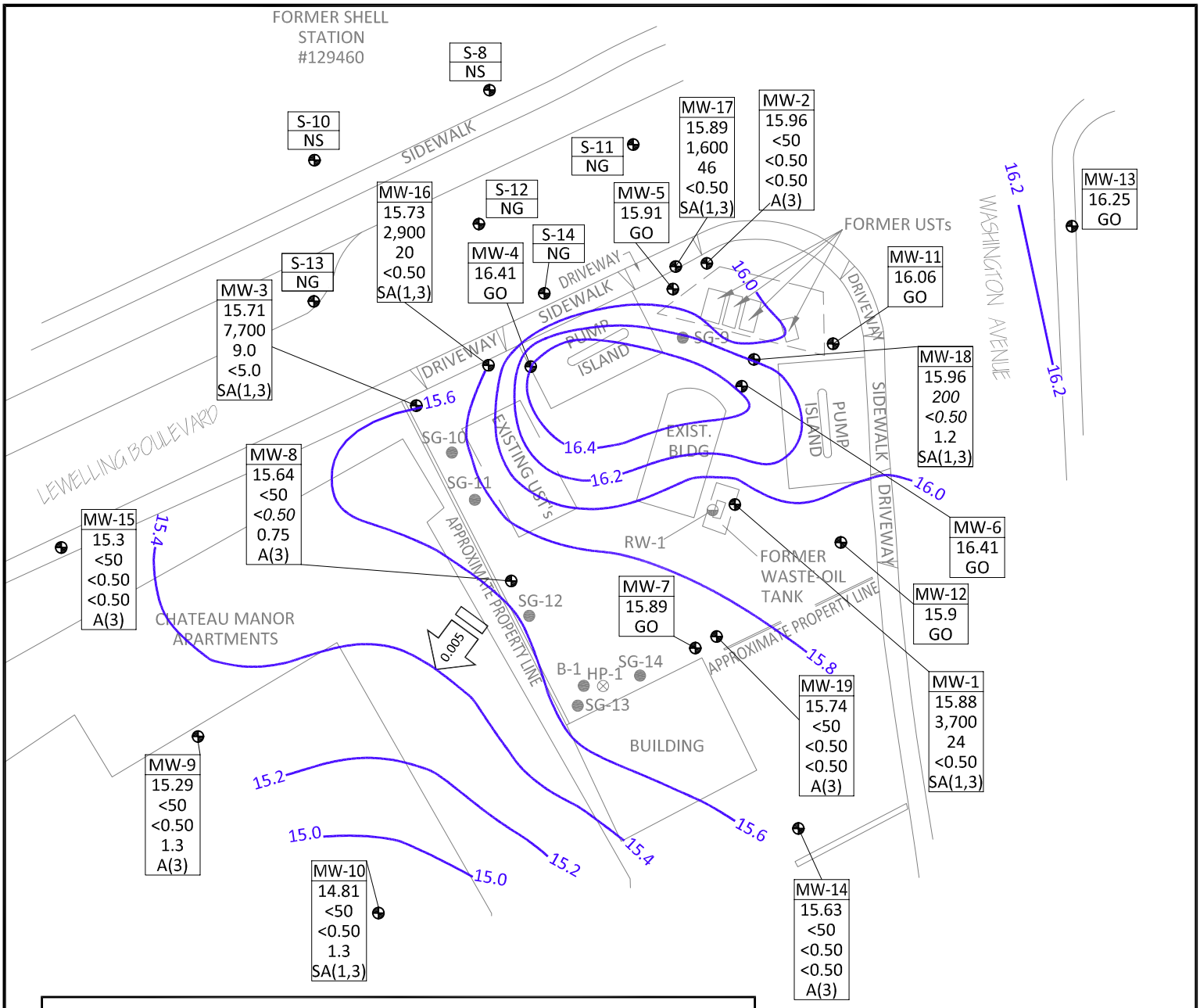


IMAGE SOURCE: USGS

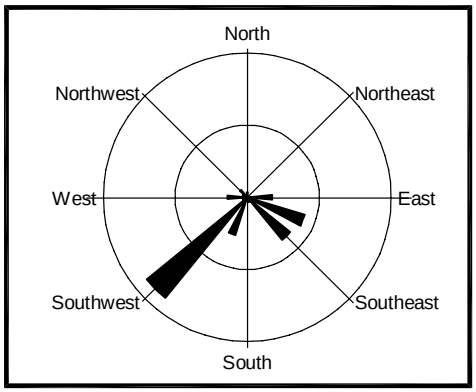
BROADBENT 1324 Mangrove Ave., Suite 212 Chico, California 95626 Project No.: 06-88-605 Date: 9/10/2013	Station № 601 712 Lewelling Boulevard San Leandro, California	Site Location Map	Drawing 1



LEGEND

- Monitoring Well Location
- Soil-Gas Boring/Temporary Vapor Implant Location
- Soil Vapor Extraction Well Location
- Hydropunch Location
- Grab-Groundwater Sample Location
- Groundwater Elevation Contour (Feet Above Site Datum)
- 0.005 Groundwater Flow Direction and Magnitude (ft/ft)

WELL	Well Designation
ELEV	Groundwater Elevation (ft)
GRO BZ MTBE	GRO, Benzene, and MTBE Concentrations (µg/L)
A/SA	Sampling Frequency
A(1)	Sampled Annually, 1st Quarter
A(3)	Sampled Annually, 3rd Quarter
SA(1,3)	Sampled Semi-Annually, 1st and 3rd Quarter
GO/NG	Gauge Only/Not Gauged
NS	Not Sampled



N

0 60 120

SCALE (ft)

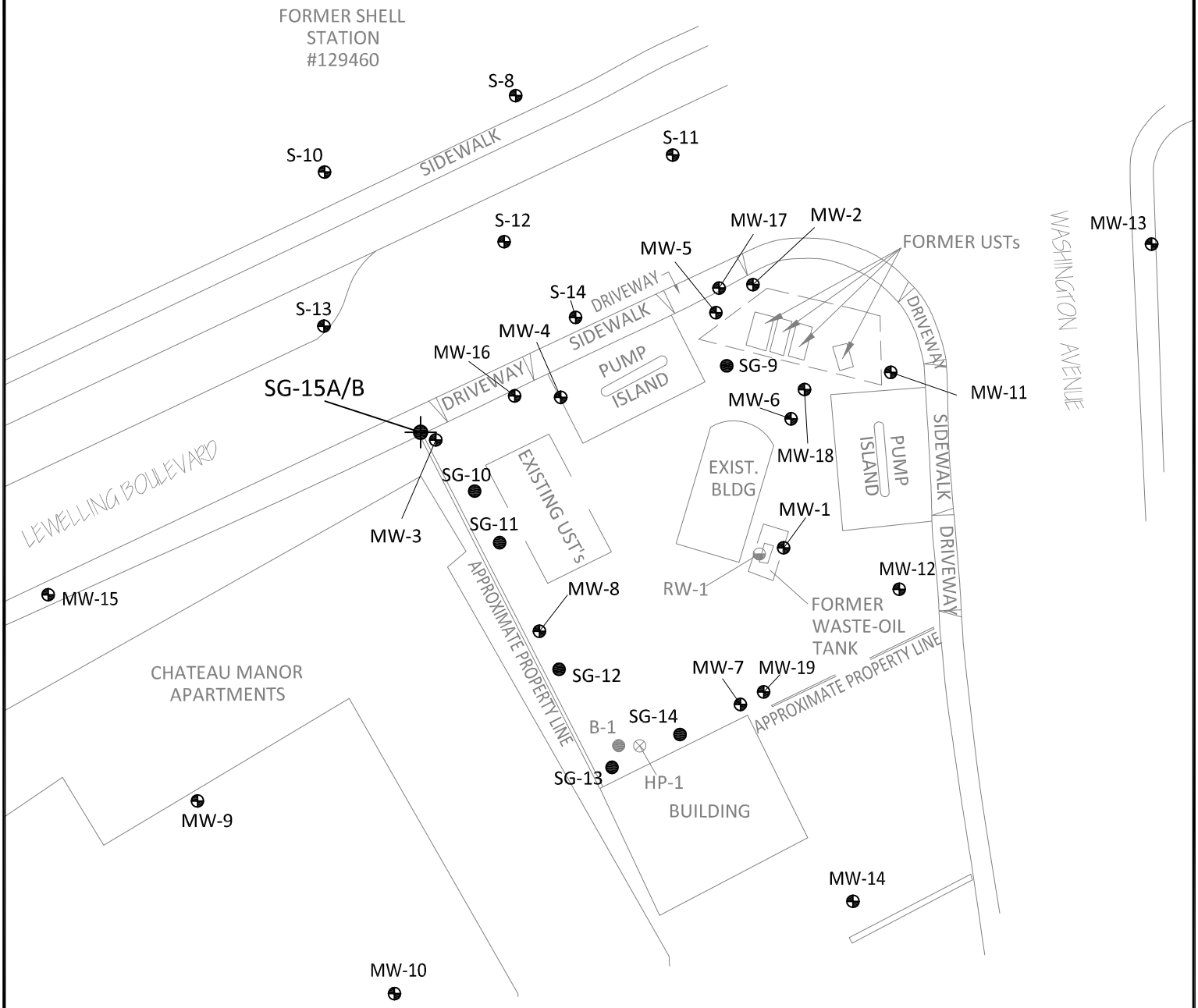
NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT
1324 Mangrove Ave., Suite 212
Chico, California 95626
Project No.: 06-88-605 Date: 9/03/2013

Station № 601
712 Lewelling Boulevard
San Leandro, California

Groundwater Elevation Contours and Analytical Summary Map
July 30, 2013

Drawing 2



LEGEND

- Monitor Well Location
- Soil-Gas Boring/Temporary Vapor Implant Location
- Soil Vapor Extraction Well Location
- Hydropunch Location
- Proposed Soil Vapor Borings

N

0 60 120

SCALE (ft)

NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT 1324 Mangrove Ave., Suite 212 Chico, California 95626 Project No.: 06-88-605 Date: 1/23/2014	Station #601 712 Lewelling Boulevard San Leandro, California	Site Layout Plan with Proposed Soil Vapor Borings

Drawing 3

APPENDIX B

Soil Vapor Sampling Results from 2009

Sample Identification	Methane %	Carbon Dioxide %	Oxygen +Argon mg/m3	GRO mg/m3	Benzene mg/m3
SG-9	<0.835	14.4	4.16	<64	<0.0027
SG-10	<1.02	8.36	12.5	<78	<0.0033
SG-11	<0.860	9.75	11.3	<66	<0.0027
SG-12	<0.825	6.99	14.2	<63	<0.0026
SG-13	<0.815	1.19	22.3	<62	<0.0026
SG-14	<0.870	3.74	19.6	<67	<0.0028

Sample Identification	DIPE mg/m3	Ethanol mg/m3	ETBE mg/m3	Ethylbenzene mg/m3	MTBE mg/m3
SG-9	<0.014	<0.016	<0.014	<0.0036	<0.012
SG-10	<0.017	<0.019	<0.017	<0.0045	<0.015
SG-11	<0.014	<0.016	<0.014	<0.0037	<0.012
SG-12	<0.014	<0.016	<0.015	<0.0036	<0.012
SG-13	<0.014	<0.015	<0.014	<0.0035	<0.012
SG-14	<0.015	<0.016	<0.015	<0.0038	<0.013

Sample Identification	Xylenes mg/m3	TAME mg/m3	TBA mg/m3	Toluene mg/m3	1,1-Difluoroethane mg/m3
SG-9	<0.015	<0.014	<0.010	<0.0031	<0.0090
SG-10	<0.018	<0.017	<0.012	<0.0039	<0.011
SG-11	<0.015	<0.014	<0.010	<0.0032	<0.0093
SG-12	<0.014	<0.014	<0.010	<0.0031	<0.0089
SG-13	<0.014	<0.014	<0.0099	<0.0031	<0.0088
SG-14	<0.015	<0.015	<0.011	<0.0033	<0.0094

Calscience
Environmental
Laboratories, Inc.

July 08, 2009

Jay Johnson
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Subject: **Calscience Work Order No.: 09-07-0008**
Client Reference: ARCO 601

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 7/1/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 07/01/09
Work Order No: 09-07-0008
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-9	**09-07-0008-1-A**	**06/30/09 14:35**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.835	1.67		Oxygen + Argon	4.16	0.835	1.67	
Carbon Dioxide	14.4	0.835	1.67						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-10	**09-07-0008-2-A**	**06/30/09 09:26**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	1.02	2.05		Oxygen + Argon	12.5	1.02	2.05	
Carbon Dioxide	8.36	1.02	2.05						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-11	**09-07-0008-3-A**	**06/30/09 10:21**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.860	1.72		Oxygen + Argon	11.3	0.860	1.72	
Carbon Dioxide	9.75	0.860	1.72						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-12	**09-07-0008-4-A**	**06/30/09 11:24**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.825	1.65		Oxygen + Argon	14.2	0.825	1.65	
Carbon Dioxide	6.99	0.825	1.65						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-13	**09-07-0008-5-A**	**06/30/09 12:19**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.815	1.63		Oxygen + Argon	22.3	0.815	1.63	
Carbon Dioxide	1.19	0.815	1.63						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-14	**09-07-0008-6-A**	**06/30/09 13:25**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.870	1.74		Oxygen + Argon	19.6	0.870	1.74	
Carbon Dioxide	3.74	0.870	1.74						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-03-002-830**	**N/A**	**Air**	**GC 36**	**N/A**	**07/01/09 00:00**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	ND	0.500	1	
Carbon Dioxide	ND	0.500	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3
Project: ARCO 601		Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-9	**09-07-0008-1-A**	**06/30/09 14:35**	**Air**	**GC/MS V**	**N/A**	**07/02/09 20:07**	**090702L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0027	1.67		Xylenes (total)	ND	0.015	1.67	
Diisopropyl Ether (DIPE)	ND	0.014	1.67		Tert-Amyl-Methyl Ether (TAME)	ND	0.014	1.67	
Ethanol	ND	0.016	1.67		Tert-Butyl Alcohol (TBA)	ND	0.010	1.67	
Ethyl-t-Butyl Ether (ETBE)	ND	0.014	1.67		Toluene	ND	0.0031	1.67	
Ethylbenzene	ND	0.0036	1.67		1,1-Difluoroethane	ND	0.0090	1.67	
Methyl-t-Butyl Ether (MTBE)	ND	0.012	1.67						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	85	57-129			1,2-Dichloroethane-d4	88	47-137		
Toluene-d8	100	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-10	**09-07-0008-2-A**	**06/30/09 09:26**	**Air**	**GC/MS DD**	**N/A**	**07/01/09 22:47**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0033	2.05		Xylenes (total)	ND	0.018	2.05	
Diisopropyl Ether (DIPE)	ND	0.017	2.05		Tert-Amyl-Methyl Ether (TAME)	ND	0.017	2.05	
Ethanol	ND	0.019	2.05		Tert-Butyl Alcohol (TBA)	ND	0.012	2.05	
Ethyl-t-Butyl Ether (ETBE)	ND	0.017	2.05		Toluene	ND	0.0039	2.05	
Ethylbenzene	ND	0.0045	2.05		1,1-Difluoroethane	ND	0.011	2.05	
Methyl-t-Butyl Ether (MTBE)	ND	0.015	2.05						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	104	57-129			1,2-Dichloroethane-d4	117	47-137		
Toluene-d8	105	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-11	**09-07-0008-3-A**	**06/30/09 10:21**	**Air**	**GC/MS DD**	**N/A**	**07/01/09 23:34**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0027	1.72		Xylenes (total)	ND	0.015	1.72	
Diisopropyl Ether (DIPE)	ND	0.014	1.72		Tert-Amyl-Methyl Ether (TAME)	ND	0.014	1.72	
Ethanol	ND	0.016	1.72		Tert-Butyl Alcohol (TBA)	ND	0.010	1.72	
Ethyl-t-Butyl Ether (ETBE)	ND	0.014	1.72		Toluene	0.0033	0.0032	1.72	
Ethylbenzene	ND	0.0037	1.72		1,1-Difluoroethane	ND	0.0093	1.72	
Methyl-t-Butyl Ether (MTBE)	ND	0.012	1.72						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	100	57-129			1,2-Dichloroethane-d4	109	47-137		
Toluene-d8	99	78-156							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3
Project: ARCO 601		Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-12	**09-07-0008-4-A**	**06/30/09 11:24**	**Air**	**GC/MS DD**	**N/A**	**07/02/09 00:21**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0026	1.65		Xylenes (total)	ND	0.014	1.65	
Diisopropyl Ether (DIPE)	ND	0.014	1.65		Tert-Amyl-Methyl Ether (TAME)	ND	0.014	1.65	
Ethanol	ND	0.016	1.65		Tert-Butyl Alcohol (TBA)	ND	0.010	1.65	
Ethyl-t-Butyl Ether (ETBE)	ND	0.014	1.65		Toluene	ND	0.0031	1.65	
Ethylbenzene	ND	0.0036	1.65		1,1-Difluoroethane	ND	0.0089	1.65	
Methyl-t-Butyl Ether (MTBE)	ND	0.012	1.65						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	105	57-129			1,2-Dichloroethane-d4	120	47-137		
Toluene-d8	105	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-13	**09-07-0008-5-A**	**06/30/09 12:19**	**Air**	**GC/MS DD**	**N/A**	**07/02/09 01:08**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0026	1.63		Xylenes (total)	ND	0.014	1.63	
Diisopropyl Ether (DIPE)	ND	0.014	1.63		Tert-Amyl-Methyl Ether (TAME)	ND	0.014	1.63	
Ethanol	ND	0.015	1.63		Tert-Butyl Alcohol (TBA)	ND	0.0099	1.63	
Ethyl-t-Butyl Ether (ETBE)	ND	0.014	1.63		Toluene	ND	0.0031	1.63	
Ethylbenzene	ND	0.0035	1.63		1,1-Difluoroethane	ND	0.0088	1.63	
Methyl-t-Butyl Ether (MTBE)	ND	0.012	1.63						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	87	57-129			1,2-Dichloroethane-d4	108	47-137		
Toluene-d8	101	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-14	**09-07-0008-6-A**	**06/30/09 13:25**	**Air**	**GC/MS DD**	**N/A**	**07/02/09 01:56**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0028	1.74		Xylenes (total)	ND	0.015	1.74	
Diisopropyl Ether (DIPE)	ND	0.015	1.74		Tert-Amyl-Methyl Ether (TAME)	ND	0.015	1.74	
Ethanol	ND	0.016	1.74		Tert-Butyl Alcohol (TBA)	ND	0.011	1.74	
Ethyl-t-Butyl Ether (ETBE)	ND	0.015	1.74		Toluene	ND	0.0033	1.74	
Ethylbenzene	ND	0.0038	1.74		1,1-Difluoroethane	ND	0.0094	1.74	
Methyl-t-Butyl Ether (MTBE)	ND	0.013	1.74						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	95	57-129			1,2-Dichloroethane-d4	110	47-137		
Toluene-d8	102	78-156							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3
Project: ARCO 601		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-7,853**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**07/01/09 14:54**	**090701L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Ethanol	ND	0.0094	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1		Toluene	ND	0.0019	1	
Ethylbenzene	ND	0.0022	1		1,1-Difluoroethane	ND	0.0054	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	104	57-129		1,2-Dichloroethane-d4	116	47-137	
Toluene-d8	96	78-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-7,870**	**N/A**	**Air**	**GC/MS V**	**N/A**	**07/02/09 10:49**	**090702L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Ethanol	ND	0.0094	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1		Toluene	ND	0.0019	1	
Ethylbenzene	ND	0.0022	1		1,1-Difluoroethane	ND	0.0054	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	102	57-129		1,2-Dichloroethane-d4	105	47-137	
Toluene-d8	97	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0008
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-3M

Project: ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-9	**09-07-0008-1-A**	**06/30/09 14:35**	**Air**	**GC 19**	**N/A**	**07/01/09 12:50**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	64	1.67		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-10	**09-07-0008-2-A**	**06/30/09 09:26**	**Air**	**GC 19**	**N/A**	**07/01/09 13:23**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	78	2.05		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-11	**09-07-0008-3-A**	**06/30/09 10:21**	**Air**	**GC 19**	**N/A**	**07/01/09 13:57**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	66	1.72		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-12	**09-07-0008-4-A**	**06/30/09 11:24**	**Air**	**GC 19**	**N/A**	**07/01/09 14:32**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	63	1.65		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-13	**09-07-0008-5-A**	**06/30/09 12:19**	**Air**	**GC 19**	**N/A**	**07/01/09 15:05**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	62	1.63		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SG-14	**09-07-0008-6-A**	**06/30/09 13:25**	**Air**	**GC 19**	**N/A**	**07/01/09 15:41**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	67	1.74		mg/m3

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-3M

Project: ARCO 601

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-685-169**	**N/A**	**Air**	**GC 19**	**N/A**	**07/01/09 08:39**	**090701L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	38	1		mg/m3

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.	Date Received:	07/01/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0008
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-3M

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
09-07-0012-1	**Air**	**GC 19**	**N/A**	**07/01/09**	**090701D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	5700	6100	6	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0008
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	ASTM D-1946

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-03-002-830	**Air**	**GC 36**	**N/A**	**07/01/09**	**090701L01**

Parameter	LCS Conc	LCSD Conc	RPD	RPD CL	Qualifiers
Carbon Dioxide	4.844	4.853	0	0-30	
Oxygen + Argon	17.90	17.84	0	0-30	
Nitrogen	61.24	61.10	0	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0008
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-7,853	Air	GC/MS DD	N/A	07/01/09	090701L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	120	104	60-156	44-172	14	0-40	
Carbon Tetrachloride	139	116	64-154	49-169	18	0-32	
1,2-Dibromoethane	127	111	54-144	39-159	14	0-36	
1,2-Dichlorobenzene	117	113	34-160	13-181	3	0-47	
1,2-Dichloroethane	148	122	69-153	55-167	19	0-30	
1,2-Dichloropropane	123	107	67-157	52-172	14	0-35	
1,4-Dichlorobenzene	114	112	36-156	16-176	2	0-47	
c-1,3-Dichloropropene	154	132	61-157	45-173	15	0-35	
Ethylbenzene	136	116	52-154	35-171	16	0-38	
o-Xylene	135	116	52-148	36-164	15	0-38	
p/m-Xylene	132	112	42-156	23-175	16	0-41	
Tetrachloroethene	128	105	56-152	40-168	20	0-40	
Toluene	121	101	56-146	41-161	18	0-43	
Trichloroethene	130	111	63-159	47-175	16	0-34	
1,1,2-Trichloroethane	129	111	65-149	51-163	15	0-37	
Vinyl Chloride	135	116	45-177	23-199	15	0-36	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0008
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO 601

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-7,870	Air	GC/MS V	N/A	07/02/09	090702L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	120	112	60-156	44-172	7	0-40	
Carbon Tetrachloride	97	94	64-154	49-169	3	0-32	
1,2-Dibromoethane	119	113	54-144	39-159	5	0-36	
1,2-Dichlorobenzene	124	121	34-160	13-181	3	0-47	
1,2-Dichloroethane	102	97	69-153	55-167	5	0-30	
1,2-Dichloropropane	118	111	67-157	52-172	7	0-35	
1,4-Dichlorobenzene	124	119	36-156	16-176	4	0-47	
c-1,3-Dichloropropene	131	125	61-157	45-173	5	0-35	
Ethylbenzene	128	121	52-154	35-171	6	0-38	
o-Xylene	128	122	52-148	36-164	5	0-38	
p/m-Xylene	124	118	42-156	23-175	5	0-41	
Tetrachloroethene	119	112	56-152	40-168	6	0-40	
Toluene	123	115	56-146	41-161	7	0-43	
Trichloroethene	109	104	63-159	47-175	5	0-34	
1,1,2-Trichloroethane	117	111	65-149	51-163	5	0-37	
Vinyl Chloride	120	111	45-177	23-199	8	0-36	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-07-0008

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = Matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
BZ	Sample preserved improperly.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	Internal standard recovery is outside method recovery limit.
IB	CCV recovery abovelimit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.

Work Order Number: 09-07-0008

Qualifier	Definition
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

APPENDIX C

Copy of ACEH directive letter

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

December 9, 2013

Charles Carmel
Atlantic Richfield Company
P.O. Box 1257
San Ramon CA 94583
(*Sent via E-mail to: charles.carmel@bp.com*)

Subject: Case File Review for Fuel Leak Case No. RO0000309 and GeoTracker Global ID T0600100108, ARCO #0601, 712 Lewelling Boulevard, San Leandro, CA 94579

Dear Mr. Carmel:

I have been assigned as the caseworker for the above referenced fuel leak case. Please send future correspondence to my attention.

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the document entitled, "*Conceptual Site Model and Case Closure Request,*" dated January 31, 2013 (CSM). The CSM, which was prepared on your behalf by Broadbent, summarizes site conditions and recommends case closure. ACEH has reviewed the CSM and Closure Request and finds that the case is not eligible for case closure at this time. As discussed in the technical comments below, further evaluation of the potential for vapor intrusion to the adjacent apartment building is required. We request that you submit a Work Plan to address the technical comments below no later than February 13, 2014.

TECHNICAL COMMENTS

1. **Potential for Vapor Intrusion.** Up to 1.08 feet of free product has historically been detected in well MW-3, which is located at the western corner of the site. Well MW-3 is located approximately 15 feet north of the corner of the Chateau Manor Apartments. As recently as April 21, 2009, 720,000 micrograms per liter of TPHg was detected in groundwater from MW-3. These highly elevated concentrations of TPHg are likely indicative of non-aqueous phase liquid (NAPL). Well MW-3 is screened between depths of 8 to 12 feet bgs although water levels in the well are typically between depths of 4.75 to 7.5 feet bgs. Therefore, the screen interval of MW-3 is submerged and may not detect NAPL if present. At a minimum, there is smear zone of petroleum hydrocarbons between depths of approximately 4.75 to 7.5 feet bgs in the area of well MW-3. Due to the potential for NAPL and/or a smear zone at these depths and the proximity of the adjacent apartment building, we request further evaluation of the potential for vapor intrusion to the apartment building.

2. **Soil Vapor Sampling Results.** Soil vapor samples were collected once on June 30, 2009 from soil vapor probes SG-9 through SG-14, which are located along the southwestern property boundary. The soil vapor probes were installed with screen intervals from 3.0 to 3.5 feet bgs. Toluene was detected at a trace concentration of 3.3 micrograms per cubic meter in one of the six soil vapor samples collected. No other petroleum hydrocarbons were detected at concentrations above the reporting limits; however, carbon dioxide was detected at concentrations ranging from 1.19 to 14.4 percent. These results appear unusual given the apparent proximity of the soil vapor samples to the smear zone and the detections of elevated concentrations of carbon dioxide. Detection of petroleum hydrocarbons at concentrations above reporting limits would be expected. To confirm these initial results, we request that you submit a Work Plan to further evaluate potential vapor intrusion to the adjacent apartment building. We request that the proposed scope of work include at a minimum the following:
    - An additional soil vapor probe installed between monitoring well MW-3 and the corner of the apartment building.
    - Re-sampling of the new and existing soil vapor probes.
    - Collection of soil samples at two depths within the upper five feet in any new soil vapor probe borings.

3. **Groundwater Monitoring.** Please continue groundwater monitoring on the existing semi-annual schedule. Please present results for the first quarter 2014 groundwater sampling event in the First Semi-Annual 2014 Groundwater Monitoring Report requested below.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Jerry Wickham), and to the State Water Resources Control Board's GeoTracker website according to the following schedule and file-naming convention:

- **February 13, 2014** – Work Plan for Vapor Intrusion Investigation
  File to be named: WP_R_yyyy-mm-dd RO0309

- **April 25, 2014** – First Semi-Annual 2014 Groundwater Monitoring Report
  File to be named: GWM_R_yyyy-mm-dd RO0309

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 ST system, and require your compliance with this request.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org. Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm.

Sincerely,

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

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Kristene Tidwell, Broadbent, 875 Cotting Lane, Suite G, Vacaville, CA 95688 (*Sent via E-mail to: ktidwell@broadbentinc.com*)

Jerry Wickham, ACEH (*Sent via E-mail to: jerry.wickham@acgov.org*)

GeoTracker, eFile

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT/DATA REQUESTS

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. Please visit the SWRCB website for more information on these requirements. (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)

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, 7835, 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, late 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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	**REVISION DATE:** July 25, 2012
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (petroleum UST and SCP) require submission of all reports in electronic form to the county's FTP site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single Portable Document Format (PDF) with no password protection**.
- 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)

Submission Instructions

1) 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 .loptoxic@acgov.org
   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**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   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.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to .loptoxic@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 @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) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.