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*By Alameda County Environmental Health at 8:47 am, Apr 17, 2013*

April 15, 2013

Mr. Jerry Wickham  
Senior Hazardous Materials Specialist  
Alameda County Environmental Health Services  
Environmental Protection, Local Oversight Program  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Subject: Letter of Transmittal for Additional Soil Vapor Investigation and Indoor Air Monitoring Workplan  
O'Reilly Auto Parts (Former Grand Auto #43)  
4240 International Boulevard (East 14th Street)  
Oakland, California 94601  
ACEH Fuel Leak Case No. RO0002483  
GeoTracker Global ID No. T06019705075**

Dear Mr. Wickham:

As required in your letter of December 12, 2012 regarding the above-referenced subject site, we submit this transmittal letter and accompanying work plan to further evaluate the extent of tetrachloroethene (PCE) in soil vapor and potential for soil vapor intrusion at the subject site by installation and sampling of additional soil vapor probes and collection of indoor air quality samples.

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.

Sincerely,

PACCAR Inc



Vicki ZumBrunnen, REM  
Environmental Project Supervisor



**AllWest**

**AllWest Environmental, Inc.**

Specialists in Physical Due  
Diligence and Remedial Services

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**ADDITIONAL SOIL VAPOR INVESTIGATION  
AND  
INDOOR AIR MONITORING WORKPLAN**

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(Former Grand Auto #43)  
4240 International Boulevard (East 14<sup>th</sup> Street)  
Oakland, California 94601**

**ACHCS Case # RO0002483  
Geotracker Global ID # T06019705075**

PREPARED FOR:

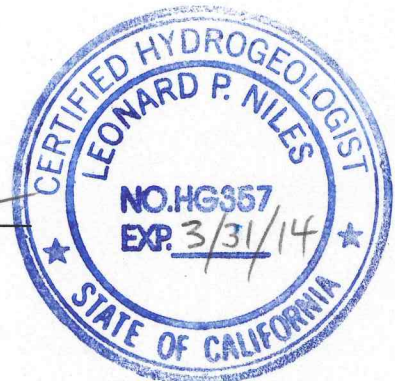
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ALLWEST PROJECT 13007.23  
April 15, 2013

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**I. INTRODUCTION**

AllWest Environmental, Inc. (AllWest) has prepared this workplan describing tasks to further characterize concentrations of volatile organic compounds (VOCs) in soil vapor and indoor air at the former Grand Auto # 43 facility (the subject site) referenced above (Figure 1). This proposed work will be performed in response to a request by the Alameda County Health Care Services Agency, Environmental Health Services (ACHCS/ACEH) in their letter of December 27, 2012 to further assess potential indoor soil vapor intrusion issues identified during the previous sub-slab soil vapor investigation conducted by AllWest during October 2012.

The purpose of the proposed work is to further evaluate potential impact by soil vapor intrusion of VOCs to indoor air quality at the subject site in the vicinity of the former car wash sump by installation and sampling of additional sub-slab soil vapor probes and collection of indoor air quality samples. Potential migration of soil vapor onto the subject property from offsite sources will also be assessed by advancement and sampling of soil vapor probes around the subject property perimeter. This work will be completed after approval and with oversight of the ACHCS. The primary goal is to close data gaps, determine whether mitigation measures are necessary, and enable case closure as a low risk solvent plume site.

This work plan briefly summarizes the site setting and background including previous investigations conducted at the property.

## **II. PROJECT BACKGROUND**

### **A. Site Location and Description**

The approximately 1.2 acre former Grand Auto retail facility is located at the northwest corner of High Street and International Boulevard (formerly 14<sup>th</sup> Street) in Oakland, California (Figure 1). The site currently is used as an O'Reilly Auto Parts store, which occupies the southeastern portion of the subject site building. The northwestern portion of the building, which contained the former Grand Auto service area, is currently vacant.

The site was used as a dance hall in 1903. Site use between 1903 and 1946 is unknown. Circa 1946, an L-shaped building was constructed on the site. This building was used as office space and for auto repair and painting. The date of demolition of this building is not known. In 1960 or 1961, the present building was constructed for use as a Safeway grocery store.

Grand Auto occupied the building in 1971, installed gasoline pump islands and three 10,000-gallon gasoline underground storage tanks (USTs) for retail gasoline sales, and a car wash with an associated drainage sump. The gasoline service station and car wash operated from circa 1972 to 1986. The USTs were removed in August 1986. The car wash drainage sump was removed in August 1992. In October 1993, the remaining fuel conveyance piping associated with the former USTs was excavated and removed from the site.

Between 1992 and 2012, site environmental conditions were characterized via soil borings and groundwater monitoring wells. A site plan is presented as Figure 2.

### **B. Site Geology and Hydrogeology**

The property is located on the East Bay Plain along the eastern slopes of the San Francisco Bay and immediately west of the East Bay Hills. The subject site is located at an elevation of approximately 30 feet above mean sea level (msl). The topographic gradient in the site vicinity is to the south-southwest toward San Francisco Bay.

Data from previous site borings advanced during subsurface investigations conducted during the 1990s and 2012 indicate the property is underlain by an irregularly layered sequence of clayey to silty gravelly sand and sandy to clayey gravel lenses separated by clayey to sandy silt and silty to sandy clay layers to a depth of approximately 35 feet below ground surface (bgs). As much as 20 feet of imported fill material has been reported at some areas of the site. However, the site is not in an area mapped as artificial fill [Hart Crowser, *Preliminary Site Investigation Report*, November 20, 1992 (Hart Crowser, 1992b) and

*Supplemental Site Investigation* June 18, 1993 (Hart Crowser, 1993), and AllWest, *Soil Vapor and Subsurface Investigation Report*, March 16, 2012 (AllWest, March 2012b)].

Shallow perched water-bearing zones were encountered at 14.5 feet bgs, 9.5 feet bgs and 10.4 feet bgs in borings B-1, B-2, and GP-2, respectively. Very moist to wet zones were encountered during the drilling of borings B-4 at approximately 11.5 to 20 feet bgs, B-5 at approximately 11.5 to 15.5 feet bgs, B-7 (MW-1) at approximately 9.5 to 10.5 feet bgs, and GP-1 at approximately 16.5 to 23.5 feet bgs, although free water was not encountered. These perched water-bearing and moist to wet zones indicate a possible discontinuous zone of perched groundwater. No other wet or perched zones were noted in other borings drilled at the subject property (Hart Crowser, 1992b and 1993).

Below the silt and clay layers, a fairly uniform layer of silty to gravelly sand was encountered in all borings at approximately 31 to 37 feet bgs, and extended to the total explored depth of approximately 46 feet bgs in most borings, except for a lower clay layer encountered from approximately 44 to 46 feet bgs in borings MW-3 and MW-4. Groundwater was first encountered within this sand layer at approximately 34.5 to 37 feet bgs in borings B-5, B-7 (MW-1), MW-2, MW-3, MW-4 and GP-1. Although first encountered groundwater within this sand layer was unconfined when these borings (except GP-1) were drilled near the end of a prolonged drought period in the early 1990s, increased precipitation has since resulted in static water levels rising to approximately 23 to 24 feet bgs; therefore groundwater within this sand layer is now confined. A relatively thick silty to sandy clay or clayey silt confining layer, which overlies the sand layer containing the first encountered groundwater, appears to be present in all of the deeper subject site borings. The static depth of confined groundwater encountered in GP-1 of approximately 20.6 feet bgs during January 2012 was approximately 3 to 4 feet higher than depth to water measured in the onsite monitoring wells during the December 20, 2011 monitoring event (Hart Crowser, 1992b and 1993, and AllWest, March 2012b).

The groundwater gradient in the site area is very flat, thus the determination of the groundwater flow direction is difficult to assess. Groundwater flow direction in the vicinity of the site has historically fluctuated, but was generally calculated to be to the east, at a very flat gradient, with the exception of the June 2008 monitoring event measurement which was to the west. The regional groundwater flow direction is presumed to be to the southwest from the Oakland Hills towards San Francisco Bay, concurrent with the topography. The historical fluctuations in gradient direction are not considered significant due to the very small differences in groundwater elevations measured (AllWest, March 2012b).

The depth to groundwater during the last monitoring event in December 2011 ranged between 22.51 feet below ground surface (bgs) and 24.13 feet bgs. The

local groundwater flow direction measured during the 2011 monitoring event was generally towards the east at a gradient of approximately 0.001 feet/foot [AllWest, *2011 Groundwater Monitoring Report*, March 16, 2012 (AllWest, March 2012a)].

### C. Previous Investigations and Remedial Actions

More detailed descriptions of site conditions and previous investigations from 1992 to 1996 are presented in the Hart Crowser, Inc. (Hart Crowser) reports titled: *Sampling and Analysis Plan, Grand Auto/Super Tire Facilities*, dated July 5, 1992 (Hart Crowser, 1992a), *Preliminary Site Investigation Report*, dated November 20, 1992 (Hart Crowser, 1992b), *Supplemental Site Investigation*, dated June 18, 1993 (Hart Crowser, 1993), *Quarterly Status Report*, dated January 14, 1994 (Hart Crowser, 1994a), *Quarterly Status Report*, dated November 9, 1994 (Hart Crowser, 1994b), *Facility Closure Report*, dated February 16, 1996 (Hart Crowser, 1996a), *Risk Assessment*, dated October 8, 1996 (Hart Crowser, 1996b).

More detailed descriptions of site conditions and previous investigations from 2000 to 2012 are presented in the AllWest reports titled: *Site Closure and Groundwater Monitoring Report*, dated August 15, 2000 (AllWest, 2000), *Annual Groundwater Monitoring and Well Destruction Report*, dated August 27, 2001 (AllWest, 2001), *Biennial Groundwater Monitoring Report*, dated July 28, 2008 (AllWest, 2008), *Soil Vapor Investigation and Groundwater Monitoring Work Plan*, dated April 15, 2011 (AllWest, 2011a), *Soil and Groundwater Investigation Workplan Addendum*, dated July 15, 2011 (AllWest, 2011b), *2011 Groundwater Monitoring Report*, dated March 16, 2012 (AllWest, 2012a), *Soil Vapor and Subsurface Investigation Report*, dated March 16, 2012 (AllWest, 2012b), *Additional Sub-Slab Soil Vapor Investigation [Workplan]*, dated August 1, 2012 (AllWest, 2012c), and *Sub-Slab Soil Vapor Probe Installation and Sampling Report*, dated December 18, 2012 (AllWest, 2012d). Historical boring and monitoring well locations are shown on Figure 2.

#### Soil Vapor Investigations in 2012

AllWest conducted a subsurface investigation in January 2012 to characterize current soil and groundwater conditions and potential indoor soil vapor intrusion conditions at the subject site. Six temporary soil vapor probes (SVP-1 through SVP-6) were installed to a depth of 5 feet bgs inside and outside of the building in the vicinity of the former car wash sump (Figure 2). PCE was detected in all six soil vapor samples collected at a maximum concentration of 4,600 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) in SVP-2 inside the building adjacent to the former sump. TCE was detected in soil vapor samples collected from SVP-2, SVP-3, SVP-5 and SVP-6 at a maximum concentration of 210  $\mu\text{g}/\text{m}^3$  in SVP-3. Low concentrations of other VOCs including BTEX, acetone, 1,3-butadiene, chloroform, dichlorodifluoromethane (Freon 12), ethanol, ethyl acetate, 4-ethyltoluene,



isopropyl alcohol (IPA), 4-methyl-2-pentanone (MIBK), naphthalene, propene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were also detected (AllWest, 2012b). Soil vapor analytical results are summarized in Figures 3.

PCE concentrations in probes SVP-3 and SVP-5 exceeded the corresponding California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Level (ESL) of  $1,400 \mu\text{g}/\text{m}^3$  for commercial/industrial land use (RWQCB, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Table E*, Interim Final November 2007, revised May 2008). None of the other VOCs detected in soil vapor samples exceeded their applicable ESLs (AllWest, 2012b).

AllWest concluded the highest VOC concentrations detected in soil vapor samples were from the vicinity of the former sump; however, soil vapor intrusion into the building interior is likely not a significant exposure pathway to building occupants, since only one of the three soil vapor samples collected from 5 feet beneath the building interior floor slab contained PCE at concentrations exceeding the applicable ESL, by less than one order of magnitude. (AllWest, 2012b).

In their letter of June 5, 2012 responding to the AllWest *Soil Vapor and Subsurface Investigation Report* (AllWest, March 2012b), the ACHCS requested additional assessment of potential indoor soil vapor intrusion by sub-slab soil vapor sampling within the subject site building adjacent to the former sump area. AllWest submitted a workplan titled *Additional Sub-Slab Soil Vapor Investigation*, dated August 1, 2012, which was approved in the ACHCS letter dated September 6, 2012.

AllWest Environmental, Inc. (AllWest) conducted a subsurface investigation in October 2012 to further evaluate the potential for impact by soil vapor intrusion to the indoor air quality within the O'Reilly Auto Parts store. Six permanent soil vapor probes SVP-7 through SVP-12 were installed on October 22, 2012 beneath the floor slab within the O'Reilly Auto Parts store to approximate depths of 0.5 feet bgs inside the building (Figure 2). AllWest collected soil vapor samples from SVP-7 through SVP-12 on October 27, 2012 in SUMMA canisters in general accordance with the State of California Department of Toxic Substances Control (DTSC) *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October 2011 (DTSC, 2011).

Soil vapor samples were analyzed for VOCs by EPA Method TO-15. Tetrachloroethene (PCE) was detected in soil vapor samples collected from sub-slab vapor probes SVP-7, SVP-8, SVP-9, SVP-10, SVP-11 and SVP-12, at respective concentrations of  $1,200 \mu\text{g}/\text{m}^3$ ,  $4,100 \mu\text{g}/\text{m}^3$ ,  $940 \mu\text{g}/\text{m}^3$ ,  $530 \mu\text{g}/\text{m}^3$ ,  $740 \mu\text{g}/\text{m}^3$  and  $1,700 \mu\text{g}/\text{m}^3$ . The PCE breakdown product trichloroethene (TCE) was detected in soil vapor samples collected from SVP-11 and SVP-12, at

respective concentrations of 18  $\mu\text{g}/\text{m}^3$  and 39  $\mu\text{g}/\text{m}^3$ . A summary of soil vapor analytical results are shown on Figure 3.

Low concentrations of other VOCs including acetone, benzene, carbon disulfide, dichlorodifluoromethane (Freon 12), ethanol, ethylbenzene, hexane, methylene chloride, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and xylenes were also detected.

PCE concentrations in probes SVP-8 and SVP-12 exceeded the RWQCB soil vapor ESL of 1,400  $\mu\text{g}/\text{m}^3$  for commercial/industrial land use (RWQCB, 2008). None of the other VOCs detected in soil vapor samples exceeded their applicable ESLs.

### **III. PURPOSE AND SCOPE OF WORK**

The purpose of this investigation is to evaluate the extent of VOC-impacted soil vapor and potential for impact by soil vapor intrusion of VOCs to the indoor air quality at the subject site by installing sub-slab soil vapor probes and collecting soil vapor samples within the O'Reilly Auto Parts store near the former car wash sump area, as requested by the ACHCS letter dated June 5, 2012. The scope of work, as proposed, consists of the following tasks:

- 1) Prepare this written workplan to address the technical comments of the ACHCS letter dated December 27, 2012. This will include locating sub-slab utility conduits, conducting an inventory of chemicals stored on site, conducting an additional sub-slab soil vapor investigation within the subject site building, an additional soil vapor investigation around the subject property perimeter, and indoor air quality sampling within the subject site building. Submit the workplan to the ACHCS for review and concurrence;
- 2) Conduct a review of City of Oakland Building Services and Fire Department files for information regarding sub-slab utility conduit layouts and historical hazardous materials storage and use within the subject site building. Obtain a current hazardous materials inventory list from the current building occupant, O'Reilly Auto Parts;
- 3) Update site-specific health and safety plan;
- 4) Engage the service of Underground Service Alert (USA) and a private underground utility locator to locate and clear underground utilities within the proposed investigation area so that the potential of accidental damage to underground utilities will be reduced during proposed subsurface investigation. The private utility locator will also attempt to conduct a survey of sub-slab sewer and other utility lines within the building, including the suspected sewer line connected to the former sump.

Notify the ACHCS and site tenants, property owners and facility maintenance prior to the start of field work;

- 5) Retain the service of a C-57 licensed drilling contractor for the installation of three (3) semi-permanent sub-slab soil vapor probes to approximately 0.5 feet below the concrete floor slab of the northern and western areas of the O'Reilly Auto Parts store area within the subject site building. Probe installations will be in general accordance with State of California Environmental Protection Agency (CalEPA) Department of Toxic Substance Control (DTSC) *Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October 2011;
- 6) Retain the service of a C-57 licensed drilling contractor for the advancement by Geoprobe<sup>®</sup> DPT methods, using a limited access rig, of nine (9) temporary expendable-point soil vapor sampling probes to approximately 5 feet below the concrete floor slab near or adjacent to the six (6) existing and three (3) proposed permanent sub-slab soil vapor probes within the subject site building. Advance by Geoprobe<sup>®</sup> DPT methods, using a truck-mounted rig, eight (8) temporary expendable-point soil vapor sampling probes to approximately 5 feet bgs around the subject property perimeter and in the vicinity of the former USTs. Probe installations will be in general accordance with CalEPA DTSC *Advisory – Active Soil Gas Investigations*, April, 2012;
- 7) Collect twenty (20) soil vapor samples from the newly installed temporary soil vapor probes and semi-permanent sub-slab probes using SUMMA canisters in general accordance with the DTSC *Advisory – Active Soil Gas Investigations*, April, 2012. Retain one (1) soil vapor sample from each vapor probe, and one (1) ambient leak detection gas shroud sample, for analytical testing. Temporary soil vapor probes will be removed and boreholes grouted with neat cement. Sub-slab vapor probes will be left in place for future monitoring;
- 8) Maintain soil vapor and ambient leak detect gas samples under chain-of-custody and transport the samples to a Department of Health Services (DHS) certified analytical laboratory (McCampbell Analytical of Pittsburg, California) for chemical analyses. Analyze twenty (20) soil vapor samples for VOCs using EPA Method TO-15 (mid detection level, full scan) and helium by ASTM D1946, and one (1) leak detection gas sample for helium only by ASTM D1946;
- 9) Perform a building survey and hazardous materials inventory audit of the O'Reilly Auto Parts store prior to conducting indoor air monitoring in general accordance with CalEPA Department of Toxic Substance Control (DTSC) *Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October 2011;

- 10) Collect four (4) indoor air quality (IAQ) samples inside the O'Reilly Auto Parts store area within the subject site building, including one (1) within the current storeroom/former car wash, one (1) in the restroom, one (1) in the main stockroom and one (1) in the main retail store area. Collect one (1) outdoor ambient air control (OAA) sample in the prevailing upwind location on the subject building roof. The air samples will be collected over a 24-hour period beginning and ending during normal weekday business hours using Summa canisters in general accordance with DTSC *Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October 2011;
- 11) Maintain IAQ and OAA samples under chain-of-custody and transport the samples to a Department of Health Services (DHS) certified analytical laboratory (McCampbell Analytical of Pittsburg, California) for chemical analyses. Analyze IAQ and ambient air samples for VOCs using EPA Method TO-15 SIM (low detection level, full scan); and
- 12) Prepare a written report describing the field activities, summarizing the laboratory data, presenting investigation findings, and providing conclusions and recommendations. Upload the report to the ACHS FTP site and GeoTracker database;
- 13) Collect a second round of three (3) soil vapor samples six months after the first event from the newly installed permanent sub-slab probes per DTSC guidance and submit for chemical analysis as previously described above;
- 14) Collect a second round of four (4) IAQ samples inside the subject site building and one (1) OAA sample on the subject building roof per DTSC guidance and submit for chemical analysis as previously described above; and
- 15) Prepare a written report describing the second semi-annual soil vapor and indoor air monitoring field activities, summarizing the laboratory data, presenting investigation findings, and providing conclusions and recommendations. Upload the report to the ACHCS FTP site and GeoTracker database.

#### **IV. INVESTIGATIVE ACTIVITIES**

##### **A. Agency File Review**

AllWest will review the City of Oakland Building Services Division (BSD) files for information regarding the layout of sub-slab sanitary sewer lines and other utilities within the subject site building. AllWest will also review the City of Oakland Fire Department (OFD) hazardous materials files for the subject site for information regarding historical and current storage and use of hazardous materials and hazardous waste, including permits, hazardous materials business

plans (HMBP), hazardous materials and waste inventory lists, OFD inspection records, and potential notices of violation. The ACHCS informed AllWest that they have no hazardous materials files for the subject property, and that the OFD is the Certified Unified Program Agency (CUPA) with jurisdiction for sites within the City of Oakland. AllWest will also request an inventory list of hazardous materials and automotive chemicals stocked for retail sale at the subject site from the current occupant, O'Reilly Auto Parts.

**B. Permitting**

According to Alameda County Public Works Agency (ACPWA), drilling permits are not required for installation of interior sub-slab soil vapor probes. However, permits are required for the exterior temporary soil vapor probes. AllWest will prepare and submit a drilling permit application to ACPWA for review and approval. Upon permit approval, AllWest will notify ACPWA, ACHCS, and the site tenant and property owner of the drilling schedule a minimum of 72 working hours in advance to allow scheduling of drilling and grouting inspection.

**C. Health and Safety Plan**

AllWest will update the site specific health and safety plan prior to mobilizing to the site. A tailgate safety meeting will be given prior to commencing work. All site personnel will be required to review the health and safety plan.

**D. Underground Utility Inspection and Conduit Survey**

To avoid damage to underground utility installations during the course of the subsurface investigation, AllWest will contact Underground Service Alert (USA), an organization for public utility information, on the pending subsurface investigation. USA will then notify public and private entities that maintained underground utilities within the site vicinity to locate and mark their installations for field identification. A private underground utility locator, Subtronic Corporation (Subtronic) of Concord, California, will also be employed by AllWest to conduct a magnetometer sweep investigation to locate marked and unmarked underground utilities in the vicinity of the proposed boring locations, both inside and outside of the subject site building.

Subtronic will also attempt to conduct a utility conduit survey of sub-slab sanitary sewer lines and other utilities within the subject site building, including the suspected sewer line in the vicinity of the former sump, which may be potential conduits for contaminants. Attempts to trace the sewer line to the sump from a nearby floor drain during previous subsurface investigations were unsuccessful due to the drain being blocked. Other qualified contractors may be used if necessary.

## **E. Geoprobe® DPT Soil Vapor Probe Advancement and Installation**

A State of California C-57 licensed drilling contractor (Vironex, Inc. of Concord, California) will advanced ten (10) shallow temporary soil vapor probes using Geoprobe® DPT methods to a depth of approximately 5 feet bgs. Nine (9) temporary soil vapor probes will be advanced with a limited access rig inside the subject site building, located near or adjacent to the six (6) existing sub-slab soil vapor probes (SVP-7 through SVP-12), and adjacent to the three (3) proposed permanent sub-slab soil vapor probes. The purpose of collecting soil vapor samples at 5 feet bgs adjacent to the sub-slab vapor probes at 0.5 feet bgs is to evaluate whether VOCs detected in soil vapor samples from the sub-slab probes originate from impacted soil below or are transported laterally within the sub-base material from other sources.

Eight (8) additional temporary soil vapor probes will be advanced using truck-mounted Geoprobe® DPT methods to a depth of approximately 5 feet bgs in the parking areas and driveways around the subject site perimeter to the northeast, southeast and southwest of the building to evaluate potential soil vapor migration from offsite sources. Proposed soil vapor probe locations are shown in Figure 4.

Following coring of the concrete floor slab or asphalt pavement, Geoprobe® DPT methods will drive extension rods with a nominal 1 ½-inch diameter PRT soil vapor probe into native soil to 5 feet bgs. The probe is retracted slightly to detach the expendable drive point, expose the vapor sampling inlet and open a small void in the soil. New disposable polyethylene sample tubing with a PRT fitting is inserted into the drive rod and connected to the PRT vapor probe. Hydrated granulated bentonite is used to seal the borehole annulus around the drive rods to the surface of the concrete slab. At least 2 hours will elapse prior to collecting vapor samples to allow the bentonite seal to hydrate and borehole conditions to equalize, per DTSC vapor sampling guidelines.

Alternatively, borings will be advanced using truck-mounted or limited access Geoprobe® DPT equipment, or a hand-operated slide hammer, to drive 1-inch outside diameter (OD) rods and probes with expendable steel tips to 5 feet bgs, without recovering soil cores. After the probes are advanced to the specified depth, the probes and drive rods are removed, leaving the borehole open with the expendable probe tip at the bottom.

Plastic soil vapor probes, ½-inch diameter by 2-inches long and tipped with porous plastic membranes, are then inserted to the bottom of the 1-inch diameter boreholes at 5 feet bgs. The probe tips are attached to 7-foot lengths of 0.25-inch OD Teflon™ tubing extending to the top of the floor slab. A fine sand filter pack is placed in the borehole annulus around the probe. Hydrated bentonite chips are then used to fill the annular space above the filter pack to the top of the floor slab.

The bentonite is allowed to hydrate and borehole conditions to equalize for 2 hours prior to sampling activities, per DTSC vapor sampling guidelines.

Soil vapor probe installation procedures will be performed in general accordance with guidelines presented in the CalEPA DTSC *Advisory – Active Soil Gas Investigations*, April, 2012. AllWest Geoprobe® DPT soil vapor sampling procedures are included in Appendix B.

#### **F. Sub-Slab Soil Vapor Probe Installation**

A State of California C-57 licensed drilling contractor (Vironex, Inc. of Concord, California) will core through the approximately 6-inch thick concrete floor slab and approximately 1 to 4 inches into the sub-base using a power-operated coring bit or Roto-Hammer at three (3) locations within the O'Reilly Auto Parts store. Other qualified contractors may be used if necessary. One (1) boring will be located in the northeast corner of the building within the northern portion of the former car wash area (current stockroom) in the vicinity of the current waste oil and hazardous waste storage area, one (1) boring will be located in the northwest portion of the building within the stockroom area, and one (1) boring will be located in the southwest corner of the building within the main store area. The borings will be completed as semi-permanent sub-slab soil vapor probes. Proposed sub-slab vapor probe locations are shown on Figure 4.

Three (3) shallow permanent sub-slab soil vapor probes will be installed, one in each of the boreholes, per the DTSC *Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, Appendix G, October 2011. Stainless steel vapor probes, ½-inch diameter by 2-inch long and tipped with porous plastic membranes, are inserted to the bottom of the boreholes. The probe tips are attached to approximately 6-inch lengths of 0.25-inch outside diameter (OD) stainless steel or Teflon™ tubing extending to about 1 inch below the top of the floor slab. The top of the stainless steel tubing in each probe is attached to a brass threaded female Swagelock™ fitting and cap recessed below the concrete floor. A fine sand filter pack approximately 4 inches thick is placed in the borehole annulus around the probes. Hydrated granulated bentonite is used to fill the annular space above the filter pack to approximately 1 inch above the bottom of the floor slab.

A 2-inch diameter plastic cap or 4-inch diameter metal vault box is set flush with the top of the floor slab to protect the probe fitting. Quick-drying cement/bentonite grout is used to fill the remaining annular space to the Swagelock™ fitting approximately ½ to ¾ inch below the top of the slab. At least 2 hours is allowed to elapse prior to collecting vapor samples to allow the bentonite and cement/concrete grout seal to hydrate and borehole conditions to equalize, per DTSC sub-slab vapor sampling guidelines (DTSC, 2011). Standard soil vapor

probe installation procedures and a schematic of a sub-slab vapor probe are included in Appendix B.

## **G. Soil Vapor Sampling**

AllWest will collect soil vapor samples from the seventeen (17) temporary and three (3) new permanent soil vapor probes following a minimum 2-hour period after hydration of the bentonite surface seals. The scheduled second semi-annual sampling event of the six (6) previously installed permanent sub-slab soil vapor probes SVP-7 through SVP-12 will be conducted prior to installation of the new probes. Soil vapor sampling will be performed in general accordance with the DTSC *Advisory – Active Soil Gas Investigations*, April 2012. AllWest soil vapor sampling procedures are included in Appendix B.

AllWest will collect one soil vapor sample from each probe in laboratory prepared 1-liter capacity SUMMA canisters. Prior to vapor purging and sample collection, a vacuum leak test of the flow-controller/gauge manifold assembly is performed for a minimum of 2 minutes. Prior to sample collection, approximately 0.5 liter of soil vapor (minimum of 3 sample system volumes) is purged at a flow rate of approximately 150-200 milliliters per minute (ml/min) from each sub-slab vapor probe using a dedicated 6-liter capacity SUMMA purge canister.

While sampling, a leak detection test is conducted using helium as a leak tracer inside an airtight plastic shroud. The helium concentration within the shroud is monitored with a helium gas detect meter to keep the concentration at approximately 20%. To verify meter accuracy, an ambient air sample is collected inside the leak detection shroud during the sampling of one probe to measure helium concentrations inside the shroud. Depending upon helium availability, other leak detection gases such as isopropyl alcohol (IPA) or difluoroethane may be substituted. A schematic diagram of the soil vapor sampling system and leak detection shroud is included in Appendix B.

Flow rates of approximately 150-200 ml/min are used to fill the sample canisters. The canisters are filled to approximate 80% of capacity (approximately 5 inches of mercury vacuum remaining). All pertinent field observations, pressure, times and readings are recorded. After filling and closing the sample valve, all SUMMA canisters are removed from the manifold, labeled with sampling information, including initial and final vacuum pressures, placed in a dark container and transported under chain-of-custody to the analytical laboratory, McCampbell Analytical, Inc., in Pittsburg, California. A copy of the AllWest soil vapor sampling field form is included in Appendix B. The permanent probes will be left in place and sealed with Swagelock™ caps protected by flush-mounted plastic caps or metal vault boxes for future monitoring.



A second soil vapor monitoring event of the three (3) newly installed permanent sub-slab probes will be performed six months from the first event in order to evaluate any seasonal variability in sub-slab vapor conditions, as recommended in the DTSC *Vapor Intrusion Guidance* (DTSC, October 2011). The scope of work and sampling methodology will be similar to those described above. Laboratory analyses will be similar to those described below in Section VI.

#### **H. Borehole Backfilling**

At the completion of drilling and sampling activities and removal of all drive rods and temporary soil vapor sample probes, the borings for the temporary probes will be backfilled with a “neat” Portland Type I or II cement grout slurry tremied into the borehole through a PVC pipe. The level of grout will be checked to ascertain if any settling has occurred and will be “topped off” if required. The cored concrete floor slab will be backfilled with a concrete slurry. The ACPWA will be notified 72 hours in advance of the anticipated grouting time in order to schedule inspection.

#### **I. Building Survey and Hazardous Materials Inventory**

Prior to sampling activities, AllWest will perform a survey of the building layout and conditions to determine optimum IAQ sample locations, and an inventory of chemicals stocked, stored and used at the O’Reilly Auto Parts store that may affect IAQ sample data in general accordance with the DTSC *Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October 2011. Building survey and hazardous material inventory forms are included in Appendix C.

#### **J. Indoor Air Quality Sampling**

To evaluate the potential indoor air quality impact of intrusion of VOCs in the vapor phase from soil beneath the concrete floor slab in the subject site building, four (4) indoor air quality (IAQ) samples and one outdoor ambient air (OAA) control sample will be collected at the subject site. One (1) IAQ sample will be collected within the current storeroom/former car wash, one (1) in one of the restrooms, one (1) in the main stockroom, and one (1) in the main retail store area. IAQ samples will be collected at approximately 3 to 5 feet above floor level. The purpose of the restroom sample will be to evaluate sewer lines as potential preferential pathways.

One (1) outdoor OAA sample will be collected in the prevailing upwind location on the subject building roof for security reasons. Outdoor OAA samples will be collected approximately 6 feet above ground level. Proposed IAQ and OAA sample locations are shown in Figure 4.

AllWest will collect air quality samples in laboratory prepared 6-liter capacity SUMMA canisters. Flow rates of approximately 3.5 milliliters per minute (ml/min) are used to fill the canisters over a 24 hour period. The canisters are filled to approximate 80% of capacity. All pertinent field observations, pressure, times and readings are recorded. Sampling is conducted in general accordance with the DTSC *Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October 2011. Sample containers are labeled, placed in a dark container and transported under chain-of-custody control to the California State-certified analytical laboratory, McCampbell Analytical in Pittsburg, California. Other certified analytical laboratories may be used if necessary. An example of an indoor air quality field sampling log is included in Appendix C.

A second IAQ monitoring event will be performed six months from the first event in order to evaluate any seasonal variability in sub-slab vapor conditions, as recommended in the DTSC *Vapor Intrusion Guidance* (DTSC, October 2011). The scope of work, number of samples and sampling methodology will be similar to those described above, except that samples will be collected over an 8-hour period at flow rates of 10.4 ml/min. Laboratory analyses will be similar to those described below in Section VI.

## **V. QUALITY ASSURANCE / QUALITY CONTROL PROGRAM**

### **A. Sample Preservation, Storage and Handling**

All SUMMA canisters are removed from the manifold, labeled with sampling information, including initial and final vacuum pressures, and placed in a dark container for transport to the analytical laboratory

### **B. Chain-Of-Custody Program**

All samples collected for this project will be transported under chain-of-custody protocol. The chain-of-custody program allows for the tracing of possession and handling of individual samples from the time of field collection through laboratory analysis. The document includes the signature of the collector, date and time of collection, sample number, number and type of sample containers including preservatives, SUMMA canister ID numbers, initial and final SUMMA canister vacuums, parameters requested for analysis, signatures of persons and inclusive dates involved in the chain of possession. Upon delivery to the laboratory the document will also include the name of the person receiving the samples, and date and time samples were received.

## **VI. ANALYTICAL METHODS**

All samples selected for analysis will be analyzed by a State of California certified independent analytical laboratory. McCampbell Analytical, Inc., of Pittsburg, California, will likely perform all soil vapor and leak detection gas sample analyses. However, other qualified laboratories may be utilized dependent on work load and time frame considerations.

The soil vapor samples collected during this investigation will be analyzed for VOCs using EPA Method TO-15 (mid detection level, full scan) and helium by ASTM D1946. The ambient leak detection gas sample will be analyzed for helium by ASTM D1946. Depending upon helium availability, analyses for other leak detection gases such as isopropyl alcohol (IPA) or difluoroethane by EPA Method TO-15 may be substituted instead.

The IAQ and OAA control samples collected during this investigation will be analyzed for VOCs using EPA Method TO-15 SIM (low detection level, full scan). Depending on availability of SIM-certified Summa canisters from the analytical laboratory, EPA Method TO-15 Low Level may be used instead.

## **VII. REPORT PREPARATION**

A written report will be prepared for this investigation after the completion of all field work and receipt of analytical results. Included in the report will be vapor probe installation details, chain-of-custody documents and copies of the analytical laboratory reports. The report will be reviewed by a California Professional Geologist. Analytical data will be compared to RWQCB soil vapor and indoor air ESLs for commercial use evaluate potential indoor soil vapor intrusion impact, to identify any remaining data gaps, determine whether mitigation measures are necessary, and to evaluate low threat case closure criteria.

The report and associated documents (laboratory analytical reports, boring logs, etc.) will be uploaded to the California State Water Resources Control Board (SWRCB) GeoTracker database, and the ACHCS FTP website. A similar report will be prepared for the second semiannual soil vapor and IAQ monitoring events to be performed six months after the first.

## **VIII. PROJECT STAFF AND SCHEDULE**

Mr. Leonard P. Niles, P.G., C.H.G., a California Professional Geologist (PG 5774) and Certified Hydrogeologist (CHG 357), will provide technical oversight for this project and act as the project manager and regulatory liaison. Additionally, AllWest's staff of engineers, geologists, and technicians will be employed to perform the various tasks of

the project. AllWest will inform the ACHCS at least 72 hours prior to the start of field activities. AllWest will inform the ACHCS of any significant developments during the course of the investigations. A second soil vapor monitoring event will be performed approximately six months after the first, using the previously installed semi-permanent sub-slab soil vapor probes.

## **IX. LIMITATIONS**

AllWest has prepared this remedial investigation and corrective action plan for the exclusive use of PACCAR, Inc. (Client) for this particular project and in accordance with generally accepted practices at the time of the work and with our written proposal. No other warranties, either expressed or implied is made as to the professional advice offered. This plan is not a specification for the proposed work and should not be used to bid out any of the proposed work found within. Reliance on this plan by any party other than the Client is at the user's sole risk.

Background information that AllWest has used in preparing this report, including but not limited to previous field measurements, analytical results, site plans, and other data, has been furnished to AllWest by the Client, its previous consultants, and/or third parties. AllWest has relied on this information as furnished. AllWest is not responsible for nor has it confirmed the accuracy of this information.

## **X. REFERENCES**

AllWest Environmental, Inc. (AllWest), *Environmental Site Assessment, Grand Auto Store #43, 4240 East 14<sup>th</sup> Street, Oakland, California 94601*, August 10, 1995.

AllWest, *Workplan for Well Development and Sampling at Grand Auto #43, 4240 East 14<sup>th</sup> Street, Oakland*, October 29, 1999.

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AllWest, *Sub-Slab Soil Vapor Probe Installation and Sampling Report, O'Reilly Auto Parts (Former Grand Auto #43), 4240 International Boulevard (East 14<sup>th</sup> Street), Oakland, California, December 18, 2012.*

Hart Crowser, Inc. (Hart Crowser), *Sampling and Analysis Plan, Grand Auto/Super Tire Facilities, 4240/4256 East 14<sup>th</sup> Street, Oakland, California, July 13, 1992.*

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DTSC, *Vapor Intrusion Mitigation Advisory Final Revision 1*, October 2011.

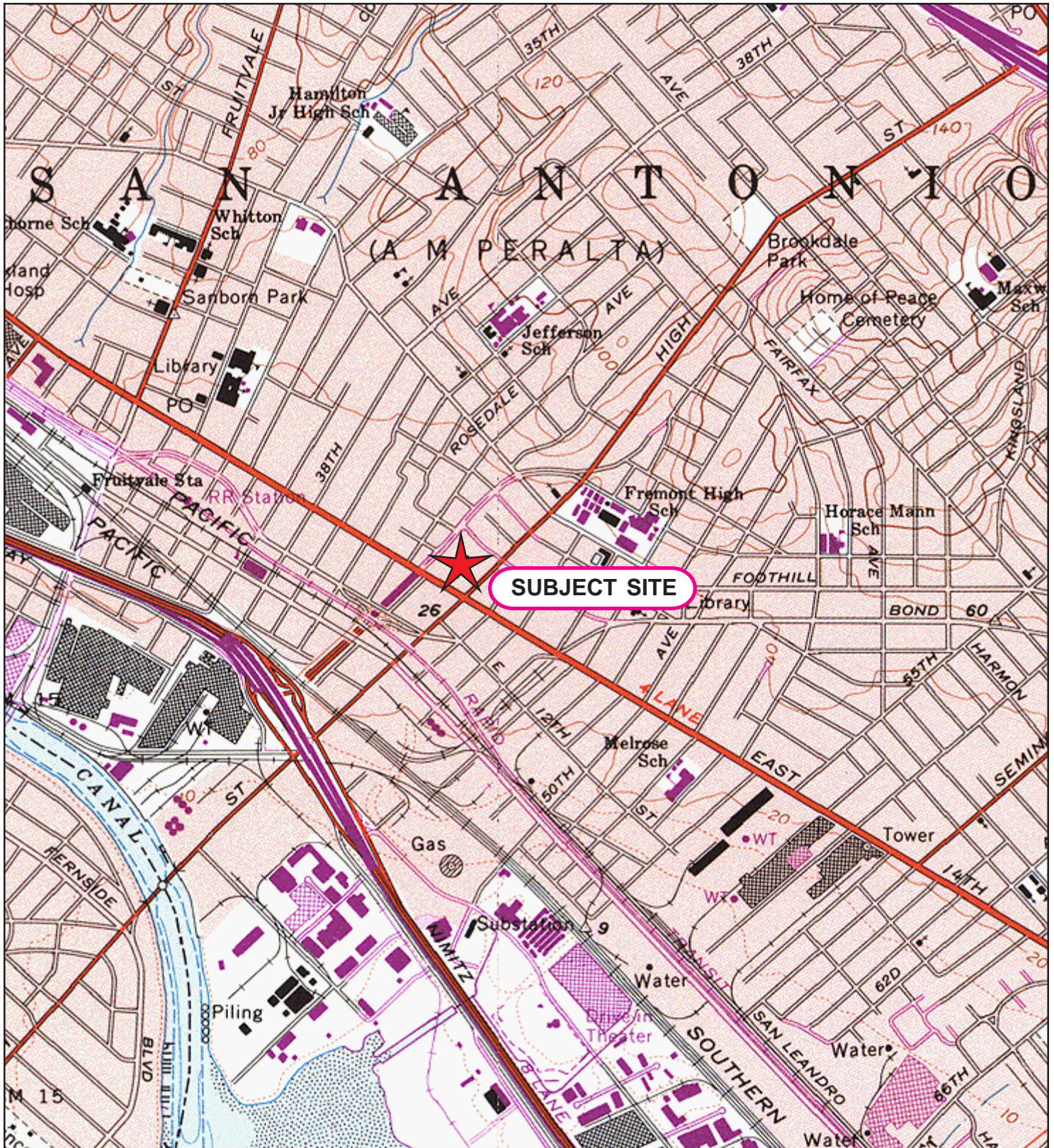
DTSC and State of California Regional Water Quality Control Board, Los Angeles Region (LARWQCB), *Advisory – Active Soil Gas Investigations*, April 2012.

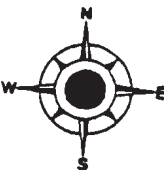

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State of California Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB), *Screening For Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Interim Final November 2007, Updated March 2008.

# FIGURES

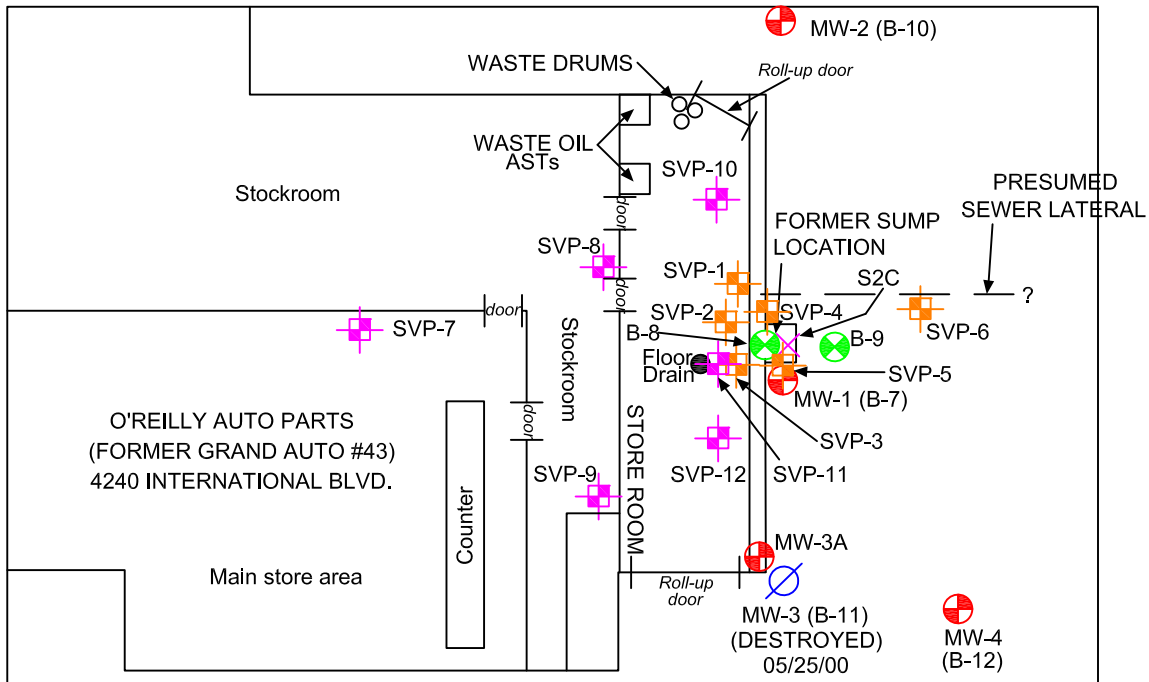




 NOT TO SCALE	 PROJECT NO. 13007.23	<b>SITE LOCATION MAP</b>
		<b>FIGURE 1</b> 4240 EAST 14TH STREET OAKLAND, CALIFORNIA SOURCE: USGS TOPO PREPARED BY: E. VELA DATE: 04/08/11

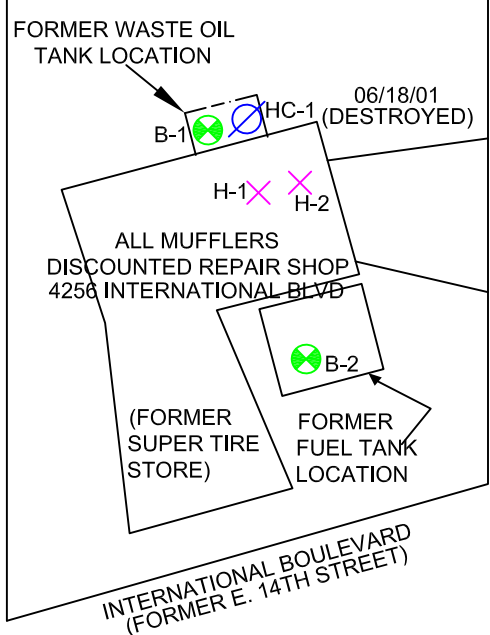
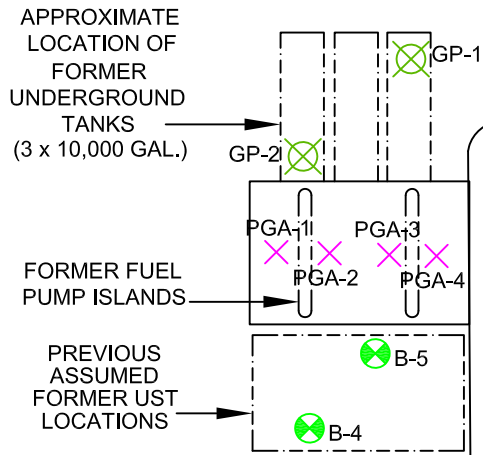


MISSION AUTOMOTIVE



SEWER LINE  
HIGH STREET

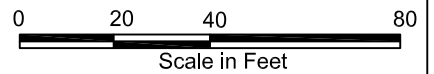
FORMER DRY CLEANERS



EXISTING DRY CLEANERS

LEGEND

- MW-2 Existing Well Location
- MW-3 Former Well Location (destroyed 2000)
- PGA-1 Trench Sample Location (HC, 1993)
- B-1 Boring Location (HC, 1992)
- GP-1 Geoprobe Boring Location (AllWest, 2012)
- SVP-1 Temporary Soil Vapor Probe Location (AllWest, January 2012)
- SVP-7 Permanent Sub-Slab Soil Vapor Probe Location (AllWest, October 2012)



SITE PLAN WITH BORING AND WELL LOCATIONS

FIGURE 2: O'REILLY AUTO PARTS

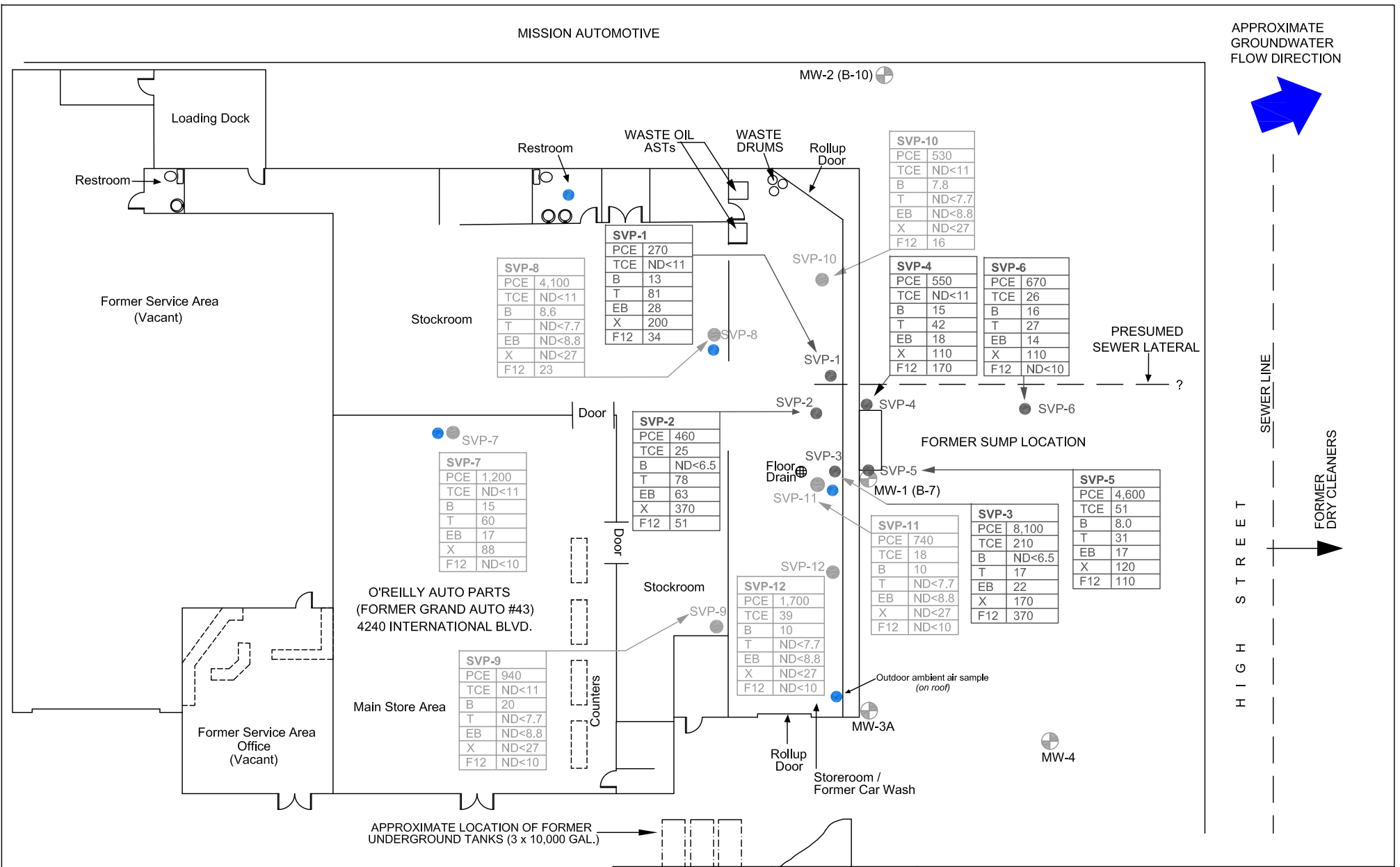
4240 INTERNATIONAL BOULEVARD

OAKLAND, CALIFORNIA

PROJECT NO.  
13007.23

SOURCE: ALLWEST

PREPARED BY: C. RAMELB (12/05/12)



**LEGEND**

- MW-2 Existing Well Location
  - Temporary 5 feet bgs probe soil vapor sample location (AllWest, January 2012)
  - Semi-Permanent sub-slab probe soil vapor sample location (AllWest, October 2012)
  - Proposed indoor/outdoor air sample locations
- Concentrations in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )
- PCE - tetrachloroethene      EB - ethyl benzene      TCE - trichloroethene  
 T - toluene      B - benzene      X - xylenes (total)  
 F12 - Freon 12 (dichloro-difluoromethane)

  Approximate Scale	 <b>AllWest</b>	<b>SOIL VAPOR SAMPLE ANALYTICAL SUMMARY, 01/04/12 AND 10/27/12, WITH PROPOSED INDOOR AND OUTDOOR AIR SAMPLE LOCATIONS</b>
	<b>FIGURE 3: FORMER GRAND AUTO #43</b>	
PROJECT NO. 13007.23		4240 EAST 14TH STREET (INTERNATIONAL BOULEVARD) OAKLAND, CALIFORNIA SOURCE: ALLWEST / PREPARED BY: C. RAMELB (12/05/12)

**SVP-10**

PCE	530
TCE	ND<11
B	7.8
T	ND<7.7
EB	ND<8.8
X	ND<27
F12	16

**SVP-8**

PCE	4,100
TCE	ND<11
B	8.6
T	ND<7.7
EB	ND<8.8
X	ND<27
F12	23

**SVP-1**

PCE	270
TCE	ND<11
B	13
T	81
EB	28
X	200
F12	34

**SVP-4**

PCE	550
TCE	ND<11
B	15
T	42
EB	18
X	110
F12	170

**SVP-6**

PCE	670
TCE	26
B	16
T	27
EB	14
X	110
F12	ND<10

**SVP-7**

PCE	1,200
TCE	ND<11
B	15
T	60
EB	17
X	88
F12	ND<10

**SVP-2**

PCE	460
TCE	25
B	ND<6.5
T	78
EB	63
X	370
F12	51

**SVP-11**

PCE	740
TCE	18
B	10
T	ND<7.7
EB	ND<8.8
X	ND<27
F12	ND<10

**SVP-5**

PCE	4,600
TCE	51
B	8.0
T	31
EB	17
X	120
F12	110

**SVP-12**

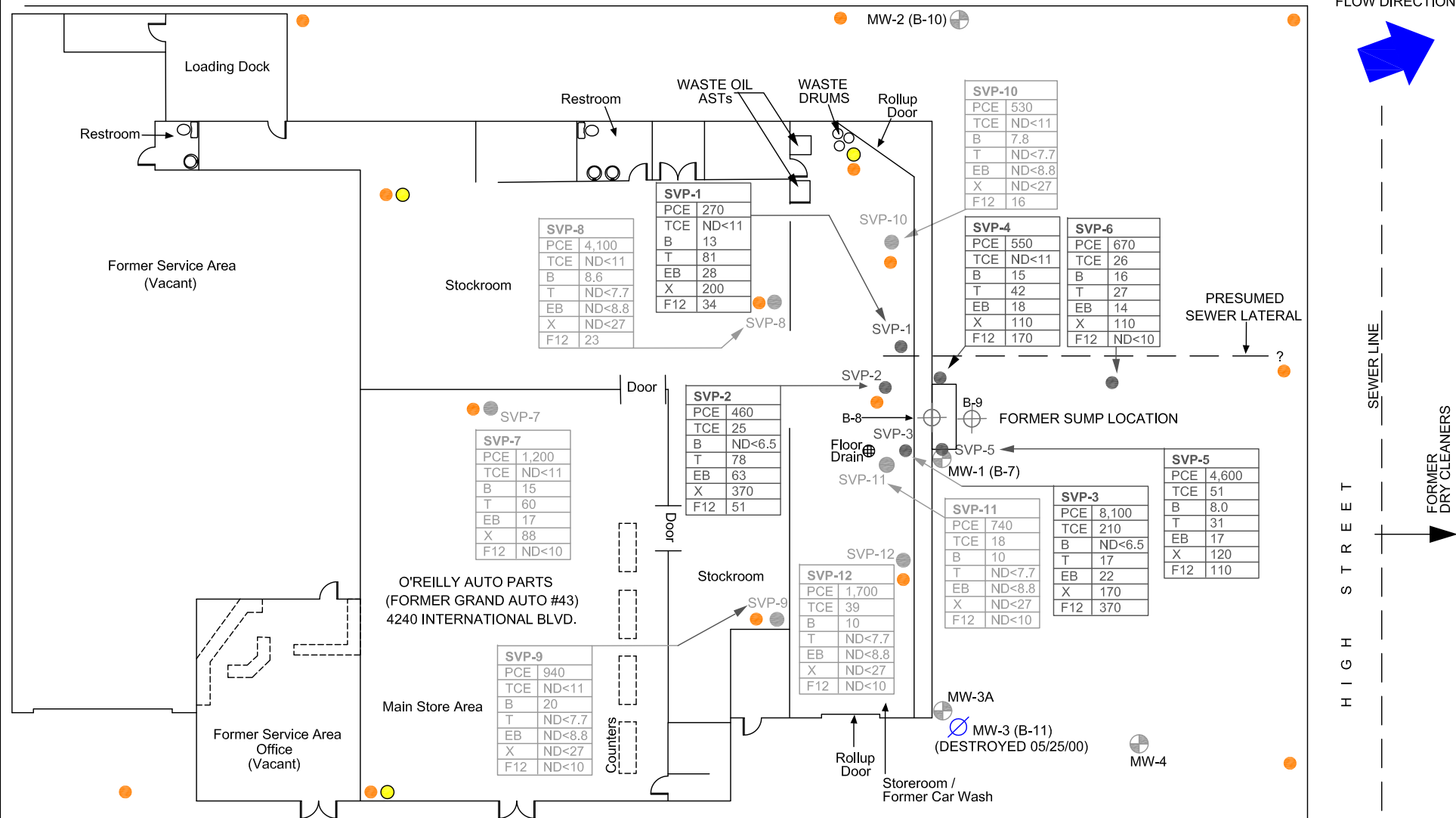
PCE	1,700
TCE	39
B	10
T	ND<7.7
EB	ND<8.8
X	ND<27
F12	ND<10

**SVP-9**

PCE	940
TCE	ND<11
B	20
T	ND<7.7
EB	ND<8.8
X	ND<27
F12	ND<10

MISSION AUTOMOTIVE

APPROXIMATE  
GROUNDWATER  
FLOW DIRECTION

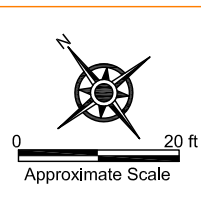


LEGEND

- MW-2 (B-10) Existing Well Location
- Temporary 5 feet bgs probe soil vapor sample location (AllWest, January 2012)
- Proposed temporary soil vapor probe location (to 5 feet bgs)
- B-1 Boring Location (HC, 1992)
- Semi-Permanent sub-slab probe soil vapor sample location (AllWest, October 2012)
- Proposed permanent sub-slab soil vapor probe location
- GP-1 Geoprobe Boring Location (AllWest, 2012)

Concentrations in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

PCE - tetrachloroethene    EB - ethyl benzene    TCE - trichloroethene  
 T - toluene    B - benzene    X - xylenes (total)  
 F12 - Freon 12 (dichloro-difluoromethane)



**AllWest**

**PROPOSED SOIL VAPOR PROBE LOCATIONS**

**FIGURE 4: FORMER GRAND AUTO #43**

4240 EAST 14TH STREET (INTERNATIONAL BOULEVARD)  
 OAKLAND, CALIFORNIA

PROJECT NO. 13007.23  
 SOURCE: ALLWEST  
 PREPARED BY: C. RAMELB (12/05/12)

# Appendix A





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

December 27, 2012

Ms. Vicki ZumBrunnen (*Sent via E-mail to: [Vicki.ZumBrunnen@PACCAR.com](mailto:Vicki.ZumBrunnen@PACCAR.com)*)  
PACCAR, Inc.  
Corporate Environmental Department  
P.O. Box 1518  
Bellevue, WA 98009

Hess Properties LLC  
c/o Mr. Joseph Hess  
2709 Park Avenue  
La Verne, CA 91750  
85012

Transamerica Title Insurance Company  
c/o CSK Auto, Inc.  
645 E Missouri Avenue

Phoenix, AZ

Subject: Sub-slab Soil Vapor Sampling Results for SLIC Case No. RO0002483 and GeoTracker Global ID T06019705075, Grand Auto, 4240 International Boulevard, Oakland, CA 94601

Dear Ms. ZumBrunnen, Mr. Hess, and Transamerica Title Insurance Company:

Alameda County Environmental Health (ACEH) staff has reviewed the Spills, Leaks, Investigations, and Cleanup (SLIC) case file for the subject site including the recently submitted documents entitled, "*Sub-Slab Soil Vapor Probe Installation and Sampling Report*," dated December 18, 2012. The "*Sub-Slab Soil Vapor Probe Installation and Sampling Report*," which was prepared by AllWest Environmental, presents results from sub-slab soil vapor sampling conducted within the interior of the building.

Tetrachloroethene (PCE) was detected in each of the six sub-slab soil vapor samples collected at concentrations up to 4,100 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The concentration of PCE in sub-slab soil vapor exceeding the Environmental Screening Level (ESL) for commercial land use of  $1,400 \mu\text{g}/\text{m}^3$  (Regional Water Quality Control Board, May 2008) in two of the six samples collected. The extent and source of PCE in sub-slab soil vapor has not been defined. Based on these results, the "*Sub-Slab Soil Vapor Probe Installation and Sampling Report*," recommends locating sub-slab utility conduits, conducting an inventory of chemicals stored on site, indoor air sampling concurrent with a second sub-slab monitoring event, and installation of additional soil vapor and sub-slab probes. We generally concur with the proposed scope of work and request that you submit a Work Plan **no later than March 12, 2013** to conduct the proposed scope of work.

#### **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:

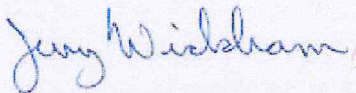
- **March 12, 2013** – Vapor Intrusion Assessment Work Plan  
File to be named: WP\_R\_yyyy-mm-dd RO2483



Responsible Parties  
RO0002483  
December 27, 2012  
Page 2

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org). Case files can be reviewed online at the following website: <http://www.acgov.org/aceh/index.htm>. If your email address does not appear on the cover page of this notification ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Sincerely,



Digitally signed by Jerry Wickham  
DN: cn=Jerry Wickham, o=Environmental Health,  
ou=Alameda County, email=jerry.wickham@acgov.org,  
c=US  
Date: 2012.12.27 10:36:59 -08'00'

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: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (Sent via E-mail to: [lgriffin@oaklandnet.com](mailto:lgriffin@oaklandnet.com))

Leonard Niles, AllWest Environmental, Inc., 530 Howard Street, Suite 300, San Francisco, CA 94105 (Sent via E-mail to: [lniles@allwest1.com](mailto:lniles@allwest1.com))

Donna Drogos, ACEH (Sent via E-mail to: [donna.drogos@acgov.org](mailto:donna.drogos@acgov.org))

Jerry Wickham, ACEH (Sent via E-mail to: [jerry.wickham@acgov.org](mailto: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/](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.



<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)</b>	<b>REVISION DATE:</b> July 25, 2012
	<b>ISSUE DATE:</b> July 5, 2005
	<b>PREVIOUS REVISIONS:</b> October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> 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](mailto: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](http://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](mailto: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.



# Appendix B



## **STANDARD GEOPROBE® AND SUB-SLAB PROBE SOIL VAPOR SAMPLING PROCEDURES**

### Geoprobe® PRT Soil Vapor Probe Advancement Sampling

The Geoprobe® Post Run Tubing (PRT) soil vapor sampling process involves driving into the subsurface a disposable Geoprobe® sampling probe with expendable tip and a PRT adapter that are connected to 4-foot sections of Geoprobe® 1.25-inch inside diameter (ID) extension rods. The PRT adapter has a reverse-thread adapter at the upper end to allow the connection of flexible soil vapor sampling tubing with a PRT tubing adaptor after the installation (post-run) of the tip. The entire sampling assembly, the sampling tip, PRT adapter, and the Geoprobe® extension rods, is driven into the subsurface by a truck-mounted hydraulic percussion hammer. The sampler is driven to the desired depth as additional rods are connected. At the desired sampling depth, a sufficient length of disposable flexible polyethylene or Teflon® sample tubing is first lowered through the center of the extension rod and connected to the PRT adapter. The extension rod is then retracted 3 to 4 inches to create a small void around the PRT adapter and the expendable sampling tip for extracting a soil vapor sample from that location. Bentonite chips will be used to fill the annular space between the probe and the subgrade material to the ground surface. The bentonite will then be hydrated with distilled water. The temporary Geoprobe® PRT soil vapor probe will be sampled at least 30 minutes following driving of the probe, to allow vapor conditions to equalize in subsurface materials and the bentonite surface seal to hydrate.

### Sub Slab Soil Vapor Probe Installation

Semi-permanent sub-slab soil vapor probes are emplaced as follows: A 1-inch diameter hole is drilled through the concrete floor slab using a portable electric drill. The boreholes are advanced approximately 0.5 feet bgs into the subgrade material beneath the floor slab. Stainless steel vapor probes 2 inches long by 0.5 inches in diameter, tipped with porous plastic membranes, will be inserted to the bottom of each sub-slab borehole. The probe tips will be attached to lengths of 0.25-inch diameter Teflon® tubing extending to the top of the floor slab. A fine sand filter pack will be placed in the borehole annulus around the probe. Bentonite chips will then used to fill the borehole annular space above the filter pack between the probe and the to the floor slab base. The bentonite will then be hydrated with distilled water.

Portland cement will be poured into the borehole annulus in the concrete floor slab to seal the probe. Care will be taken not to over hydrate the bentonite and cement to limit the introduction of excess moisture to the subsurface. Each probe will be constructed with a brass threaded fitting and cap attached to the top of the Teflon® tubing and recessed below the concrete floor. A plastic cap will then be placed flush with the concrete floor to minimize tripping hazards. AllWest will allow a minimum of two days prior to sampling to allow the cement to setup and for subsurface conditions to stabilize.

Soil vapor sampling procedures will be similar for both the semi-permanent and temporary vapor probes, in general accordance with *Interim Final, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air - DTSC December 15, 2004 (Revised February 7, 2005)*. Soil vapor sampling will not be performed if measurable precipitation has occurred within the previous five days.

### Soil Vapor Sampling via Syringe and Mobile Laboratory

The surface end of the flexible tubing is first connected to a vacuum tank with a diaphragm pump to purge the ambient air from the tubing. After a minimum of one minute purging time to remove at least 3



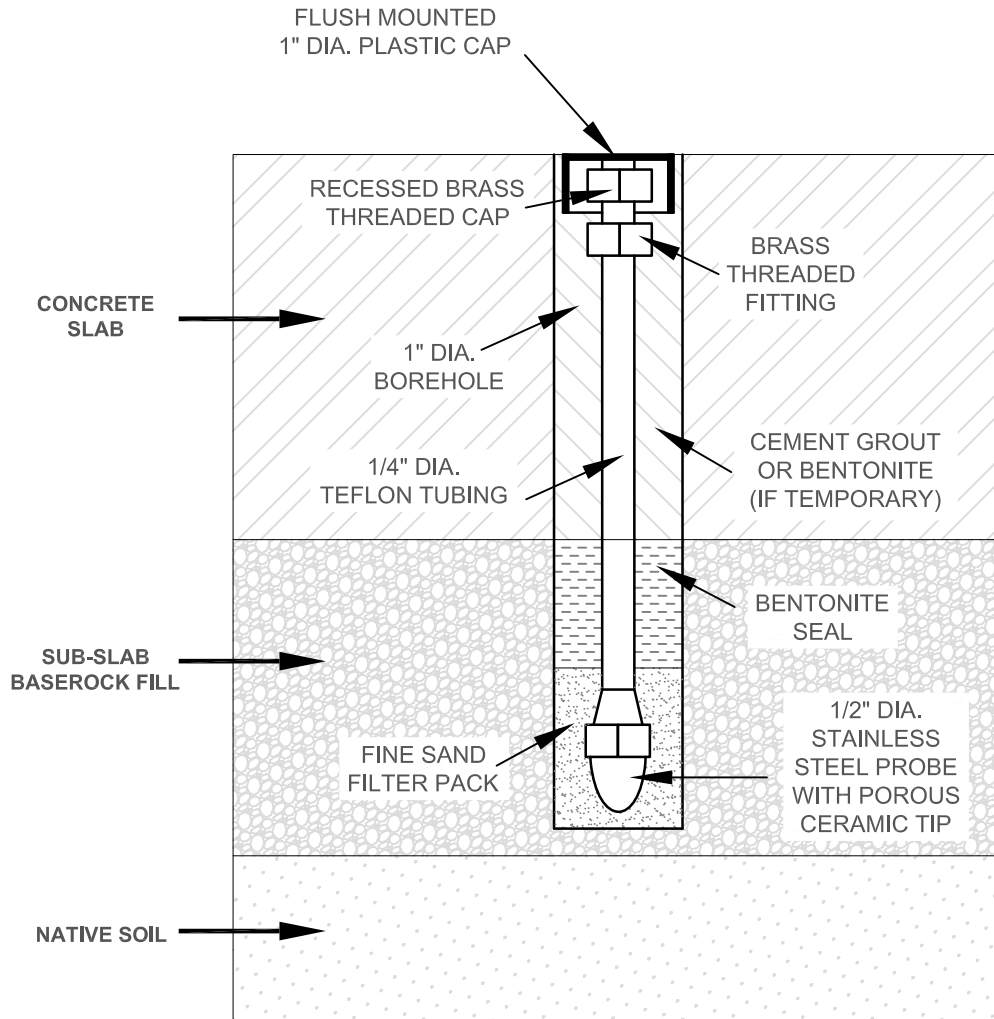
sampling system volumes, the flexible tubing is connected to a syringe collect a vapor sample. The syringe is then immediately transported to an on-site mobile laboratory for analysis.

#### Soil Vapor Sampling via Summa Canister

AllWest will collect soil vapor samples in laboratory prepared 6-liter capacity SUMMA canisters. Prior to vapor purging and sample collection, a vacuum leak test of the flow-controller/gauge manifold assembly will be performed for a minimum of 5 minutes. Prior to sample collection, approximately 1 liter of soil vapor (or a minimum of 3 sampling system volumes) will be purged at a flow rate of approximately 200 milliliters per minute (ml/min) from each sub-slab vapor probe using a dedicated 6-liter capacity SUMMA purge canister.

During vapor sample collection, a vacuum leak test of the flow-controller/gauge manifold assembly will be performed using isopropyl alcohol (IPA), difluoroethane or helium as a leak tracer inside an airtight shroud. IPA concentrations inside the shroud will be monitored using a photo-ionization detector (PID). An ambient air sample will be collected using a SUMMA canister inside the leak detection shroud during at least one soil vapor probe sampling to measure IPA, difluoroethane or helium concentrations inside the shroud concurrent with PID readings and soil vapor sample analysis. Flow rates of approximately 200 milliliters per minute (ml/min) will be used to fill the canisters. The canisters will be filled to approximately 80% of capacity. All pertinent field observations, pressure, times and readings will be recorded. Sample containers will be labeled, placed in a dark container and transported under chain-of-custody control to the analytical laboratory.

# General Schematic of Sub-Slab Vapor Probe



NOT TO SCALE



**AllWest**

STANDARD OPERATING PROCEDURE

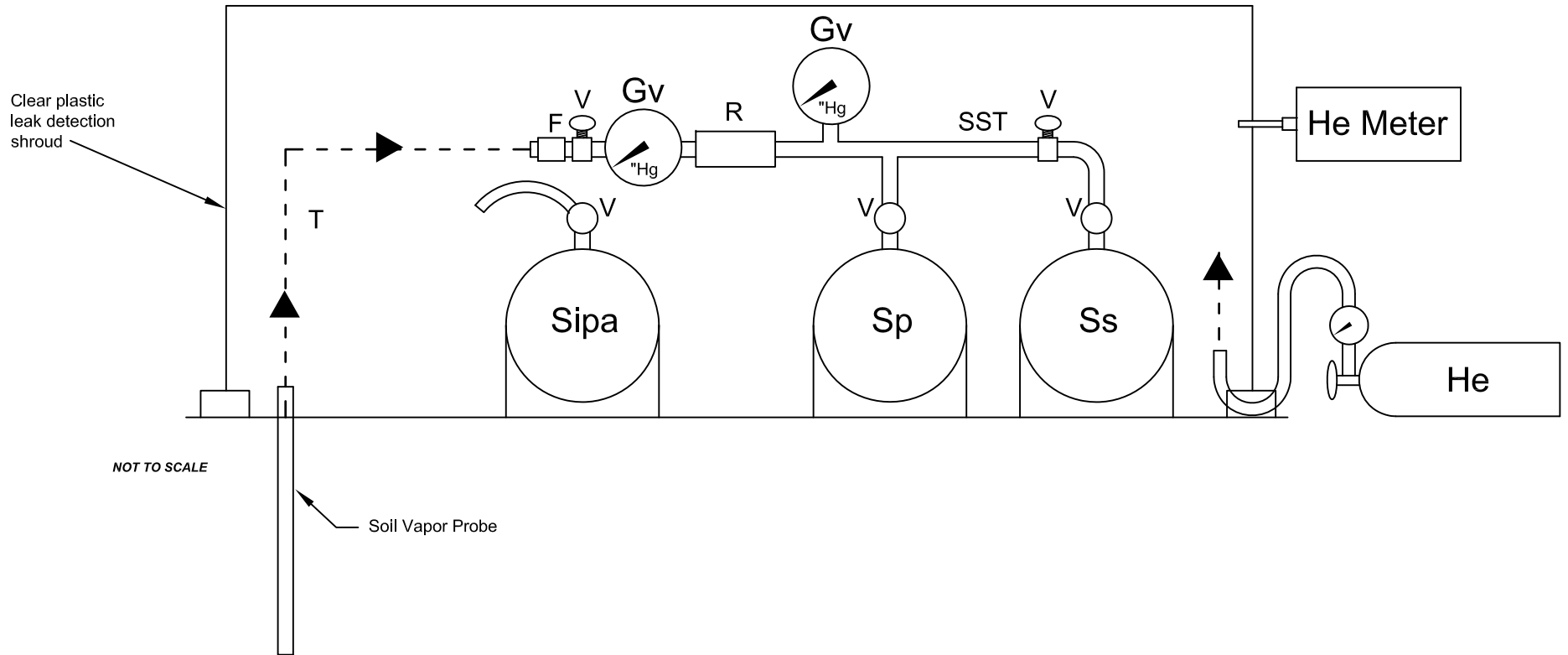
SOIL VAPOR SAMPLING

SUB-SLAB PROBE

SOURCE: ALLWEST

PREPARED BY: C. RAMELB

## General Soil Gas Sampling Manifold Schematic with Leak Detection Shroud



NOT TO SCALE

### LEGEND

F	=	Filter
V	=	Valve
Gp	=	Pressure Gauge
R	=	Flow Regulator
Gv	=	Vacuum Gauge
Sp	=	Purge Summa Canister
Ss	=	Sample Summa Canister
Sipa	=	Ambient Air Helium Leak Detect Gas Summa Canister
He Meter	=	Helium detector for He concentration readings
T	=	Disposable Teflon or Polyethylene Tubing
SST	=	Stainless Steel Tubing and Fittings
He	=	Helium tank, leak detect gas, regulator and tubing



STANDARD OPERATING PROCEDURE
SOIL VAPOR SAMPLING
HELIUM SHROUD
SOURCE: ALLWEST
PREPARED BY: C. RAMELB



**AllWest Environmental, Inc.**

Specialists in Physical Due  
Diligence and Remedial Services

530 Howard Street, Suite 300  
San Francisco, CA 94105  
Tel 415.391.2510  
Fax 415.391.2008

### SOIL GAS VAPOR FIELD LOG

Project No: \_\_\_\_\_ Project Name: \_\_\_\_\_

Date: \_\_\_\_\_ Vapor Probe No: \_\_\_\_\_ Serial No: \_\_\_\_\_

Regulatory Agencies: \_\_\_\_\_

Contractor: \_\_\_\_\_

Hole Diameter: \_\_\_\_\_ Total Depth: \_\_\_\_\_ Grout/Bentonite: \_\_\_\_\_

Probe Diameter: \_\_\_\_\_ Line Length: \_\_\_\_\_ Purge Volume: \_\_\_\_\_

Tracer Gas: \_\_\_\_\_ Flow Regulator: \_\_\_\_\_ (ml/min) Leak Test: Pass/Fail

Laboratory Name and Number: \_\_\_\_\_

### SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks

Remarks: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sampler: \_\_\_\_\_

# Appendix C

### APPENDIX L - BUILDING SURVEY FORM

Preparer's Name: \_\_\_\_\_ Date/Time Prepared: \_\_\_\_\_  
Affiliation: \_\_\_\_\_ Phone Number: \_\_\_\_\_

#### Occupant Information

Occupant Name: \_\_\_\_\_ Interviewed:  Yes  No  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Email: \_\_\_\_\_

#### Owner/Landlord Information (Check if same as occupant )

Occupant Name: \_\_\_\_\_ Interviewed:  Yes  No  
Mailing Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Email: \_\_\_\_\_

#### Building Type (Check appropriate boxes)

- Residential  Residential Duplex  Apartment Building  Mobile Home  Commercial (office)  
 Commercial (warehouse)  Industrial  Strip Mall  Split Level  Church  School

#### Building Characteristics

Approximate Building Age (years): \_\_\_\_\_ Number of Stories: \_\_\_\_\_  
Approximate Building Area (square feet): \_\_\_\_\_ Number of Elevators: \_\_\_\_\_

#### Foundation Type (Check appropriate boxes)

- Slab-on-Grade  Crawl Space  Basement

#### Basement Characteristics (Check appropriate boxes)

- Dirt Floor  Sealed  Wet Surfaces  Sump Pump  Concrete Cracks  Floor Drains

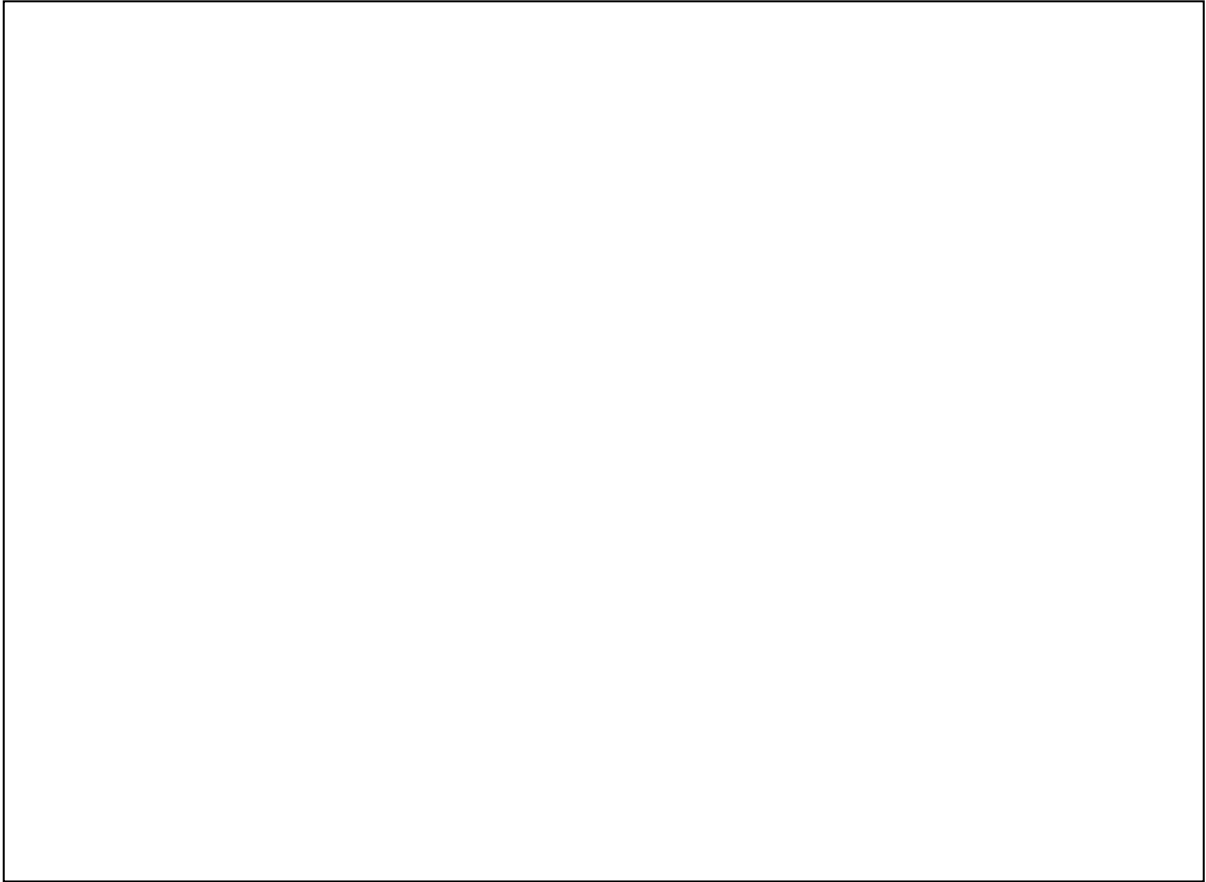
#### Factors Influencing Indoor Air Quality

Is there an attached garage?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is there smoking in the building?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is there new carpet or furniture?	<input type="checkbox"/> Yes <input type="checkbox"/> No Describe: _____
Have clothes or drapes been recently dry cleaned?	<input type="checkbox"/> Yes <input type="checkbox"/> No Describe: _____
Has painting or staining been done with the last six months?	<input type="checkbox"/> Yes <input type="checkbox"/> No Describe: _____
Has the building been recently remodeled?	<input type="checkbox"/> Yes <input type="checkbox"/> No Describe: _____
Has the building ever had a fire?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is there a hobby or craft area in the building?	<input type="checkbox"/> Yes <input type="checkbox"/> No Describe: _____
Is gun cleaner stored in the building?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is there a fuel oil tank on the property?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is there a septic tank on the property?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has the building been fumigated or sprayed for pests recently?	<input type="checkbox"/> Yes <input type="checkbox"/> No Describe: _____
Do any building occupants use solvents at work?	<input type="checkbox"/> Yes <input type="checkbox"/> No Describe: _____



### Sampling Locations

Draw the general floor plan of the building and denote locations of sample collection. Indicate locations of doors, windows, indoor air contaminant sources and field instrument readings.



### Primary Type of Energy Used (Check appropriate boxes)

Natural Gas    Fuel Oil    Propane    Electricity    Wood    Kerosene

### Meteorological Conditions

Describe the general weather conditions during the indoor air sampling event.

---

### General Comments

Provide any other information that may be of importance in understanding the indoor air quality of this building.

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### APPENDIX M – BUILDING SCREENING FORM

Occupant of Building \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

Field Investigator \_\_\_\_\_ Date \_\_\_\_\_

Field Instrument Reading	Measurement Location (Ambient Air, Foundation Opening, or Consumer Product)	If Consumer Product, Potential Volatile Ingredients

Comments:  
\_\_\_\_\_  
\_\_\_\_\_



**AllWest Environmental, Inc.**

Specialists in Physical Due Diligence and Remedial Services

530 Howard Street, Suite 300  
San Francisco, CA 94105  
Tel 415.391.2510  
Fax 415.391.2008

### INDOOR/AMBIENT AIR SAMPLING FIELD LOG

Project No: \_\_\_\_\_ Project Name: \_\_\_\_\_

Date: \_\_\_\_\_ Site Location: \_\_\_\_\_

Sample ID No: \_\_\_\_\_ Canister Type: \_\_\_\_\_ Serial No: \_\_\_\_\_

Regulatory Agencies: \_\_\_\_\_ Contractor: \_\_\_\_\_

Indoor/Outdoor: \_\_\_\_\_ Building Name/Location: \_\_\_\_\_

Initial Vacuum: \_\_\_\_\_ ("Hg) Final Vacuum: \_\_\_\_\_ ("Hg) Canister Volume: \_\_\_\_\_ (L)

Sampling Interval (hrs): \_\_\_\_\_ Flow Regulator: \_\_\_\_\_ (ml/min) Regulator Serial No: \_\_\_\_\_

Laboratory Name and Location: \_\_\_\_\_

Laboratory Analyses: \_\_\_\_\_

### SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sampler: \_\_\_\_\_

# Appendix D



**APPLICATION FOR AUTHORIZATION TO USE**

**REPORT TITLE:** ADDITIONAL SOIL VAPOR INVESTIGATION  
AND INDOOR AIR MONITORING WORKPLAN  
O'REILLY AUTO PARTS (FORMER GRAND AUTO #43)  
4240 INTERNATIONAL BOULEVARD (EAST 14TH STREET)  
OAKLAND, CALIFORNIA

**PROJECT NUMBER:** 13007.23

To: AllWest Environmental, Inc.  
530 Howard Street, Suite 300  
San Francisco, CA 94105

From (Applicant): \_\_\_\_\_  
\_\_\_\_\_

*(Please clearly identify name and address of person/entity applying for permission to use or copy this document)*

Ladies and Gentlemen:

Applicant hereby applies for permission to rely upon AllWest=s work product, as described above, for the purpose of: (state here the purpose for which you wish to rely upon the work product)

Applicant only can accept and rely upon AllWest work product under the strict understanding that Applicant is bound by all provisions in the Terms and Conditions attached to the report. Every report, recommendation, finding, or conclusion issued by AllWest shall be subject to the limitations stated in the Agreement and subject report(s). If this is agreeable, please sign below and return one copy of this letter to us along with the applicable fees. Upon receipt and if acceptable, our signed letter will be returned. AllWest may withhold permission at its sole discretion or require additional re-use fees or terms.

**FEES:** A \$1,250 coordination and reliance fee, payable in advance, will apply. If desired, for an additional \$100 report reproduction fee, we will reissue the report in the name of the Applicant; the report date, however, will remain the same. All checks will be returned if your request for reliance is not approved.

**REQUESTED BY**

**APPROVED BY**

\_\_\_\_\_  
Applicant Company

**AllWest Environmental, Inc.**

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Signature and Date

\_\_\_\_\_  
Signature and Date

## **GENERAL CONDITIONS TO THE WORK AUTHORIZATION AGREEMENT**

It is hereby agreed that the Client retains AllWest to provide services as set forth in the Work Authorization attached hereto (the "Work"). This contract shall be controlled by the following terms and conditions, and these terms and conditions shall also control any further assignments performed pursuant to this Work Authorization. Client's signature on this Work Authorization constitutes Client's agreement to the all terms to this contract, including these General Conditions.

### **FEES AND COSTS**

1. AllWest shall charge for work performed by its personnel at the rates identified in the Work Authorization. These rates are subject to reasonable increases by AllWest upon giving Client 30 days advance notice. Reimbursable Costs will be charged to the Client in addition to the fees for the basic services under this Agreement and all Additional Services (defined below) under the Agreement. Reimbursable Costs include, but are not limited to, expenses for travel, including transportation, meals, lodging, long distance telephone and other related expenses, as well as the costs of reproduction of all drawings for the Client's use, costs for specifications and type-written reports, permit and approval fees, automobile travel reimbursement, costs and fees of subcontractors, and soil and other materials testing. No overtime is accrued for time spent in travel. All costs incurred which relate to the services or materials provided by a contractor or subcontractor to AllWest shall be invoiced by AllWest on the basis of cost plus twenty percent (20%). Automobile travel reimbursement shall be at the rate of fifty- eight cents (\$0.58) per mile. All other reimbursable costs shall be invoiced and billed by AllWest at the rate of 1.1 times the direct cost to AllWest.

Reimbursable costs will be charged to the client only as outlined in the Work Authorization if the scope of work is for Phase I Environmental Site Assessment, Property Condition Assessment, Seismic Assessment or ALTA survey. Invoices for work performed shall be submitted monthly. Payment will be due upon receipt of invoice. Client shall pay interest on the balance of unpaid invoices which are overdue by more than 30 days, at a rate of 18% per annum as well as all attorney fees and costs incurred by AllWest to secure payment of unpaid invoices. AllWest may waive such fees at its sole discretion.

### **STANDARD OF CARE**

2. AllWest will perform its work in accordance with the industry's standard of care, as it is at the time of the work being performed, and applicable in the locale of the work being performed. AllWest makes no other warranties, express or implied regarding its work.

### **LIMITATION OF REMEDIES**

3. Client expressly agrees that to the fullest extent permitted by law, Client's remedies for any liability incurred by AllWest, and/or its employees or agents, for any and all claims arising from AllWest's services, shall be \$50,000 or its fees, whichever is greater.

Client may request a higher limitation of remedies, but must do so in writing. Upon such written request, AllWest may agree to increase this limit in exchange for a mutually negotiated higher fee commensurate with the increased risk to AllWest. Any such agreed increase in fee and limitation of remedies amount must be memorialized by written agreement which expressly amends the terms of this clause.

As used in this section, the term "limitation of remedies" shall apply to claims of any kind, including, but not limited to, claims brought in contract, tort, strict liability, or otherwise, for any and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to AllWest's services or the services of AllWest's subcontractors, consultants, agents, officers, directors, and employees from any cause(s). AllWest shall not be liable for any claims of loss of profits or any other indirect, incidental, or consequential damages of any nature whatsoever. Client & AllWest have specifically negotiated this limitation.

### **INDEMNIFICATION**

4. Notwithstanding any other provision of this Agreement, Client agrees, to the fullest extent permitted by law, to waive any claim against, release from any liability or responsibility for, and , indemnify and hold harmless AllWest, its employees, agents and sub-consultants (collectively, Consultant) from and against any and all damages, liabilities, claims, actions or costs of any kind, including reasonable attorney's fees and defense costs, arising or alleged to arise out of or to be in any way connected with the Project or the performance or non-performance of Consultant of any services under this Agreement, excepting only any such liabilities determined by a court or other forum of competent jurisdiction to have been caused by the negligence or willful misconduct of Consultant. This provision shall be in addition to any rights of indemnity that Consultant may have under the law and shall survive and remain in effect following the termination of this Agreement for any reason. Should any part of this provision be determined to be unenforceable, AllWest and Client agree that the rest of the provision shall apply to the maximum extent permitted by law. The Client's duty to defend AllWest shall arise immediately upon tender of any matter potentially covered by the above obligations to indemnify and hold harmless.

## **MEDIATION & JUDICIAL REFERENCE**

5. In an effort to resolve any conflicts or disputes that arise regarding the performance of this agreement, the Client & AllWest agree that all such disputes shall be submitted to non-binding mediation, using a mutually agreed upon mediation service experienced in the resolution of construction disputes. Unless the parties mutually agree otherwise, such mediation shall be a condition precedent to the initiation of any other adjudicative proceedings. The parties further agree to include a similar mediation, in their agreements with other independent contractors & consultants retained for the project and require them to similarly agree to these dispute resolution procedures. The cost of said Mediation shall be split equally between the parties. This agreement to mediate shall be specifically enforceable under the prevailing law of the jurisdiction in which this agreement was signed.

## **HAZARDOUS WASTE**

6. Client acknowledges that AllWest and its sub-contractors have played no part in the creation of any hazardous waste, pollution sources, nuisance, or chemical or industrial disposal problem, which may exist, and that AllWest has been retained for the sole purpose of performing the services set out in the scope of work within this Agreement, which may include, but is not necessarily limited to such services as assisting the Client in assessing any problem which may exist and in assisting the Client in formulating a remedial program. Client acknowledges that while necessary for investigations, commonly used exploration methods employed by AllWest may penetrate through contaminated materials and serve as a connecting passageway between the contaminated material and an uncontaminated aquifer or groundwater, possibly inducing cross contamination. While back-filling with grout or other means, according to a state of practice design is intended to provide a seal against such passageway, it is recognized that such a seal may be imperfect and that there is an inherent risk in drilling borings of performing other exploration methods in a hazardous waste site.

AllWest will not sign or execute hazardous waste manifests or other waste tracking documents on behalf of Client unless Client specifically establishes AllWest as an express agent of Client under a written agency agreement approved by AllWest. In addition, Client agrees that AllWest shall not be required to sign any documents, no matter requested by whom, that would have the effect of AllWest providing any form of certification, guarantee, or warranty as to any matter or to opine on conditions for which the existence AllWest cannot ascertain. Client also agrees that it shall never seek or otherwise attempt to have AllWest provide any form of such certification, guarantee or warranty in exchange for resolution of any disputes between Client and AllWest, or as a condition precedent to making payment to AllWest for fees and costs owing under this Agreement.

Client understands and agrees that AllWest is not, and has no responsibility as, a generator, operator, treater, storer, transporter, arranger or disposer of hazardous or toxic substances found or identified at the site, including investigation-derived waste. The Client shall undertake and arrange for the removal, treatment, storage, disposal and/or treatment of hazardous material and investigation derived waste (such as drill cuttings) and further, assumes full responsibility for such wastes to the complete exclusion of any responsibility, duty or obligation upon AllWest. AllWest's responsibilities shall be limited to recommendations regarding such matters and assistance with appropriate arrangements if authorized by Client.

## **FORCE MAJUERE**

7. Neither party shall be responsible for damages or delays in performance under this Agreement caused by acts of God, strikes, lockouts, accidents or other events or condition (other than financial inability) beyond the other Party's reasonable control.

## **TERMINATION**

8. This Agreement may be terminated by either party upon ten (10) days' written notice should the other party substantially fail to perform in accordance with its duties and responsibilities as set forth in this Agreement and such failure to perform is through no fault of the party initiating the termination. Client agrees that if it chooses to terminate AllWest for convenience, and AllWest has otherwise satisfactorily performed its obligations under this Agreement to that point, AllWest shall be paid no less than eighty percent (80%) of the contract price, provided, however, that if AllWest shall have completed more than eighty percent of the Work at the time of said termination, AllWest shall be compensated as provided in the Work Authorization for all services performed prior to the termination date which fall within the scope of work described in the Work Authorization and may as well, at its sole discretion and in accordance with said Schedule of Fees, charge Client, and Client agrees to pay AllWest's reasonable costs and labor in winding up its files and removing equipment and other materials from the Project.

Upon notice of termination by Client to AllWest, AllWest may issue notice of such termination to other consultants, contractors, subcontractors and to governing agencies having jurisdiction over the Project, and take such other actions as are reasonably necessary in order to give notice that AllWest is no longer associated with the Project and to protect AllWest from claims of liability from the work of others.



## **DOCUMENTS**

9. Any documents prepared by AllWest, including, but not limited to proposals, project specifications, drawings, calculations, plans and maps, and any ideas and designs incorporated therein, as well as any reproduction of the above are instruments of service and shall remain the property of AllWest and AllWest retains copyrights to these instruments of service. AllWest grants to Client a non-exclusive license to use these instruments of service for the purpose of completing and maintaining the Project. The Client shall be permitted to retain a copy of any instruments of service, but Client expressly agrees and acknowledges that the instruments of service may not be used by the Client on other projects, or for any other purpose, except the project for which they were prepared, unless Client first obtains a written agreement expanding the license to such use from AllWest, and with appropriate compensation to AllWest. Client further agrees that such instruments of service shall not be provided to any third parties without the express written permission of AllWest.

Client shall furnish, or cause to be furnished to AllWest all documents and information known to Client that relate to the identity, location, quantity, nature, or characteristics of any asbestos, PCBs, or any other hazardous materials or waste at, on or under the site. In addition, Client will furnish or cause to be furnished such reports, data, studies, plans, specifications, documents and other information on surface or subsurface site conditions, e.g., underground tanks, pipelines and buried utilities, required by AllWest for proper performance of its services. IF Client fails to provide AllWest with all hazardous material subject matter reports including geotechnical assessments in its possession during the period that AllWest is actively providing its services (including up to 30 days after its final invoice), Client shall release AllWest from any and all liability for risks and damages the Client incurs resulting from its reliance on AllWest's professional opinion. AllWest shall be entitled to rely upon Client - provided documents and information in performing the services required in this Agreement; however, AllWest assumes no responsibility or liability for the accuracy or completeness of Client-provided documents. Client-provided documents will remain the property of the Client.

## **ACCESS TO PROJECT**

10. Client grants to AllWest the right of access and entry to the Project at all times necessary for AllWest to perform the Work. If Client is not the owner of the Project, then Client represents that Client has full authority to grant access and right of entry to AllWest for the purpose of AllWest's performance of the Work. This right of access and entry extends fully to any agents, employees, contractors or subcontractors of AllWest upon reasonable proof of association with AllWest. Client's failure to provide such timely access and permission shall constitute a material breach of this Agreement excusing AllWest from performance of its duties under this Agreement.

## **CONFIDENTIAL INFORMATION**

11. Both Client and AllWest understand that in conjunction with AllWest's performance of the Work on the project, both Client and AllWest may receive or be exposed to Proprietary Information of the other. As used herein, the term "Proprietary Information" refers to any and all information of a confidential, proprietary or secret nature which may be either applicable to, or relate in any way to: (a) the personal, financial or other affairs of the business of each of the Parties, or (b) the research and development or investigations of each of the Parties. Proprietary Information includes, for example and without limitation, trade secrets, processes, formulas, data, know-how, improvements, inventions, techniques, software technical data, developments, research projects, plans for future development, marketing plans and strategies. Each of the Parties agrees that all Proprietary Information of the other party is and shall remain exclusively the property of that other party. The parties further acknowledge that the Proprietary Information of the other party is a special, valuable and unique asset of that party, and each of the Parties agrees that at all times during the terms of this Agreement and thereafter to keep in confidence and trust all Proprietary Information of the other party, whether such Proprietary Information was obtained or developed by the other party before, during or after the term of this Agreement. Each of the Parties agrees not to sell, distribute, disclose or use in any other unauthorized manner the Proprietary Information of the other party. AllWest further agrees that it will not sell, distribute or disclose information or the results of any testing obtained by AllWest during the performance of the Work without the prior written approval of Client unless required to do so by federal, state or local statute, ordinance or regulation.

## **INDEPENDENT CONTRACTOR**

12. Both Client and AllWest agree that AllWest is an independent contractor in the performance of the Work under this Agreement. All persons or parties employed by AllWest in connection with the Work are the agents, employees or subcontractors of AllWest and not of Client. Accordingly, AllWest shall be responsible for payment of all taxes arising out of AllWest's activities in performing the Work under this Agreement.

## **ENTIRE AGREEMENT**

13. This Agreement contains the entire agreement between the Parties pertaining to the subject matter contained in it and supersedes and replaces in its entirety all prior and contemporaneous proposals, agreements, representations and understandings of the Parties. The Parties have carefully read and understand the contents of this Agreement and sign their names to the same as their own free act.

## **INTEGRATION**

14. This is a fully integrated Agreement. The terms of this Agreement may be modified only by a writing signed by both Parties. The terms of this Agreement were fully negotiated by the Parties and shall not be construed for or against the Client or AllWest but shall be interpreted in accordance with the general meaning of the language in an effort to reach the intended result.

## **MODIFICATION / WAIVER / PARTIAL INVALIDITY**

15. Failure on the part of either party to complain of any act or omission of the other, or to declare the other party in default, shall not constitute a waiver by such party of its rights hereunder. If any provision of this Agreement or its application be unenforceable to any extent, the Parties agree that the remainder of this Agreement shall not be affected and shall be enforced to the greatest extent permitted by law.

## **INUREMENT / TITLES**

16. Subject to any restrictions on transfers, assignments and encumbrances set forth herein, this Agreement shall inure to the benefit of and be binding upon the undersigned Parties and their respective heirs, executors, legal representatives, successors and assigns. Paragraph titles or captions contained in this Agreement are inserted only as a matter of convenience, and for reference only, and in no way limit, define or extend the provisions of any paragraph, et al., incurred in that action or proceeding, in addition to any other relief to which it or they may be entitled.

## **AUTHORITY**

17. Each of the persons executing this Agreement on behalf of a corporation does hereby covenant and warrant that the corporation is duly authorized and existing under the laws of its respective state of incorporation, that the corporation has and is qualified to do business in its respective state of incorporation, that the corporation has the full right and authority to enter into this Agreement, and that each person signing on behalf of the corporation is authorized to do so. If the Client is a joint venture, limited liability company or a partnership, the signatories below warrant that said entity is properly and duly organized and existing under the laws of the state of its formation and pursuant to the organizational and operating document of the entity, and the laws of the state of its formation, said signatory has authority act on behalf of and commit the entity to this Agreement.

## **COUNTERPARTS**

18. This Agreement may be signed in counterparts by each of the Parties hereto and, taken together; the signed counterparts shall constitute a single document.

## **THIRD PARTY BENEFICIARIES / CONTROLLING LAW**

19. There are no intended third party beneficiaries of this Agreement. The services, data & opinions expressed by AllWest are for the sole use of the client, are for a particular project and may not be relied upon by anyone other than the client. This Agreement shall be controlled by the laws of the State of California and any action by either party to enforce this Agreement shall be brought in San Francisco County, California.

## **TIME BAR TO LEGAL ACTION**

20. Any legal actions by either party against the other related to this Agreement, shall be barred after one year has passed from the time the claimant knew or should have known of its claim, and under no circumstances shall be initiated after two years have passed from the date by which AllWest completes its services.