

December 18, 2012

**RECEIVED**

*By Alameda County Environmental Health at 5:45 pm, Dec 19, 2012*

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 Sub-Slab Soil Vapor Probe Installation and Sampling Report  
Kragen Auto Supply (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 September 6, 2012 regarding the above-referenced subject site, we submit this transmittal letter and accompanying work plan to evaluate the potential for soil vapor intrusion, provide additional information regarding the historical removal of underground storage tanks and conveyance piping, and resume biennial groundwater monitoring.

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 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

**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**

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

PREPARED FOR:

PACCAR, Inc.  
Corporate Environmental Department  
P.O. Box 1518  
Bellevue, Washington 98009

ALLWEST PROJECT 12088.23  
December 18, 2012

PREPARED BY:

Christopher Houlihan  
Project Manager

REVIEWED BY:

Leonard P. Niles, PG, CHG  
Senior Project Manager





## TABLE OF CONTENTS

I.	EXECUTIVE SUMMARY .....	Page 1
II.	PROJECT BACKGROUND .....	Page 3
	A. Site Location and Description.....	Page 3
	B. Site Geology and Hydrogeology.....	Page 4
	C. Previous Investigations and Remedial Actions.....	Page 5
III.	PURPOSE AND SCOPE OF WORK.....	Page 6
IV.	INVESTIGATIVE ACTIVITIES .....	Page 7
	A. Permitting.....	Page 7
	B. Health and Safety Plan.....	Page 8
	C. Underground Utility Inspection .....	Page 8
	D. Semi-Permanent Soil Vapor Probe Installation .....	Page 8
	E. Soil Vapor Sampling.....	Page 9
	F. Sample Preservation, Storage and Handling.....	Page 10
	G. Chain-of-Custody Program.....	Page 10
V.	ASSESSMENT FINDINGS .....	Page 10
	A. Subsurface Conditions .....	Page 10
	B. Laboratory Analyses and Sampling Data .....	Page 10
	C. Laboratory Quality Assurance and Quality Control .....	Page 11
VI.	DISCUSSION.....	Page 11
	A. Environmental Screening Levels .....	Page 11
	B. Contaminant Distribution.....	Page 12
VII.	RECOMMENDATIONS.....	Page 12
VIII.	LIMITATIONS.....	Page 13
IX.	REFERENCES .....	Page 13

### FIGURES

Figure 1 – Site Location Map

Figure 2 – Site Plan with Boring and Well Locations

Figure 3 – Soil Vapor Sample Analytical Summary, 01/04/12 and 10/27/12

Figure 4 – Schematic of Sub-Slab Vapor Probes

TABLE

Table 1 – Summary of Soil Vapor Analytical Data

APPENDICES

Appendix A: ACHCS Letters of June 5, 2012 and September 6, 2012

Appendix B: Standard Geoprobe<sup>®</sup> Soil Vapor, Soil and Groundwater Sampling Procedures

Appendix C: Soil Vapor Sampling Field Logs

Appendix D: Laboratory Analytical Reports and Chain of Custody Documents

Appendix E: Authorization for Reliance and General Conditions



**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 VAPOR INVESTIGATION REPORT**

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

**I. EXECUTIVE SUMMARY**

AllWest Environmental, Inc. (AllWest) conducted a subsurface investigation on October 22 and 27, 2012 to evaluate the potential for impact by soil vapor intrusion to the indoor air quality within the O'Reilly Auto Parts store (the subject site referenced above), as requested by the Alameda County Health Care Services Agency, Environmental Health Services (ACHCS) in a letter dated June 5, 2012 (Appendix A). The proposed scope of work was described in the *Additional Sub-Slab Soil Vapor Investigation* workplan submitted by AllWest on August 1, 2012, and approved by ACHCS in their letter dated September 6, 2012 (Appendix A).

The purpose of this investigation was to evaluate the extent of volatile organic compound (VOC)-impacted soil vapor beneath the building slab 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 and other store areas, as requested by the ACHCS letter dated June 5, 2012. The work was performed on October 22 and 27, 2012.

Six soil borings were advanced on October 22, 2012 using a hand-held power drill. Permanent soil vapor probes SVP-7 through SVP-12 were installed beneath the floor slab within the O'Reilly Auto Parts store to approximate depths of 0.5 feet below ground surface (bgs) inside the building (Figure 2). Soil vapor probe SVP-7 was located near the rear of the main store area. SVP-8 and SVP-9 were located in the stockroom, and SVP-10, SVP-11 and SVP-12 were located in the former car wash area, in the vicinity of the former sump. AllWest collected soil vapor samples from SVP-7 through and SVP-12 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 temporary soil vapor probes SVP-7, SVP-8, SVP-9, SVP-10, SVP-11 and SVP-12, at respective concentrations of 1,200 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), 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  $\mu\text{g}/\text{m}^3$ .

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. Soil vapor analytical results are summarized in Table 1.

PCE concentrations in probes SVP-8 and SVP-12 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 recommends:

1. Determine sub-slab utility conduit locations within the subject site building by reviewing as-built building plans at the City of Oakland Building Department;
2. Obtain from O'Reilly (or perform) an inventory of automotive chemicals stocked at the subject site auto parts store, and applicable Material Safety Data Sheets (MSDS);
3. Perform indoor air quality sampling inside the subject site building, concurrently with the second sub-slab vapor probe monitoring event;
4. Install soil vapor probes to 5 feet bgs adjacent to the existing sub-slab probes, and collect samples concurrent with the second sub-slab vapor probe monitoring event, to determine source and extent of PCE in soil vapor;

5. Install additional sub-slab and 5 feet bgs vapor probes within the subject site building farther to the north and west of the current probes to further characterize extent of PCE in soil vapor;
6. Install temporary soil vapor probes around the subject site perimeter to the north, south east and west of the building to evaluate potential offsite contaminant sources.

## **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. The site currently is occupied by an O'Reilly Auto Parts store.

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 location map and site plan are presented as Figures 1 and 2, respectively.

### **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, March 2012a), and *Soil Vapor and Subsurface Investigation Report*, dated March 16, 2012 (AllWest, March 2012b). Historical boring and monitoring well locations are shown on Figure 2.

#### *Soil Vapor Investigation 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 Figure 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.

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

The purpose of this investigation was 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 permanent 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, consisted of the following tasks:

- 1) Prepared a written workplan to address the technical comments of the ACHCS letter dated June 5, 2012. This included conducting a sub-slab soil vapor investigation within the subject site building adjacent to the former sump area in response to technical comments 1 and 2. Submitted the workplan to the ACHCS for review and concurrence;

- 2) Updated the site-specific health and safety plan;
- 3) Engaged 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 was reduced during the subsurface investigation. The private utility locator also attempted to conduct a survey of the suspected sewer line connected to the former sump and other sewer lines within the building. Notified the ACHCS and site tenants, property owners and facility maintenance prior to the start of field work;
- 4) Retained the service of a C-57 licensed drilling contractor, Vironex, Inc. of Concord, CA, for the installation of six permanent sub-slab soil vapor probes within the concrete floor slab of the subject site building in the vicinity of the former sump and sewer line, and in the center of the building. Probe installations consisted of sub-slab soil vapor probes to approximately 0.5 to 1 feet bgs 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;
- 5) Collected six soil vapor samples using SUMMA canisters in general accordance with the DTSC *Advisory – Active Soil Gas Investigations*, April, 2012. Retained one soil vapor sample from each vapor probe, and one ambient leak detection gas sample, for analytical testing. Sub-slab vapor probes were left in place for future monitoring;
- 6) Maintained 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. Analyzed six soil vapor samples for VOCs using EPA Method TO-15 (mid detection level, full scan) and helium by ASTM D1946, and one leak detection gas sample only for helium by ASTM D1946;
- 7) Prepared a written report describing the field activities, summarizing the laboratory data, presenting investigation findings, and providing conclusions and recommendations. Upload the report to the GeoTracker database.

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

##### **A. Permitting**

According to Alameda County Public Works Agency (ACPWA), drilling permits are not required for installation of sub-slab soil vapor probes.

## **B. Health and Safety Plan**

AllWest prepared a site specific health and safety plan prior to mobilizing to the site. A tailgate safety meeting was conducted prior to commencing work. All site personnel were instructed to review the health and safety plan.

## **C. Underground Utility Inspection**

To avoid damage to underground utility installations during the course of the subsurface investigation, AllWest contacted Underground Service Alert (USA), an organization for public utility information, on the pending subsurface investigation. USA then notified 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, was also employed by AllWest to conduct a ground-penetrating radar (GPR) and magnetometer sweep investigation to locate marked and unmarked underground utilities and steel rebar within the concrete floor slab in the vicinity of the proposed boring locations. Subtronic also attempted to conduct a utility conduit survey of the suspected sewer line in the vicinity of the former sump and other sewer lines within the building, which may be potential conduits for contaminants. An attempt to trace the sewer line to the sump from a nearby floor drain during the previous soil vapor sampling in January 2012 was unsuccessful. This was again unsuccessfully attempted; the drain was blocked.

## **D. Permanent Soil Vapor Probe Installation**

On October 22, 2012, a State of California C-57 licensed drilling contractor, Vironex, Inc., of Concord, California, cored through the approximately 6- to 8-inch thick concrete floor slab and approximately 1 to 4 inches into the sub-base using a hand-held power-operated Roto-Hammer coring bit at six locations within the O'Reilly Auto Parts store. Five borings (SVP-8 through SVP-12) were located within the former car wash area (current stockroom) in the vicinity of the former sump area, and the sixth boring (SVP-7) was located within the main store area. The borings were completed as permanent sub-slab soil vapor probes. Vapor probe locations are shown on Figure 2.

Shallow permanent sub-slab soil vapor probes were installed in each borehole 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, were inserted to the bottom of the boreholes. The probe tips were attached to approximately 6-inch lengths of 0.25-inch outside diameter (OD) stainless steel tubing extending to about 1 inch below the top of

the floor slab. The top of the stainless steel tubing in each probe was attached to a brass threaded female Swagelock™ fitting and cap recessed below the concrete floor. A fine sand filter pack approximately 4 inches thick was placed in the borehole annulus around the probes. Hydrated granulated bentonite was 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 (SVP-8 through SVP-12) or 4-inch diameter metal vault box was set flush with the top of the floor slab to protect the probe fitting. Quick-drying cement/bentonite grout was used to fill the remaining annular space to the Swagelock fitting approximately ½ to ¾ inch below the top of the slab. At least 48 hours were allowed 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 are included in Appendix B. A schematic of sub-slab vapor probes is shown on Figure 4.

## **E. Soil Vapor Sampling**

AllWest collected soil vapor samples from the six permanent soil vapor probes SVP-7 through SVP-12 on October 27, 2012. Soil vapor sampling was performed in general accordance with the State of California Department of Toxic Substances Control (DTSC) *Advisory – Active Soil Gas Investigations*, April 2012. Standard soil vapor sampling procedures are included in Appendix B.

AllWest collected one soil vapor sample from each probe in laboratory prepared 1-liter (L) capacity SUMMA canisters. Prior to vapor purging and sample collection, a vacuum leak test of the flow-controller/gauge manifold assembly was performed for a minimum of 1 to 2 minutes. All sample manifolds passed the vacuum leak test. Prior to sample collection, approximately 500 milliliters (ml) of soil vapor (a minimum of 3 sample system volumes) was purged at a flow rate of approximately 150 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 was conducted using helium as a leak tracer inside an airtight plastic shroud. The helium concentration inside the leak detection shroud was monitored using a helium gas detector. Initial helium concentrations ranged from 17.0% to 21.0%. An ambient air sample (SVP-12-He) was collected inside the leak detection shroud during the sampling of probe SVP-12 to measure helium concentrations inside the shroud. A schematic diagram showing the sampling manifold and shroud setup is included in Appendix B.

The permanent probes were left in place and sealed with a 4-inch flush-mounted well box (SVP-7) or 2-inch diameter flush-mounted plastic caps (SVP-8 through SVP-12) for future monitoring.

A second soil vapor 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 and sampling methodology will be similar to those described above. Laboratory analyses will be similar to those described below in Section V.

**F. Sample Preservation, Storage and Handling**

To prevent the loss of constituents of interest, all soil vapor sample SUMMA canisters were placed in a dark container for shipment to the analytical laboratory.

**G. Chain-Of-Custody Program**

All samples collected for this project were 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 included the signature of the collector, date and time of collection, sample number, number and type of sample containers including preservatives, parameters requested for analysis, signatures of persons and inclusive dates involved in the chain of possession. Upon delivery to the laboratory the document also included the name of the person receiving the samples, and date and time samples were received. Chain-of-custody documents are included in Appendix D.

**V. ASSESSMENT FINDINGS**

**A. Subsurface Conditions**

No soil cores were recovered during boring advancement, therefore no lithologic characteristics were noted. The relatively high flow rates (150 ml/min) noted during purging and sampling indicated the soils were of at least moderate permeability.

**B. Laboratory Analysis and Sampling Data**

All soil vapor samples selected for analysis were analyzed by a State of California certified independent analytical laboratory. McCampbell Analytical, Inc., of Pittsburg, California. Sample analysis was performed on 5-day turnaround time.

The soil vapor samples collected during this investigation were analyzed for VOCs using EPA Method TO-15 (mid-detection levels, full scan), and for the leak detection gas helium per ASTM D-1946.

Tetrachloroethene (PCE) was detected in soil vapor samples collected from soil vapor probes SVP-7, SVP-8, SVP-9, SVP-10, SVP-11 and SVP-12, at respective concentrations of 1,200 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), 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  $\mu\text{g}/\text{m}^3$ . Benzene, toluene, ethylbenzene and total xylenes (BTEX) were detected in soil vapor samples at maximum concentrations of 20  $\mu\text{g}/\text{m}^3$ , 60  $\mu\text{g}/\text{m}^3$ , 17  $\mu\text{g}/\text{m}^3$ , and 88  $\mu\text{g}/\text{m}^3$ , respectively.

Low concentrations of other VOCs including acetone, carbon disulfide, dichlorodifluoromethane (Freon 12), ethanol, hexane, methylene chloride, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were also detected at maximum respective concentrations of 220  $\mu\text{g}/\text{m}^3$ , 28  $\mu\text{g}/\text{m}^3$ , 23  $\mu\text{g}/\text{m}^3$ , 220  $\mu\text{g}/\text{m}^3$ , 4,200  $\mu\text{g}/\text{m}^3$ , 19  $\mu\text{g}/\text{m}^3$ , 32  $\mu\text{g}/\text{m}^3$  and 15  $\mu\text{g}/\text{m}^3$ . Soil vapor analytical results are summarized in Table 1. Laboratory analytical reports are included in Appendix D.

The leak detection gas helium was analyzed per ASTM D-1946, and was detected in all six soil vapor samples at concentrations ranging from 0.013% to 0.82%, compared to ambient shroud concentrations of approximately 17.0% to 20.1%, and a detected concentration of 90% in the ambient shroud leak detect gas sample SVP-12-He, indicating that dilution with atmospheric air from system vacuum leaks was insignificant. Soil vapor analytical data are summarized in Table 1, and PCE, TCE, BTEX, and Freon-12 concentrations are shown on Figure 3.

### **C. Laboratory Quality Assurance and Quality Control**

A review of laboratory internal quality assurance/quality control (QA/QC) reports indicates the method blank and sample spike data for all analyses were within the laboratory recovery limits. The samples were also analyzed within the acceptable EPA holding times. The data from the McCampbell Analytical laboratory are considered to be of good quality. Laboratory analytical reports and chain-of-custody records are included in Appendix D.

## **VI. DISCUSSION**

### **A. Environmental Screening Levels**

To assess if the identified COCs in soil vapor pose a risk to human health and the environment, and to be consistent with previous investigations, AllWest compared detected concentrations to ESLs for commercial land use compiled by the RWQCB in *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, Interim Final November 2007, revised May 2008), and listed in *Table E - Environmental Screening Levels (ESLs) – Indoor*

*Air and Soil Gas (Vapor Intrusion Concerns), Commercial / Industrial Land Use Only* (RWQCB, November 2007, revised May 2008). Under most circumstances, the presence of a chemical at a concentration below the corresponding ESL is presumed to not pose a significant risk to human health or the environment. The ESL for PCE as soil gas in a commercial/industrial setting is 1,400 µg/m<sup>3</sup>. The ESLs are based on a target cancer risk of 1.0 x 10<sup>-6</sup> (1/1,000,000) for an average 8-hour per day exposure period in a commercial/industrial workplace setting.

PCE soil vapor concentrations in probes SVP-8 and SVP-12 exceeded the applicable commercial/industrial RWQCB ESL. None of the other VOCs detected in soil vapor samples exceeded their applicable ESLs and do not represent environmental concerns. With the exception of PCE, TCE, BTEX, Freon 12, chloroform and naphthalene, which have all been historically detected in soil or groundwater samples at the subject site, it is likely the remaining detected VOCs are atmospheric or laboratory contaminants. Applicable ESLs for VOCs detected in site soil vapor samples are listed in Table 1.

## **B. Contaminant Distribution**

The distribution of VOCs detected in soil vapor samples indicates the highest PCE and TCE concentrations were detected in samples SVP-7, SVP-8 and SVP-12. There does not appear to be a definitive correlation between concentrations and distribution of VOCs detected in sub-slab soil vapor samples and the location of the former sump.

## **VII. RECOMMENDATIONS**

AllWest recommends:

1. Determine sub-slab utility conduit locations within the subject site building by reviewing as-built building plans at the City of Oakland Building Department;
2. Obtain from O'Reilly (or perform) an inventory of automotive chemicals stocked at the subject site auto parts store, and applicable MSDS;
3. Perform indoor air quality sampling inside the subject site building, concurrently with the second sub-slab vapor probe monitoring event;
4. Install soil vapor probes to 5 feet bgs adjacent to the existing sub-slab probes, and collect samples concurrent with the second sub-slab vapor probe monitoring event, to determine source and extent of PCE in soil vapor;



5. Install additional sub-slab and 5 feet bgs vapor probes within the subject site building farther to the north and west of the current probes, to further characterize extent of PCE in soil vapor;
6. Install temporary soil vapor probes around the subject site perimeter to the north, south, east and west of the building to evaluate potential offsite contaminant sources.

## **VIII. LIMITATIONS**

The work described in this report is performed in accordance with the Environmental Consulting Agreement between PACCAR, Inc. (Client) and AllWest Environmental, Inc, dated September 2012. AllWest has prepared this report for the exclusive use of the Client for this particular project and in accordance with generally accepted practices at the time of the work. No other warranties, certifications or representations, either expressed or implied are made as to the professional advice offered.

The services provided for the Client were limited to their specific requirements; the limited scope allows for AllWest to form no more than an opinion of the actual site conditions.

The conclusions and recommendations contained in this report are made based on observed conditions existing at the site, laboratory test results of the submitted samples, and interpretation of a limited data set. It must be recognized that changes can occur in subsurface conditions due to site use or other reasons. Furthermore, the distribution of chemical concentrations in the subsurface can vary spatially and over time. The results of chemical analysis are valid as of the date and at the sampling location only. AllWest is not responsible for the accuracy of the test data from an independent laboratory nor for any analyte quantities falling below the recognized standard detection limits or for the method utilized by the independent laboratories.

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.

## **IX. REFERENCES**

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

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

AllWest. 2000. *Site Closure and Groundwater Monitoring Report, Grand Auto Store #43, 4240 East 14<sup>th</sup> Street, Oakland, California*, August 15.

AllWest. 2001. *Annual Groundwater Monitoring and Well Destruction Report, Grand Auto Store #43, 4240 East 14<sup>th</sup> Street, Oakland, California*, August 27.

AllWest. 2008. *Biennial Groundwater Monitoring Report, Kragen Auto Supply (Former Grand Auto #43), 4240 International Boulevard (East 14<sup>th</sup> Street), Oakland, California*, July 28.

AllWest. 2011a. *Biennial Groundwater Monitoring Report, O'Reilly Auto Parts Auto Supply (Former Grand Auto #43), 4240 International Boulevard (East 14<sup>th</sup> Street), Oakland, California*. February 22 (Draft).

AllWest. 2011b. *Soil Vapor Investigation and Groundwater Monitoring Work Plan, Kragen Auto Supply (Former Grand Auto #43), 4240 International Boulevard (East 14<sup>th</sup> Street), Oakland, California 94601*, April 15.

AllWest. 2011c. *Soil and Groundwater Investigation Work Plan Addendum, Kragen Auto Supply (Former Grand Auto #43), 4240 International Boulevard (East 14<sup>th</sup> Street), Oakland, California 94601*, July 15.

AllWest. 2012a. *2011 Groundwater Monitoring Report, O'Reilly Auto Parts (Former Grand Auto #43), 4240 International Boulevard (East 14<sup>th</sup> Street), Oakland, California 94601*, March 16.

AllWest. 2012b. *Soil Vapor and Subsurface Investigation Report, O'Reilly Auto Parts (Former Grand Auto #43), 4240 International Boulevard (East 14<sup>th</sup> Street), Oakland, California 94601*, March 16.

AllWest. 2012c. *Additional Sub-Slab Soil Vapor Investigation, O'Reilly Auto Parts, (Former Grand Auto #43), 4240 International Boulevard (East 14<sup>th</sup> Street), Oakland, California 94601*, August 1.

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

Hart Crowser. 1992b. *Preliminary Site Investigation Report, Grand Auto/Super Tire Facilities, 4240/4256 East 14<sup>th</sup> Street, Oakland, California 94621*, November 20.

Hart Crowser. 1993. *Supplemental Site Investigation, Grand Auto Facility, 4240 E. 14<sup>th</sup> Street, Oakland, California*, June 18.

Hart Crowser. 1994a. *Quarterly Status Report, Grand Auto Facility, 4240 E. 14<sup>th</sup> Street, Oakland, California*, January 14.

Hart Crowser. 1994b. *Quarterly Status Report, Grand Auto Facility, 4240 E. 14<sup>th</sup> Street, Oakland, California*, November 9.

Hart Crowser. 1996a. *Facility Closure Report, Grand Auto Supply, 4240 East 14<sup>th</sup> Street, Oakland, California*, February 16.

Hart Crowser,. 1996b. *Risk Assessment, Grand Auto Supply, 4240 East 14<sup>th</sup> Street, Oakland, California*, October 8.

State of California Department of Toxics Substance Control (DTSC) and State of California Regional Water Quality Control Board, Los Angeles Region (LARWQCB). 2003. *Advisory – Active Soil Gas Investigations*, January 28.

DTSC. 2011. *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*, October.

Lawrence Berkeley National Laboratory (LBNL). 2002. *Analysis of Background Distribution of Metals in the Soil at Lawrence Berkeley National Laboratory*, June.

State of California Environmental Protection Agency (Cal EPA). 2010. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties, Table 2- California Human Health Screening Levels for Indoor Air and Soil Gas*, January 2005, updated September 23, 2010.

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

# TABLES

**TABLE 1**  
**SUMMARY OF SOIL VAPOR SAMPLE ANALYTICAL DATA**  
**O'REILLY AUTO SUPPLY**  
**(FORMER GRAND AUTO SUPPLY #43)**  
**OAKLAND, CALIFORNIA**  
**AllWest Project No. 12088.23**

Sample Number	Date	Sample Depth feet bgs	Acetone $\mu\text{g}/\text{m}^3$	Benzene $\mu\text{g}/\text{m}^3$	1,3-Butadiene $\mu\text{g}/\text{m}^3$	Chloroform $\mu\text{g}/\text{m}^3$	Dichloro-difluoromethane (Freon 12) $\mu\text{g}/\text{m}^3$	Ethanol $\mu\text{g}/\text{m}^3$	Ethyl-benzene $\mu\text{g}/\text{m}^3$	Ethyl Acetate $\mu\text{g}/\text{m}^3$	4-Ethyltoluene $\mu\text{g}/\text{m}^3$	Helium (% v/v) (Leak detect gas)	Isopropyl Alcohol (IPA) $\mu\text{g}/\text{m}^3$	4-Methyl-2-pentanone (MIBK) $\mu\text{g}/\text{m}^3$	Naphthalene $\mu\text{g}/\text{m}^3$	Propene $\mu\text{g}/\text{m}^3$	Tetrachloro-ethene (PCE) $\mu\text{g}/\text{m}^3$	Toluene $\mu\text{g}/\text{m}^3$	Trichloro-ethene (TCE) $\mu\text{g}/\text{m}^3$	1,2,4-Trimethyl-benzene $\mu\text{g}/\text{m}^3$	1,3,5-Trimethyl-benzene $\mu\text{g}/\text{m}^3$	Xylenes (Total) $\mu\text{g}/\text{m}^3$	Other VOCs $\mu\text{g}/\text{m}^3$
SVP-1	1/4/2012	5	ND (<120)	13	ND (<4.5)	ND (<9.9)	34	1,600	28	46	18	NA	91	ND (<8.3)	ND (<11)	ND (<88)	270	81	ND (<11)	66	23	200	ND (varies)
SVP-2	1/4/2012	5	ND (<120)	ND (<6.5)	ND (<4.5)	ND (<9.9)	51	200	63	21	23	NA	ND (<50)	14	ND (<11)	ND (<88)	460	78	25	39	14	370	ND (varies)
SVP-3	1/4/2012	5	ND (<120)	ND (<6.5)	ND (<4.5)	97	370	170	22	15	22	NA	ND (<50)	15	ND (<11)	ND (<88)	8,100	17	210	55	23	170	ND (varies)
SVP-4	1/4/2012	5	140	15	28	28	170	1,500	18	76	30	NA	80	30	ND (<11)	770	550	42	ND (<11)	49	18	110	ND (varies)
SVP-5	1/4/2012	5	320	8.0	ND (<4.5)	ND (<9.9)	110	1,900	17	250	32	NA	88	47	11	470	4,600	31	51	55	19	120	ND (varies)
SVP-6	1/4/2012	5	ND (<120)	16	76	ND (<9.9)	ND (<10)	340	14	40	17	NA	ND (<50)	20	ND (<11)	ND (<88)	670	27	26	65	22	110	ND (varies)
SVP-7	10/27/2012	<1	220	15	ND (<4.5)	ND (<9.9)	ND (<10)	ND (<96)	17	ND (<19)	ND (<10)	0.65	NA	ND (<8.3)	ND (<11)	ND (<88)	1,200	60	ND (<11)	32	15	88	Hexane 4,200, carbon disulfide 28, others ND (varies)
SVP-8	10/27/2012	<1	130	8.6	ND (<4.5)	ND (<9.9)	23	ND (<96)	ND (<8.8)	ND (<19)	ND (<10)	0.10	NA	ND (<8.3)	ND (<11)	ND (<88)	4,100	ND (<7.7)	ND (<11)	ND (<10)	ND (<10)	ND (<27)	ND (varies)
SVP-9	10/27/2012	<1	200	20	ND (<4.5)	ND (<9.9)	ND (<10)	ND (<96)	ND (<8.8)	ND (<19)	ND (<10)	0.26	NA	ND (<8.3)	ND (<11)	ND (<88)	940	ND (<7.7)	ND (<11)	12	ND (<10)	ND (<27)	ND (varies)
SVP-10	10/27/2012	<1	ND (<120)	7.8	ND (<4.5)	ND (<9.9)	16	ND (<96)	ND (<8.8)	ND (<19)	ND (<10)	0.013	NA	ND (<8.3)	ND (<11)	ND (<88)	530	ND (<7.7)	ND (<11)	ND (<10)	ND (<10)	ND (<27)	ND (varies)
SVP-11	10/27/2012	<1	120	10	ND (<4.5)	ND (<9.9)	ND (<10)	220	ND (<8.8)	ND (<19)	ND (<10)	0.020	NA	ND (<8.3)	ND (<11)	ND (<88)	740	ND (<7.7)	18	ND (<10)	ND (<10)	ND (<27)	ND (varies)
SVP-12	10/27/2012	<1	130	10	ND (<4.5)	ND (<9.9)	ND (<10)	ND (<96)	ND (<8.8)	ND (<19)	ND (<10)	0.82	NA	ND (<8.3)	ND (<11)	ND (<88)	1,700	ND (<7.7)	39	ND (<10)	ND (<10)	ND (<27)	Hexane 560, methylene chloride 19, others ND (varies)
ESL	Commercial		1,800,000	280	NL	1,500	NL	NL	3,300	NL	NL	NL	NL	NL	240	NL	1,400	180,000	4,100	NL	NL	58,000	Hexane, carbon disulfide NL, methylene chloride 17,000, others vary

**Notes:**

VOCs Volatile Organic Compounds by EPA Method TO-15, McCampbell Analytical, Inc., Pittsburg, CA

MIBK 4-Methyl-2-pentanone

$\mu\text{g}/\text{m}^3$  Micrograms per cubic meter = 0.001 micrograms per liter

ND Not detected at or below laboratory reporting limit (reporting limit in parenthesis)

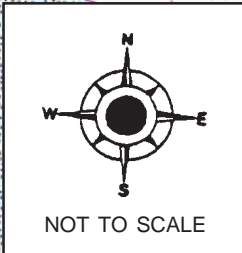
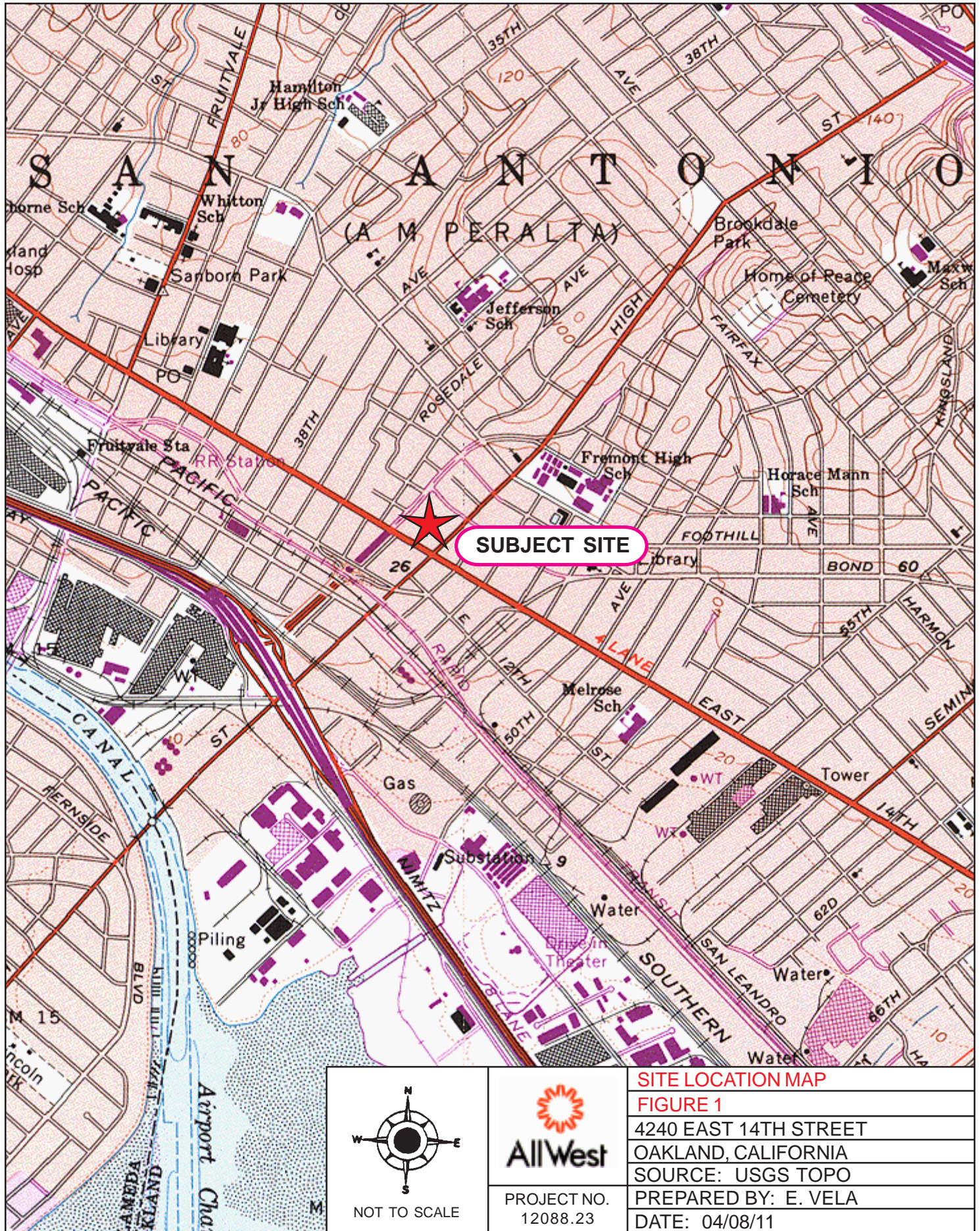
NA Not Analyzed

NL Not Listed

ESL Environmental Screening Level (Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, California Regional Water Quality Control Board, San Francisco Bay, INTERIM FINAL - November 2007 (revised May 2008). Table E, Shallow Soil Gas Screening Levels, For Evaluation Of Potential Vapor Intrusion Concerns, Commercial/Industrial Land Use).

# FIGURES



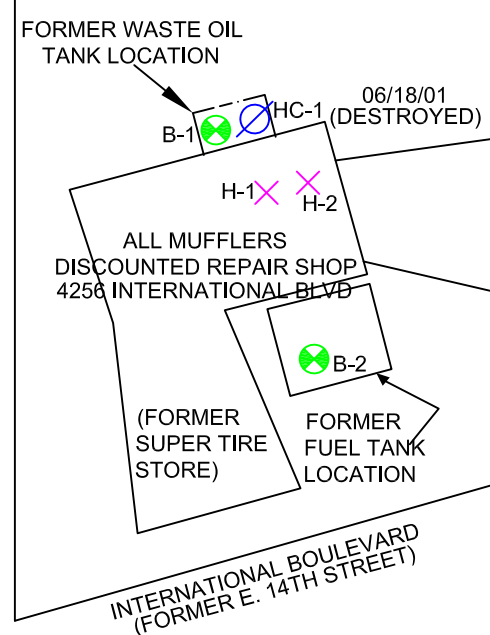
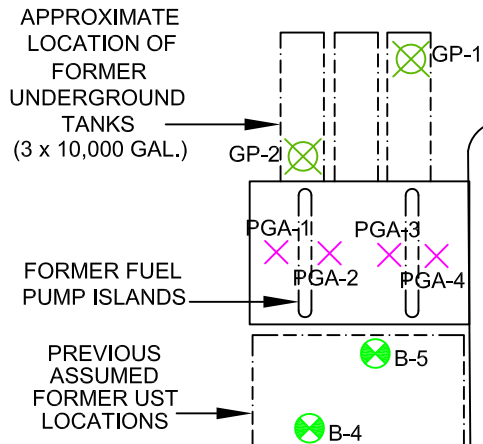
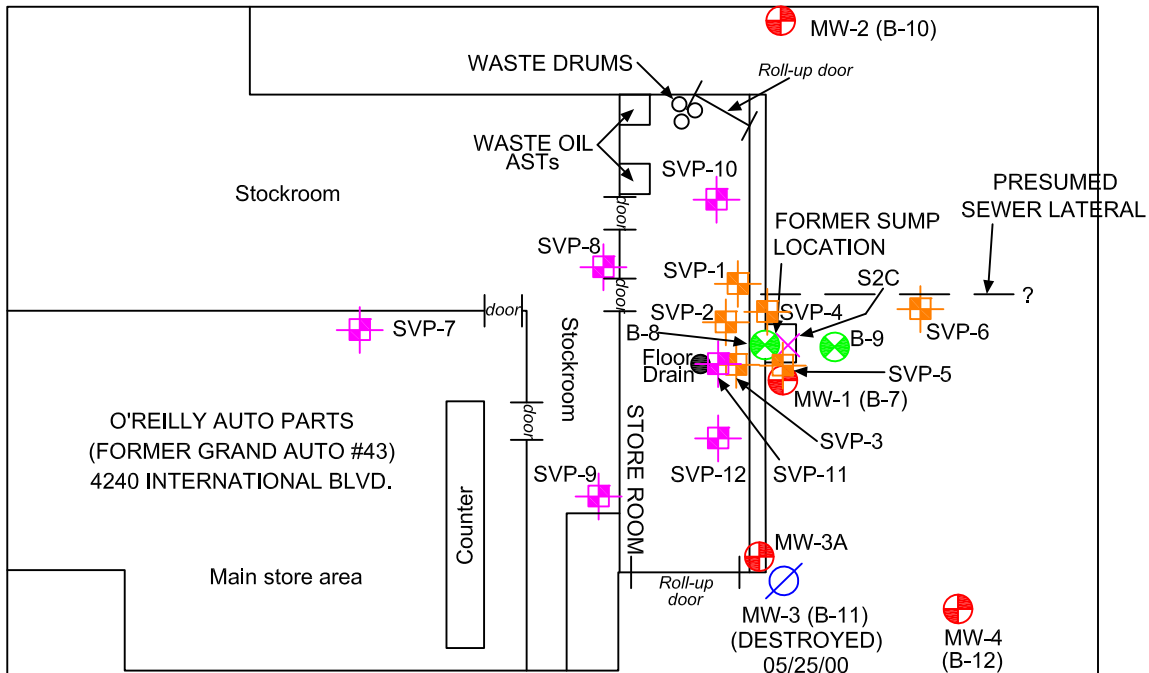


PROJECT NO.  
12088.23

<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

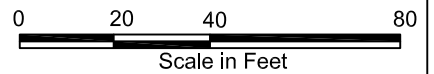
HIGH STREET

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.  
12088.23

SOURCE: ALLWEST

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



MISSION AUTOMOTIVE

MMW-2 (B-10)

APPROXIMATE  
GROUNDWATER  
FLOW DIRECTION

WASTE OIL  
ASTS

WASTE DRUMS

Rollup Door

Stockroom

<b>SVP-2</b>	
PCE	460
TCE	25
B	ND<6.5
T	78
EB	63
X	370
F12	51

Stockroom

Stockroom

Stockroom

Stockroom

Stockroom

Stockroom

Stockroom

Stockroom

Stockroom

Door

Door

Door

Door

Door

Door

Door

Door

Door

<b>SVP-7</b>	
PCE	1,200
TCE	ND<11
B	15
T	60
EB	17
X	88
F12	ND<10

SVP-7

OREILLY AUTO PARTS  
(FORMER GRAND AUTO #43)  
4240 INTERNATIONAL BLVD.

Main Store Area

Counter

<b>SVP-11</b>	
PCE	740
TCE	18
B	10
T	ND<7.7
EB	ND<8.8
X	ND<27
F12	ND<10

SVP-11

SVP-11

SVP-11

SVP-11

SVP-11

SVP-11

SVP-11

SVP-11

SVP-11

LEGEND

MMW-2 Existing Well Location

SVP-1 Temporary 5 feet bgs probe soil vapor sample location (AllWest, January, 2012)

SVP-2 Permanent sub-slab probe soil vapor sample location (AllWest, October 2012)

Concentrations in micrograms per cubic meter (mg/m<sup>3</sup>)

PCE = tetrachloroethene

TCE = trichloroethene

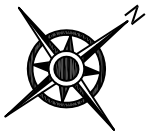
B = benzene

T = toluene

EB = ethyl benzene

X = xylenes (total)

F12 = Freon 12 (dichloro-difluoromethane)



0  
20 ft



PROJECT NO.  
12088.23

SOIL VAPOR SAMPLE ANALYTICAL SUMMARY,  
01/04/12 AND 10/27/12

FIGURE 3: FORMER GRAND AUTO #43

4240 EAST 14TH STREET (INTERNATIONAL BOULEVARD)

OAKLAND, CALIFORNIA

SOURCE: ALLWEST

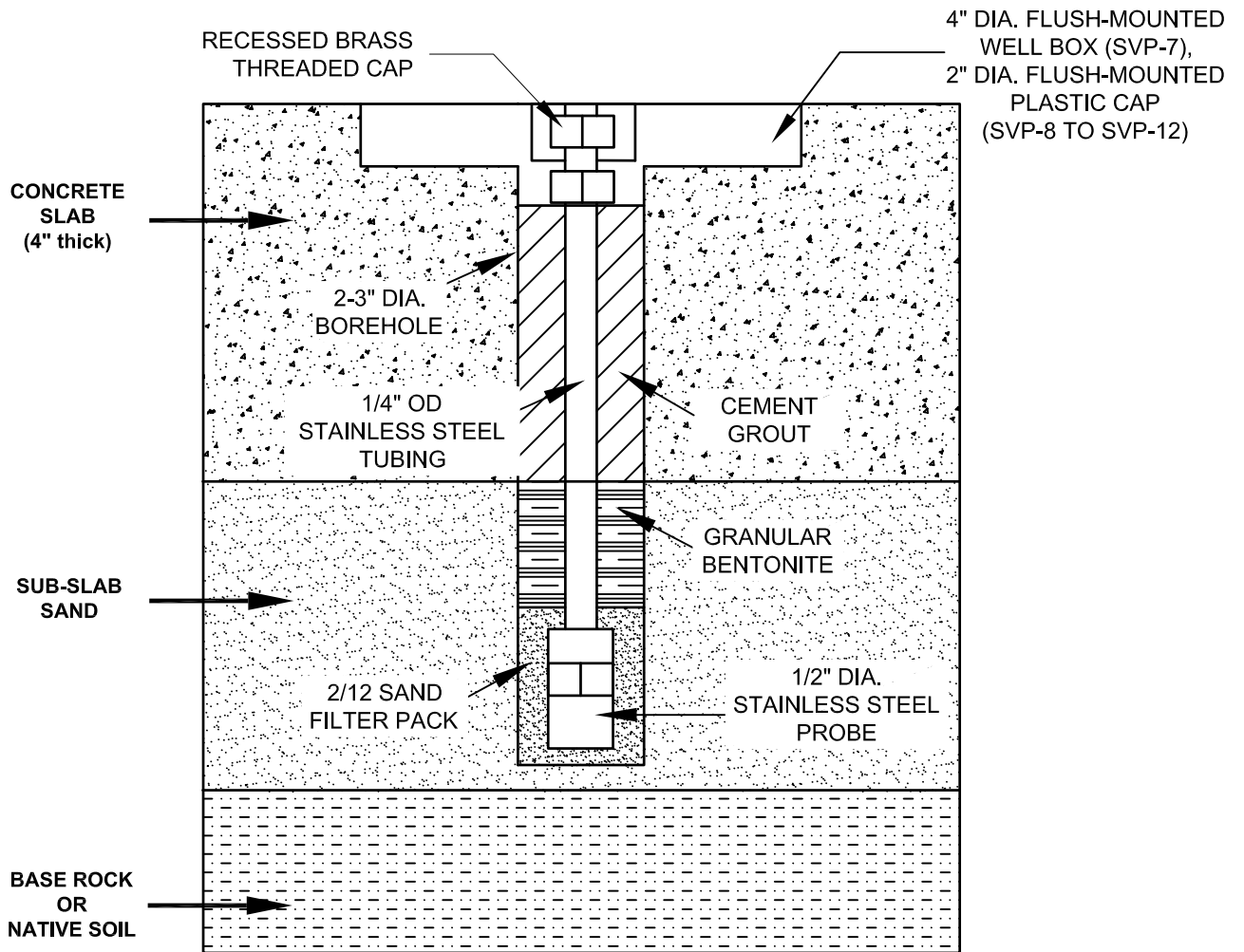
PREPARED BY: C. RAMELB (12/05/12)

SEWER LINE


FORMER  
DRY CLEANERS

H I G H S T R E E T

# Schematic of Sub-Slab Vapor Probes



NOT TO SCALE

 <b>AllWest</b>	FIGURE 4
	O'REILLY AUTO PARTS
	4240 INTERNATIONAL BOULEVARD
	OAKLAND, CALIFORNIA
	SOURCE: ALLWEST
PROJECT NO. 12088.23	PREPARED BY: C. RAMELB
	DATE: 12/06/12

# Appendix A



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

June 5, 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

Transamerica Title Insurance Company  
c/o CSK Auto, Inc.  
645 E Missouri Avenue  
Phoenix, AZ 85012

Subject: Site Investigation 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, "*Soil Vapor and Subsurface Investigation*," dated March 16, 2012 (Site Investigation Report) and "*2011 Groundwater Monitoring Report*," also dated March 16, 2012 (Monitoring Report). The Site Investigation Report, which was prepared by AllWest Environmental, presents results from soil, soil vapor, and groundwater sampling conducted in two areas of the site.

Tetrachloroethene (PCE) was detected in each of the five soil vapor samples collected in the area of a former sump at concentrations up to 8,100 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The maximum concentration of PCE in soil vapor was detected in soil vapor sample SVP-3, which was collected beneath the interior of the building. We request that you submit a Work Plan that addressed the technical comments below.

#### **TECHNICAL COMMENTS**

- 1. Soil Vapor Results within the Building.** PCE was detected in each of the three soil vapor samples collected beneath the interior floor of the building. The maximum reported concentration of 8,100  $\mu\text{g}/\text{m}^3$  of PCE exceeds the commercial land use California Human Health Screening Level (CHHSL) for PCE in soil vapor of 603  $\mu\text{g}/\text{m}^3$  by more than an order of magnitude. Although the detection of PCE in soil vapor at concentrations exceeding the CHHSL does not necessarily indicate that adverse impacts to human health are occurring, it does indicate that further assessment is required. Consistent with the approach used in the, California Department of Toxic Substances Control (DTSC) "*Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*," dated December 15, 2004, a step-wise investigation approach is recommended to evaluate potential vapor intrusion. Since soil vapor results indicate a potential for vapor intrusion to indoor air, sub-slab sampling appears to be necessary for the next step. Therefore, we request that you submit a Work Plan to conduct sub-slab vapor sampling beneath the floor of the building adjacent to the sump area.

2. **Conclusion Regarding Potential for Soil Vapor Intrusion.** The Investigation Report presents a conclusion that vapor intrusion into the building is probably not a significant exposure pathway to building occupants since only one of three soil vapor samples collection from the building interior exceeded the CHHSL. The existing data do not necessarily support this conclusion. DTSC guidance states, "Use the maximum soil gas concentration over an area of the footprint of existing or assumed future buildings to compensate for potentially isolated rooms within a building and the uncertainties in soil gas collection," (page 2-5 of "*Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*, DTSC January 2005). As noted in technical comment 1, sub-slab sampling is required to evaluate the potential for vapor intrusion.
3. **Investigation Results for Former UST Area.** Two soil borings were advanced to collect soil and grab groundwater samples from the former UST area. Petroleum hydrocarbons were not detected at concentrations above screening levels in soil and groundwater samples from the two borings. Based on these results and results from the groundwater monitoring, no further investigation is necessary in the area of the former USTs.

#### **TECHNICAL REPORT REQUEST**

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

- **August 7, 2012** – Work Plan for Sub-slab Vapor Sampling

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). Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>.

Sincerely,

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

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: 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))

Responsible Parties  
RO0002483  
June 5, 2012  
Page 3

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 REQUESTS

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

#### ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.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, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

#### UNDERGROUND STORAGE TANK CLEANUP FUND

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

#### AGENCY OVERSIGHT

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

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>REVISION DATE:</b> July 20, 2010
	<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 (LOP and SLIC) 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 [deh.loptoxic@acgov.org](mailto:deh.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 <ftp://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 [deh.loptoxic@acgov.org](mailto:deh.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.





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

September 6, 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

Transamerica Title Insurance Company  
c/o CSK Auto, Inc.  
645 E Missouri Avenue  
Phoenix, AZ 85012

Subject: Conditional Work Plan Approval 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, "Additional Sub-Slab Vapor Investigation Work Plan," dated August 1, 2012 (Work Plan). The Work Plan, which was prepared by AllWest Environmental, presents plans for installation and sampling of six-sub slab vapor probes.

The proposed scope of work is conditionally approved and may be implemented provided that the technical comments below are incorporated during implementation of the proposed investigation. Submittal of a revised Work Plan or Work Plan Addendum is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

#### **TECHNICAL COMMENTS**

1. **Sub-slab Vapor Probes.** Installation of the Vapor Pin™ for sub-slab sampling is not approved for the site. We request that semi-permanent sub-slab vapor probes be installed per the DTSC "Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance), Appendix G," October 2011.
2. **Analysis.** In addition to the proposed analyses, please include analysis for oxygen, carbon dioxide, and methane using ASTM D1946 for all sub-slab vapor samples. Please present the results in the Sub-Slab Vapor Sampling Report requested below.

Responsible Parties  
RO0002483  
September 6, 2012  
Page 2

### **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:

- **December 14, 2012** – Sub-Slab Vapor Sampling Report  
File to be named: SWI\_R\_YYYY-mm-dd RO2483

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

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,

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>
    - (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



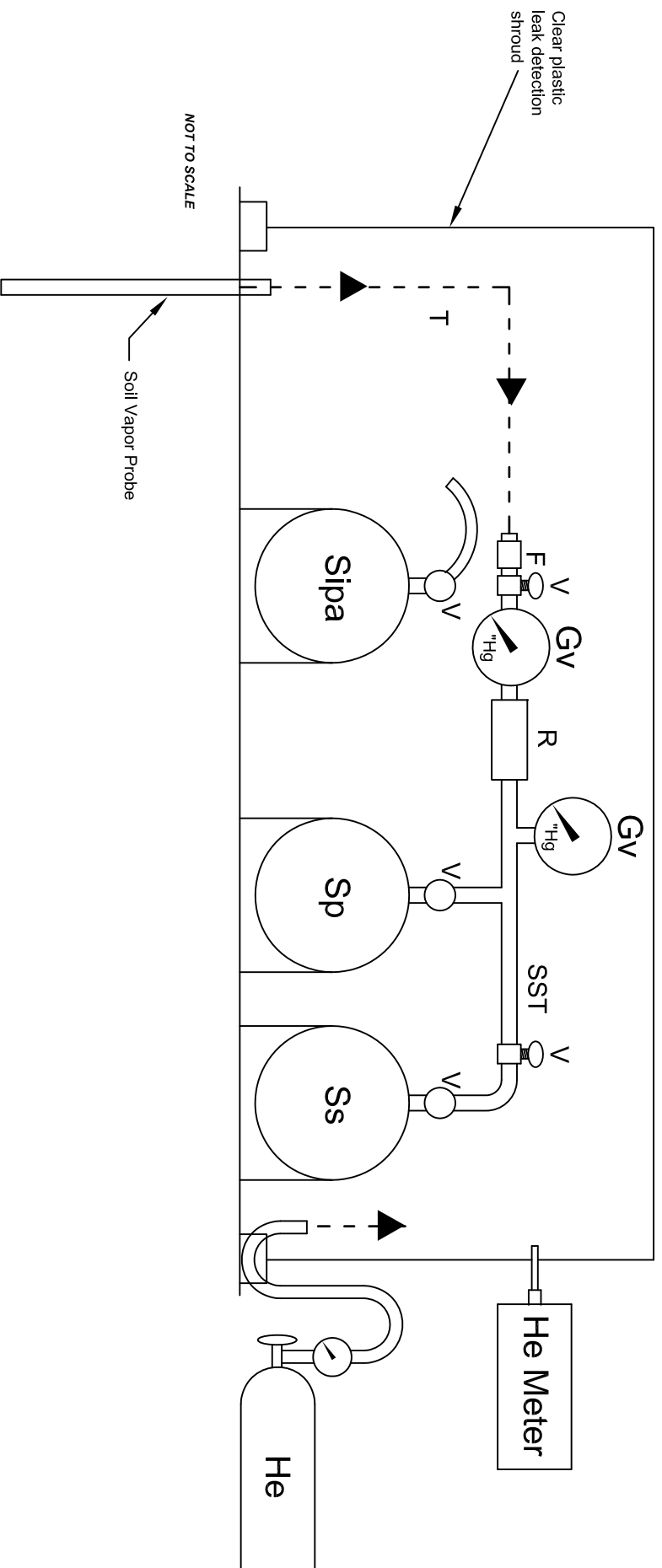
sampling system volumes, the flexible tubing is connected to a syringe collect a vapor sample. The syringe is then immediately transported to an on-site mobile laboratory for analysis.

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



### 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. RAMEL B



# Appendix C



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: 12088.23

Project Name: O'Reilly

Date: 10/27/12

Vapor Probe No: SVP-7

Serial No: 6407  
Purge can L4776

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

Contractor: AllWest

Hole Diameter: 4" Total Depth: 4'6" Grout/Bentonite: \_\_\_\_\_

Probe Diameter: 1/2" Line Length: 2' Purge Volume: 500ml (25" Hg)

Tracer Gas: He ~~MAN316 719 712~~ Flow Regulator: 150 (ml/min) Leak Test: Pass/Fail

Laboratory Name and Number: McCampbell Analytical, TO-15 (VOCs)

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1009	0	25"/26"	Start leak check
1014	5	25"/26"	stop leak check
1034	0	0"/26"	Start purge
1037	3	0"/23.5"	Stop purge
1110	0	25"/25"	start sample He 21%
1117	7	15"	stop sample He 15%

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

Sampler: DMA



**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**

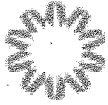
Project No: 12088.23 Project Name: O'Reilly  
 Date: 10/27/12 Vapor Probe No: SVP-8 Serial No: A7522  
Purge Summa L4776  
 Regulatory Agencies: ACHCS  
 Contractor: AllWest  
 Hole Diameter: 2" Total Depth: 4'6" Grout/Bentonite: \_\_\_\_\_  
 Probe Diameter: 1/2" OD Line Length: \_\_\_\_\_ Purge Volume: 500mL (2.5" Hg)  
MAN316-719  
 Tracer Gas: He Flow Regulator: 150 (ml/min) Leak Test: Pass/Fail  
 Laboratory Name and Number: McCampbell Analytical, TO-15 (VOCs)

**SAMPLE COLLECTION**

Start Time	Time Elapsed	Pressure	Remarks
1153	0	22"/20"	start leak check
1158	5	22"/20"	stop leak check
1159	0	0"/20"	start purge
1202	3	0"/17.5"	stop purge
1206	0	29"/27.5"	start sample He 17%
1212	6	15"	stop sample He 19%

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

Sampler: Jon



AllWest

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: 12088.23

Project Name: O'Reilly

Date: 10/27/12

Vapor Probe No: SVP-9

Serial No: 6169  
*Purge Summa L4776*

Regulatory Agencies: ACHCS

Contractor: AllWest

Hole Diameter: 2" Total Depth: 6" Grout/Bentonite: \_\_\_\_\_

Probe Diameter: 1/2" OD Line Length: 2' Purge Volume: 500 mL (2.5" H<sub>2</sub>O)  
*MAN316-762*

Tracer Gas: He Flow Regulator: 150 (ml/min) Leak Test: Pass/Fail

Laboratory Name and Number: McCampbell Analytical, TO-15 (VOCs)

SAMPLE COLLECTION

*19.5"*  
~~18"~~ *18"*

Start Time	Time Elapsed	Pressure	Remarks
1251	0	<del>18"</del> / <del>18"</del>	Start leak check
1256	5	19.5" / 18"	stop leak check
1257	0	0" / 18"	start purge
1300	3	0" / 15.5"	stop purge
1302	0	28" / 28"	start sample He 20.1%
1308	6	5" / 15"	stop sample He 15%

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

Sampler: *CM*



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: 12088.23 Project Name: O'Reilly  
 Date: 10/27/12 Vapor Probe No: SVP-10 Serial No: A7509  
 Regulatory Agencies: ACHCS Purge sampling L4776  
 Contractor: AllWest  
 Hole Diameter: 2" Total Depth: 9" Grout/Bentonite: \_\_\_\_\_  
 Probe Diameter: 1/2" OD Line Length: 2" Purge Volume: 500 mL (25" Hg)  
MAN316-671  
 Tracer Gas: He Flow Regulator: 150 (ml/min) Leak Test: Pass/Fail  
 Laboratory Name and Number: McCampbell Analytical, TO-15 (VOCs)

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1410	0	16"/16"	Start leak check
1415	5	16"/16"	Stop leak check
1416	0	0"/16"	Start purge
1421	5	0"/135"	Stop purge
1424	0	29"/28.5"	Start sample He 19.5%
1431	7	5.5"/15"	Stop sample He 18%

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

Sampler: OMA



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: 12088.23 Project Name: O'Reilly  
 Date: 10/27/12 Vapor Probe No: SVP-11 Serial No: 1462  
Purge Summa L4776  
 Regulatory Agencies: AC HCS  
 Contractor: AllWest  
 Hole Diameter: 2" Total Depth: 6" Grout/Bentonite: \_\_\_\_\_  
 Probe Diameter: 1/2" OD Line Length: 2' Purge Volume: \_\_\_\_\_  
MAN316-767  
 Tracer Gas: He Flow Regulator: 166 (ml/min) Leak Test: Pass/Fail  
 Laboratory Name and Number: McCampbell Analytical, To-15 (VOCs)

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1457	0	14.5"/13"	Start leak check
1502	5	14.5"/13"	Stop leak check
1503	0	0"/12.5"	Start purge
1506	3	0"/10"	Stop purge
1510	0	29"/128.5"	Start sample He 21%
1514	4	6"/15"	Stop sample He 18%

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

Sampler: OMA



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: 12088.23 Project Name: O'Reilly

Date: 10/27/12 Vapor Probe No: SVP-12 Serial No: 6804

Purge L4776

Regulatory Agencies: ACTICS

Contractor: AllWest

Hole Diameter: 2" Total Depth: 6" Grout/Bentonite: \_\_\_\_\_

Probe Diameter: 1/2" OD Line Length: 2' Purge Volume: 500 mL (2.5" Hg)

MAN316-662

Tracer Gas: He Flow Regulator: 150 (ml/min) Leak Test: Pass/Fail

Laboratory Name and Number: McCampbell Analytical, To-15(VOCs)

### SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1538	0	11.5"/10"	Start leak check
1543	5	11.5"/10"	Stop leak check
1547	0	11.5"/10"	Start purge
1551	4	0"/7.5"	Stop purge
1556	0	28"/28"	Start Sample 19.7% He
1603	7	5"/5"	Stop Sample 16.2% He

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

Sampler: [Signature]

# Appendix D





## Analytical Report

All West Environmental, Inc  530 Howard Street, Ste.300  San Francisco, CA 94105	Client Project ID: #12088.23; O'Reilly	Date Sampled: 10/27/12
		Date Received: 10/29/12
	Client Contact: Leonard Niles	Date Reported: 11/05/12
	Client P.O.:	Date Completed: 11/05/12

**WorkOrder: 1210921**

November 05, 2012

Dear Leonard:

Enclosed within are:

- 1) The results of the **7** analyzed samples from your project: **#12088.23; O'Reilly,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.

*The analytical results relate only to the items tested.*

1210921



**McCAMPBELL ANALYTICAL INC.**  
 1534 WILLOW PASS ROAD / PITTSBURG, CA 94565-1701  
 Website: [www.mccampbell.com](http://www.mccampbell.com) / Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
 Telephone: (877) 252-9262 / Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

**TURN AROUND TIME**       
 T06019705075 RUSH 24 HR 48 HR 72 HR 5 DAY  
 EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Leonard Niles Bill To: Carol Ramella  
 Company: AllWest carol@allwest1.com  
530 Howard St. # 300  
SF, CA 94105 E-Mail: leonard@allwest1.com  
 Tele: (415) 391-2510 Fax: (415) 391-2008

Lab Use Only  
 Pressurized By \_\_\_\_\_ Date \_\_\_\_\_  
 Pressurization Gas  
 N2 \_\_\_\_\_ He \_\_\_\_\_

Project #: 12088.23 Project Name: O'Reilly

Helium Shroud SN#: N/A (AllWest Shroud)

Project Location: 4040 International Blvd., Oakland CA

Other: \_\_\_\_\_

Sampler Signature: [Signature]

Notes: Analyze sample # SVP-12-He for helium by ASTM D1946 only. All others for both TO-15 VOCs and He by ASTM D1946

Field Sample ID (Location)	Collection		Canister SN#	Manifold / Sampler Kit SN#	Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum			
	Date	Time						Initial	Final	Receipt	Final (psi)
SVP-7	10/27/12	1117	6407	MAN316-712	TO-15 (VOCs), <sup>ASTM-D1946</sup> (He)		X	-28	-5		
SVP-8		1212	A7522	MAN316-719			X	-27.5	-5		
SVP-9		1308	6169	MAN316-762			X	-28	-5		
SVP-10		1431	A7509	MAN316-671			X	-28.5	-5		
SVP-11		1514	1462	MAN316-767			X	-28.5	-5		
SVP-12		1603	6804	MAN316-662			X	-28	-5		
SVP-12-He	↓	1603	6436	MAN316-671	ASTM-D1946 (He)		X	-28.5	-5		

Relinquished By: [Signature] Date: 10/29/12 Time: 1210 Received By: [Signature]

Temp (°C): \_\_\_\_\_ Work Order #: 1210921

Relinquished By: [Signature] Date: 10/29/12 Time: 1400 Received By: Me Vall

Equipment Condition: \_\_\_\_\_

Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

Shipped Via: \_\_\_\_\_



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210921

ClientCode: AWE

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  EQUIS   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

**Report to:**  
 Leonard Niles  
 All West Environmental, Inc  
 530 Howard Street, Ste.300  
 San Francisco, CA 94105  
 (415) 391-2510    FAX: (415) 391-2008

Email: Leonard@allwest1.com  
 cc:  
 PO:  
 ProjectNo: #12088.23; O'Reilly

**Bill to:**  
 Darlene Torio  
 All West Environmental, Inc  
 530 Howard Street, Ste.300  
 San Francisco, CA 94105  
 darlene@allwest1.com

**Requested TAT: 5 days**

**Date Received: 10/29/2012**

**Date Printed: 10/29/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1210921-001	SVP-7	Soil Gas	10/27/2012 11:17	<input type="checkbox"/>		A	A										
1210921-002	SVP-8	Soil Gas	10/27/2012 12:12	<input type="checkbox"/>			A										
1210921-003	SVP-9	Soil Gas	10/27/2012 13:08	<input type="checkbox"/>			A										
1210921-004	SVP-10	Soil Gas	10/27/2012 14:31	<input type="checkbox"/>			A										
1210921-005	SVP-11	Soil Gas	10/27/2012 15:14	<input type="checkbox"/>			A										
1210921-006	SVP-12	Soil Gas	10/27/2012 16:03	<input type="checkbox"/>			A										
1210921-007	SVP-12-He	Soil Gas	10/27/2012 16:03	<input type="checkbox"/>	A												

**Test Legend:**

1	HELIUM_LC_SOILGAS(%)	2	PREFD REPORT	3	TO15_SOIL(UG/M3)	4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A contain testgroup.

**Prepared by: Zoraida Cortez**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



### Sample Receipt Checklist

Client Name: **All West Environmental, Inc**

Date and Time Received: **10/29/2012 6:25:08 PM**

Project Name: **#12088.23; O'Reilly**

LogIn Reviewed by: **Zoraida Cortez**

WorkOrder N°: **1210921** Matrix: Soil Gas

Carrier: Rob Pringle (MAI Courier)

#### Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

#### Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

#### Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature	Cooler Temp:		NA <input checked="" type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Metal - pH acceptable upon receipt (pH<2)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Samples Received on Ice?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



**McC Campbell Analytical, Inc.**

*"When Quality Counts"*

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269  
<http://www.mccampbell.com> / E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)

All West Environmental, Inc  530 Howard Street, Ste.300  San Francisco, CA 94105	Client Project ID: #12088.23; O'Reilly	Date Sampled: 10/27/12
		Date Received: 10/29/12
	Client Contact: Leonard Niles	Date Reported: 11/05/12
	Client P.O.:	Date Completed: 11/05/12

**Work Order: 1210921**

November 05, 2012

**CASE NARRATIVE REGARDING TO-15 ANALYSIS**

All summa canisters are EVACUATED 5 days after the reporting of the results. Please call or email if a longer retention time is required.

In an effort to attain the lowest reporting limits possible for the majority of the TO-15 target list, high level compounds may be analyzed using EPA Method 8260B.

Polymer (Tedlar) bags are not recommended for TO15 samples. The disadvantages are listed in Appendix B of the DTSC Advisory of April 2012.



All West Environmental, Inc  530 Howard Street, Ste.300  San Francisco, CA 94105	Client Project ID: #12088.23; O'Reilly	Date Sampled: 10/27/12
		Date Received: 10/29/12
	Client Contact: Leonard Niles	Date Extracted: 10/31/12-11/01/12
	Client P.O.:	Date Analyzed: 10/31/12-11/01/12

**Helium\***

Extraction method: ASTM D 1946-90

Analytical methods: ASTM D 1946-90

Work Order: 1210921

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Helium	DF	% SS	Comments
001A	SVP-7	Soil Gas	13.36	26.64	0.65	1	N/A	
002A	SVP-8	Soil Gas	12.12	24.14	0.10	1	N/A	
003A	SVP-9	Soil Gas	12.46	24.82	0.26	1	N/A	
004A	SVP-10	Soil Gas	12.48	24.87	0.013	1	N/A	
005A	SVP-11	Soil Gas	12.43	24.76	0.020	1	N/A	
006A	SVP-12	Soil Gas	12.21	24.35	0.82	1	N/A	
007A	SVP-12-He	Soil Gas	12.46	24.83	90	60	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	SoilGas	psia	psia	0.005	%

\* vapor samples are reported in %.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor





Table with client information: All West Environmental, Inc, Client Project ID: #12088.23; O'Reilly, Date Sampled: 10/27/12, Date Received: 10/29/12, Client Contact: Leonard Niles, Date Extracted: 11/01/12-11/02/12, Client P.O., Date Analyzed: 11/01/12-11/02/12

Volatile Organic Compounds in µg/m³\*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1210921

Summary table with Lab ID 1210921-001A, Client ID SVP-7, Matrix Soil Gas, Initial Pressure 13.36 psia, Final Pressure 26.64 psia

Main data table with columns: Compound, Concentration \*, DF, Reporting Limit, Compound, Concentration \*, DF, Reporting Limit. Lists various VOCs like Acetone, Benzene, Chloroform, etc.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 126, %SS2: 105, %SS3: 112

Comments:

\*vapor samples are reported in µg/m³.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



All West Environmental, Inc 530 Howard Street, Ste.300 San Francisco, CA 94105	Client Project ID: #12088.23; O'Reilly	Date Sampled: 10/27/12
		Date Received: 10/29/12
	Client Contact: Leonard Niles	Date Extracted: 11/01/12-11/02/12
	Client P.O.:	Date Analyzed: 11/01/12-11/02/12

**Volatile Organic Compounds in µg/m<sup>3</sup>\***

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1210921

Lab ID	1210921-002A	Initial Pressure (psia)	12.12
Client ID	SVP-8	Final Pressure (psia)	24.14
Matrix	Soil Gas		

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	130	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	8.6	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	23	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrachloroethene	4100	10	14	Tetrahydrofuran	ND	1.0	6.0
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11
Trichloroethene	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27				

**Surrogate Recoveries (%)**

%SS1:	129	%SS2:	105
%SS3:	111		

Comments:

\*vapor samples are reported in µg/m<sup>3</sup>.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor





All West Environmental, Inc 530 Howard Street, Ste.300 San Francisco, CA 94105	Client Project ID: #12088.23; O'Reilly	Date Sampled: 10/27/12
		Date Received: 10/29/12
	Client Contact: Leonard Niles	Date Extracted: 11/01/12-11/02/12
	Client P.O.:	Date Analyzed: 11/01/12-11/02/12

**Volatile Organic Compounds in µg/m<sup>3</sup>\***

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1210921

Lab ID	1210921-003A	Initial Pressure (psia)	12.46
Client ID	SVP-9	Final Pressure (psia)	24.82
Matrix	Soil Gas		

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	200	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	20	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrachloroethene	940	10	14	Tetrahydrofuran	ND	1.0	6.0
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11
Trichloroethene	ND	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	12	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27				

**Surrogate Recoveries (%)**

%SS1:	125	%SS2:	105
%SS3:	110		

Comments:

\*vapor samples are reported in µg/m<sup>3</sup>.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



Table with client information: All West Environmental, Inc, Client Project ID: #12088.23; O'Reilly, Date Sampled: 10/27/12, Date Received: 10/29/12, Client Contact: Leonard Niles, Date Extracted: 11/01/12, San Francisco, CA 94105, Client P.O., Date Analyzed: 11/01/12

Volatile Organic Compounds in ug/m3\*\*

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1210921

Summary table with columns: Lab ID (1210921-004A), Client ID (SVP-10), Matrix (Soil Gas), Initial Pressure (psia) (12.48), Final Pressure (psia) (24.87)

Main data table with columns: Compound, Concentration \*, DF, Reporting Limit, Compound, Concentration \*, DF, Reporting Limit. Lists various compounds like Acetone, Benzene, Chloroform, etc.

Surrogate Recoveries (%)

Table showing surrogate recoveries: %SS1: 125, %SS2: 105, %SS3: 112

Comments:

\*vapor samples are reported in ug/m3.
ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.
# surrogate diluted out of range or surrogate coelutes with another peak.
%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor



All West Environmental, Inc  
530 Howard Street, Ste.300  
San Francisco, CA 94105

Client Project ID: #12088.23; O'Reilly  
Client Contact: Leonard Niles  
Client P.O.:

Date Sampled: 10/27/12  
Date Received: 10/29/12  
Date Extracted: 11/01/12  
Date Analyzed: 11/01/12

**Volatile Organic Compounds in µg/m<sup>3</sup>\***

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1210921

Lab ID	1210921-005A	Initial Pressure (psia)	12.43
Client ID	SVP-11	Final Pressure (psia)	24.76
Matrix	Soil Gas		

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	120	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	10	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	220	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	ND	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	ND	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrachloroethene	740	1.0	14	Tetrahydrofuran	ND	1.0	6.0
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11
Trichloroethene	18	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27				

**Surrogate Recoveries (%)**

%SS1:	107	%SS2:	108
%SS3:	109		

Comments:

\*vapor samples are reported in µg/m<sup>3</sup>.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



All West Environmental, Inc 530 Howard Street, Ste.300 San Francisco, CA 94105	Client Project ID: #12088.23; O'Reilly	Date Sampled: 10/27/12
		Date Received: 10/29/12
	Client Contact: Leonard Niles	Date Extracted: 11/01/12-11/02/12
	Client P.O.:	Date Analyzed: 11/01/12-11/02/12

**Volatile Organic Compounds in µg/m<sup>3</sup>\***

Extraction Method: TO15

Analytical Method: TO15

Work Order: 1210921

Lab ID	1210921-006A	Initial Pressure (psia)	12.21
Client ID	SVP-12	Final Pressure (psia)	24.35
Matrix	Soil Gas		

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	130	1.0	120	Acrylonitrile	ND	1.0	4.4
tert-Amyl methyl ether (TAME)	ND	1.0	8.5	Benzene	10	1.0	6.5
Benzyl chloride	ND	1.0	11	Bromodichloromethane	ND	1.0	14
Bromoform	ND	1.0	21	Bromomethane	ND	1.0	7.9
1,3-Butadiene	ND	1.0	4.5	2-Butanone (MEK)	ND	1.0	150
t-Butyl alcohol (TBA)	ND	1.0	62	Carbon Disulfide	ND	1.0	6.3
Carbon Tetrachloride	ND	1.0	13	Chlorobenzene	ND	1.0	9.4
Chloroethane	ND	1.0	5.4	Chloroform	ND	1.0	9.9
Chloromethane	ND	1.0	4.2	Cyclohexane	ND	1.0	180
Dibromochloromethane	ND	1.0	17	1,2-Dibromo-3-chloropropane	ND	1.0	20
1,2-Dibromoethane (EDB)	ND	1.0	16	1,2-Dichlorobenzene	ND	1.0	12
1,3-Dichlorobenzene	ND	1.0	12	1,4-Dichlorobenzene	ND	1.0	12
Dichlorodifluoromethane	ND	1.0	10	1,1-Dichloroethane	ND	1.0	8.2
1,2-Dichloroethane (1,2-DCA)	ND	1.0	8.2	1,1-Dichloroethene	ND	1.0	8.1
cis-1,2-Dichloroethene	ND	1.0	8.1	trans-1,2-Dichloroethene	ND	1.0	8.1
1,2-Dichloropropane	ND	1.0	9.4	cis-1,3-Dichloropropene	ND	1.0	9.2
trans-1,3-Dichloropropene	ND	1.0	9.2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	1.0	14
Diisopropyl ether (DIPE)	ND	1.0	8.5	1,4-Dioxane	ND	1.0	7.3
Ethanol	ND	1.0	96	Ethyl acetate	ND	1.0	19
Ethyl tert-butyl ether (ETBE)	ND	1.0	8.5	Ethylbenzene	ND	1.0	8.8
4-Ethyltoluene	ND	1.0	10	Freon 113	ND	1.0	16
Heptane	ND	1.0	210	Hexachlorobutadiene	ND	1.0	22
Hexane	560	1.0	180	2-Hexanone	ND	1.0	210
4-Methyl-2-pentanone (MIBK)	ND	1.0	8.3	Methyl-t-butyl ether (MTBE)	ND	1.0	7.3
Methylene chloride	19	1.0	7.1	Naphthalene	ND	1.0	11
Propene	ND	1.0	88	Styrene	ND	1.0	8.6
1,1,1,2-Tetrachloroethane	ND	1.0	14	1,1,2,2-Tetrachloroethane	ND	1.0	14
Tetrachloroethene	1700	10	14	Tetrahydrofuran	ND	1.0	6.0
Toluene	ND	1.0	7.7	1,2,4-Trichlorobenzene	ND	1.0	15
1,1,1-Trichloroethane	ND	1.0	11	1,1,2-Trichloroethane	ND	1.0	11
Trichloroethene	39	1.0	11	Trichlorofluoromethane	ND	1.0	11
1,2,4-Trimethylbenzene	ND	1.0	10	1,3,5-Trimethylbenzene	ND	1.0	10
Vinyl Acetate	ND	1.0	180	Vinyl Chloride	ND	1.0	5.2
Xylenes, Total	ND	1.0	27				

**Surrogate Recoveries (%)**

%SS1:	102	%SS2:	103
%SS3:	109		

Comments:

\*vapor samples are reported in µg/m<sup>3</sup>.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



**QC SUMMARY REPORT FOR ASTM D 1946-90**

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 72132

WorkOrder: 1210921

EPA Method: ASTM D 1946-90		Extraction: ASTM D 1946-90					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	%	%	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
Helium	N/A	0.010	N/A	N/A	N/A	102	N/A	N/A	60 - 140	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 72132 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210921-001A	10/27/12 11:17 AM	10/31/12	10/31/12 4:38 PM	1210921-002A	10/27/12 12:12 PM	10/31/12	10/31/12 4:51 PM
1210921-003A	10/27/12 1:08 PM	10/31/12	10/31/12 5:04 PM	1210921-004A	10/27/12 2:31 PM	10/31/12	10/31/12 5:17 PM
1210921-005A	10/27/12 3:14 PM	10/31/12	10/31/12 5:30 PM	1210921-006A	10/27/12 4:03 PM	10/31/12	10/31/12 5:43 PM
1210921-007A	10/27/12 4:03 PM	11/01/12	11/01/12 3:20 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$   
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 72140

WorkOrder: 1210921

Analyte	Extraction: TO15		MS				Spiked Sample ID: N/A		
	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acrylonitrile	N/A	25	N/A	N/A	N/A	128	N/A	N/A	60 - 140
tert-Amyl methyl ether (TAME)	N/A	25	N/A	N/A	N/A	82.5	N/A	N/A	60 - 140
Benzene	N/A	25	N/A	N/A	N/A	88.5	N/A	N/A	60 - 140
Benzyl chloride	N/A	25	N/A	N/A	N/A	84.5	N/A	N/A	60 - 140
Bromodichloromethane	N/A	25	N/A	N/A	N/A	88.1	N/A	N/A	60 - 140
Bromoform	N/A	25	N/A	N/A	N/A	95.2	N/A	N/A	60 - 140
t-Butyl alcohol (TBA)	N/A	25	N/A	N/A	N/A	108	N/A	N/A	60 - 140
Carbon Disulfide	N/A	25	N/A	N/A	N/A	145, F2	N/A	N/A	60 - 140
Carbon Tetrachloride	N/A	25	N/A	N/A	N/A	93.3	N/A	N/A	60 - 140
Chlorobenzene	N/A	25	N/A	N/A	N/A	88.5	N/A	N/A	60 - 140
Chloroethane	N/A	25	N/A	N/A	N/A	121	N/A	N/A	60 - 140
Chloroform	N/A	25	N/A	N/A	N/A	88.7	N/A	N/A	60 - 140
Chloromethane	N/A	25	N/A	N/A	N/A	85.2	N/A	N/A	60 - 140
Dibromochloromethane	N/A	25	N/A	N/A	N/A	92.1	N/A	N/A	60 - 140
1,2-Dibromo-3-chloropropane	N/A	25	N/A	N/A	N/A	94.4	N/A	N/A	60 - 140
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	86	N/A	N/A	60 - 140
1,2-Dichlorobenzene	N/A	25	N/A	N/A	N/A	87.5	N/A	N/A	60 - 140
1,3-Dichlorobenzene	N/A	25	N/A	N/A	N/A	88.3	N/A	N/A	60 - 140
1,4-Dichlorobenzene	N/A	25	N/A	N/A	N/A	87.9	N/A	N/A	60 - 140
Dichlorodifluoromethane	N/A	25	N/A	N/A	N/A	97.7	N/A	N/A	60 - 140
1,1-Dichloroethane	N/A	25	N/A	N/A	N/A	99.8	N/A	N/A	60 - 140
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	85.2	N/A	N/A	60 - 140
1,1-Dichloroethene	N/A	25	N/A	N/A	N/A	111	N/A	N/A	60 - 140
cis-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	90.2	N/A	N/A	60 - 140
trans-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	93.2	N/A	N/A	60 - 140
1,2-Dichloropropane	N/A	25	N/A	N/A	N/A	87.3	N/A	N/A	60 - 140
cis-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	84.6	N/A	N/A	60 - 140
trans-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	84.6	N/A	N/A	60 - 140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	N/A	25	N/A	N/A	N/A	110	N/A	N/A	60 - 140
Diisopropyl ether (DIPE)	N/A	25	N/A	N/A	N/A	82.2	N/A	N/A	60 - 140
1,4-Dioxane	N/A	25	N/A	N/A	N/A	88	N/A	N/A	60 - 140

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



**QC SUMMARY REPORT FOR TO15**

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 72140

WorkOrder: 1210921

Analyte	Extraction: TO15		Spiked Sample ID: N/A				Acceptance Criteria (%)		
	Sample nL/L	Spiked nL/L	MS % Rec.	MSD % Rec.	MS-MSD % RPD	LCS % Rec.	MS / MSD	RPD	LCS
Ethyl acetate	N/A	25	N/A	N/A	N/A	84.7	N/A	N/A	60 - 140
Ethyl tert-butyl ether (ETBE)	N/A	25	N/A	N/A	N/A	83.4	N/A	N/A	60 - 140
Ethylbenzene	N/A	25	N/A	N/A	N/A	86.5	N/A	N/A	60 - 140
Freon 113	N/A	25	N/A	N/A	N/A	111	N/A	N/A	60 - 140
Hexachlorobutadiene	N/A	25	N/A	N/A	N/A	110	N/A	N/A	60 - 140
4-Methyl-2-pentanone (MIBK)	N/A	25	N/A	N/A	N/A	83.3	N/A	N/A	60 - 140
Methyl-t-butyl ether (MTBE)	N/A	25	N/A	N/A	N/A	91.1	N/A	N/A	60 - 140
Methylene chloride	N/A	25	N/A	N/A	N/A	109	N/A	N/A	60 - 140
Naphthalene	N/A	25	N/A	N/A	N/A	126	N/A	N/A	60 - 140
Styrene	N/A	25	N/A	N/A	N/A	86.7	N/A	N/A	60 - 140
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	97.3	N/A	N/A	60 - 140
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	85.5	N/A	N/A	60 - 140
Tetrachloroethene	N/A	25	N/A	N/A	N/A	91.1	N/A	N/A	60 - 140
Tetrahydrofuran	N/A	25	N/A	N/A	N/A	86	N/A	N/A	60 - 140
Toluene	N/A	25	N/A	N/A	N/A	89.7	N/A	N/A	60 - 140
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	115	N/A	N/A	60 - 140
1,1,1-Trichloroethane	N/A	25	N/A	N/A	N/A	89	N/A	N/A	60 - 140
1,1,2-Trichloroethane	N/A	25	N/A	N/A	N/A	88.8	N/A	N/A	60 - 140
Trichloroethene	N/A	25	N/A	N/A	N/A	95.4	N/A	N/A	60 - 140
1,2,4-Trimethylbenzene	N/A	25	N/A	N/A	N/A	84.3	N/A	N/A	60 - 140
1,3,5-Trimethylbenzene	N/A	25	N/A	N/A	N/A	89.3	N/A	N/A	60 - 140
Vinyl Chloride	N/A	25	N/A	N/A	N/A	100	N/A	N/A	60 - 140
%SS1:	N/A	500	N/A	N/A	N/A	91	N/A	N/A	60 - 140
%SS2:	N/A	500	N/A	N/A	N/A	99	N/A	N/A	60 - 140
%SS3:	N/A	500	N/A	N/A	N/A	102	N/A	N/A	60 - 140

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

F2 = LCS recovery for this compound is higher than acceptance limits.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery =  $100 * (MS - Sample) / (Amount Spiked)$ ;  $RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)$ .

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



### QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas

QC Matrix: Soilgas

BatchID: 72140

WorkOrder: 1210921

<b>EPA Method: TO15</b>		<b>Extraction: TO15</b>				<b>Spiked Sample ID: N/A</b>			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS

BATCH 72140 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210921-001A	10/27/12 11:17 AM	11/01/12	11/01/12 8:20 PM	1210921-001A	10/27/12 11:17 AM	11/02/12	11/02/12 2:25 PM
1210921-002A	10/27/12 12:12 PM	11/01/12	11/01/12 9:02 PM	1210921-002A	10/27/12 12:12 PM	11/02/12	11/02/12 3:07 PM
1210921-003A	10/27/12 1:08 PM	11/01/12	11/01/12 9:43 PM	1210921-003A	10/27/12 1:08 PM	11/02/12	11/02/12 3:48 PM
1210921-004A	10/27/12 2:31 PM	11/01/12	11/01/12 10:25 PM	1210921-005A	10/27/12 3:14 PM	11/01/12	11/01/12 11:06 PM
1210921-006A	10/27/12 4:03 PM	11/01/12	11/01/12 11:48 PM	1210921-006A	10/27/12 4:03 PM	11/02/12	11/02/12 5:53 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 % Recovery =  $100 * (MS - Sample) / (Amount Spiked)$ ;  $RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)$ .  
 \* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.  
 Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



# Appendix E



**APPLICATION FOR AUTHORIZATION TO USE**

**REPORT TITLE:** SUB-SLAB SOIL VAPOR PROBE INSTALLATION AND SAMPLING REPORT  
O'REILLY AUTO PARTS (FORMER GRAND AUTO #43)  
4240 INTERNATIONAL BOULEVARD (EAST 14TH STREET)  
OAKLAND, CALIFORNIA

**PROJECT NUMBER:** 12088.23

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 General Conditions.

Client agrees that AllWest is responsible only for the services set forth within the Scope of Work. In addition to the services to be performed by AllWest as described in the Work Authorization, the following items shall for the purposes of this Agreement be termed "Additional Services": (a) work resulting from changes in scope or magnitude of the Work as described therein, (b) work resulting from changes necessary because of construction cost over-runs, (c) work resulting from implementation of alternative or different designs from that first contemplated by the Parties, (d) work resulting from corrections or revisions required because of errors or omissions in construction by the building contractors, (e) work due to extended design or construction time schedules, (f) layout surveys in review of in-place constructed elements, and (g) services as an expert witness in connection with any public hearing, arbitration or proceedings of a court of record with respect to the Work on the Project. AllWest will be compensated by Client for any Additional Services on a time and materials basis in accordance with rates specified under the Work Authorization with appropriate fee increases for inflation. The Client is solely responsible for making any disclosures or reports to any third party and for the taking of corrective, remedial, or mitigative action.

### **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.

### **LIMITATION OF LIABILITY**

2. AllWest will perform its work in accordance with the existing standard of care of its industry, as of the time of the work being performed in that locale. AllWest makes no warranties, express or implied regarding its work. Client expressly agrees that to the fullest extent permitted by law, AllWest's maximum liability, as well as that of its employees and agents, to Client for any claims arising from AllWest's services, shall be \$50,000 or its fees, whichever is higher. In the event Client makes a written request for a higher limitation of liability, AllWest may increase this limit for a mutually negotiated higher fee commensurate with the increased risk to AllWest, provided however, that such agreed increase in fee and limitation of liability amount is memorialized by separate written agreement which expressly amends the terms of this clause. As used in this paragraph, the term "liability" means liability of any kind, whether in contract (including breach of warranty), in tort (including negligence), in 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.

### **INDEMNIFICATION**

3. 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 to assume the defense of, 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**

4. 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. It is further agreed that any dispute that is not settled pursuant to such mediation shall be adjudicated by a court appointed referee in accordance with the Judicial Reference procedures as set forth in California Code of Civil Procedure Section 638 et seq. The parties hereby mutually agree to waive any right to a trial by jury regarding any dispute arising out of this agreement.

The parties further agree to include a similar mediation, Judicial Reference & waiver of jury trial provision 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**

5. 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). AllWest's responsibilities shall be limited to recommendations regarding such matters and assistance with appropriate arrangements if authorized by Client.

## **FORCE MAJUERE**

6. 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**

7. This Agreement may be terminated by either party upon seven (7) 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**

8. 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 current one, unless Client first obtains a written agreement expanding the license to such use from AllWest, and with appropriate compensation to 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**

9. 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**

10. 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**

11. Both Client and AllWest agree that AllWest will act as 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**

12. 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.

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

13. The terms of this Agreement may be modified only by a writing signed by both Parties. 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**

14. 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.

## **INTERPRETATION / ADDITIONAL DOCUMENTS**

15. The words "Client" and "AllWest" as used herein shall include the plural as well as the singular. Words used in the neuter gender include the masculine and feminine. Words used in the masculine gender include the feminine and neuter. If there is more than one Client, the obligations hereunder imposed on Client shall be joint and several. 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.

## **AUTHORITY**

16. 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**

17. 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**

18. 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**

19. All 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.