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PACCAR Inc

July 11, 2013

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

Subject: **Letter of Transmittal for Second Semiannual Sub-Slab Soil Vapor Sampling Report**
O'Reilly Auto Parts (Former Grand Auto #43)
4240 International Boulevard (East 14th Street)
Oakland, California 94601
ACEH Fuel Leak Case No. RO0002483
GeoTracker Global ID No. T06019705075

Dear Mr. Wickham:

As required in your letter of September 6, 2012 regarding the above-referenced subject site, we submit this transmittal letter and accompanying report for the second semiannual soil vapor sampling event performed April 19, 2013 of the sub-slab vapor probes installed at the subject site in October 2012 to further evaluate the potential for soil vapor intrusion.

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,

Vicki ZumBrunnen, REM
Environmental Project Supervisor

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AllWest Environmental, Inc.

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SECOND SEMIANNUAL SUB-SLAB SOIL VAPOR SAMPLING REPORT

O'Reilly Auto Parts
(Former Grand Auto #43)
4240 International Boulevard (East 14th 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
July 11, 2013

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AllWest

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SECOND SEMIANNUAL SUB-SLAB SOIL VAPOR SAMPLING REPORT

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Oakland, California

I. EXECUTIVE SUMMARY

AllWest Environmental, Inc. (AllWest) conducted sub-slab soil vapor sampling on April 19, 2013 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). This work was a follow-up to the sub-slab soil vapor sampling event conducted on October 27, 2012, 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 collecting soil vapor samples from six sub-slab soil vapor probes 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.

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 soil vapor probes SVP-7, SVP-8, SVP-9, SVP-10, SVP-11 and SVP-12, at respective concentrations of 970 micrograms per cubic meter ($\mu g/m^3$), 3,200 $\mu g/m^3$, 650 $\mu g/m^3$, 700 $\mu g/m^3$, 590 $\mu g/m^3$ and 2,300 $\mu g/m^3$. The PCE breakdown product trichloroethene (TCE) was not detected above laboratory detection limits in soil vapor samples collected during this investigation.

Low concentrations of other VOCs including acetone, 2-butanone, chloroform, ethanol, tertiary butyl alcohol (TBA) and toluene 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) soil gas Environmental Screening Level (ESL) of 2,100 $\mu g/m^3$ 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 soil gas ESLs.

PCE concentrations in all soil vapor samples exceeded the sub-slab screening level of 42 $\mu g/m^3$ calculated by dividing the indoor air ESL of 2.1 $\mu g/m^3$ by the sub-slab attenuation factor of 0.05 per the DTSC Vapor Intrusion Guidance (DTSC, 2011).

AllWest recommended the following in our *Additional Soil Vapor Investigation and Indoor Air Monitoring Workplan* dated April 15, 2013:

1. Perform indoor air quality sampling inside the subject site building;

2. Install soil vapor probes to 5 feet bgs adjacent to the existing sub-slab probes, and collect samples to determine source and extent of PCE in soil vapor;

3. 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;

4. 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.

The workplan was approved by the ACEH on May 20, 2013 with the report to be submitted by February 20, 2014.

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 14th 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. 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 ($\mu g/m^3$) 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 $\mu g/m^3$ 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 $\mu g/m^3$ 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.

On October 22, 2012, six soil borings were advanced in the store interior 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. On October 27, 2012, 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) *Advisory – Active Soil Gas Investigations,* April 2012 (DTSC, 2012). 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 ($\mu g/m^3$), 4,100 $\mu g/m^3$, 940 $\mu g/m^3$, 530 $\mu g/m^3$, 740 $\mu g/m^3$ and 1,700 $\mu g/m^3$. The PCE breakdown product trichloroethene (TCE) was detected in soil vapor samples collected from SVP-11 and SVP-12, at respective concentrations of 18 $\mu g/m^3$ and 39 $\mu g/m^3$ (AllWest 2012d).

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) Updated the site-specific health and safety plan;

2) 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;

3) 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 (Calscience Environmental Laboratories, Inc. of Garden Grove, California) for chemical analyses. Analyzed six soil vapor samples for VOCs including 1,1-DFA using EPA Method TO-15 (mid detection level, full scan) and 1,1-DFA, and one leak detection sample only for 1,1-DFA;

4) 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. Soil Vapor Sampling

AllWest collected soil vapor samples from the six permanent soil vapor probes SVP-7 through SVP-12 on April 19, 2013 as a follow-up to the sub-slab soil vapor sampling event conducted on October 27, 2012 (AllWest 2012d). 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 3 to 5 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 1,1-difluoroethane (1,1-DFA) as a leak tracer inside an airtight plastic shroud. 1,1-DFA was used due to the unavailability of helium. The 1,1-DFA was sprayed into the shroud through a small hole at a five-second burst during each sample. An ambient air sample (SVP-12-DFA) was collected inside the leak detection shroud during the sampling of probe SVP-12 to measure 1-1-DFA concentrations inside the shroud. A schematic diagram showing the sampling manifold and shroud setup is included in Appendix B.

B. 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.

C. 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. Laboratory Analysis and Sampling Data

All soil vapor samples selected for analysis were analyzed by a State of California certified independent analytical laboratory, Calscience Environmental Laboratories, Inc., of Garden Grove, California. Sample analysis was performed on 5-day turnaround time.

The soil vapor samples collected during this investigation were analyzed for VOCs and for 1,1-DFA using EPA Method TO-15 (mid-detection levels, full scan).

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 970 micrograms per cubic meter ($\mu g/m^3$), 3,200 $\mu g/m^3$, 650 $\mu g/m^3$, 700 $\mu g/m^3$, 590 $\mu g/m^3$ and 2,300 $\mu g/m^3$. The PCE breakdown product trichloroethene (TCE) was not detected above laboratory detection limits in soil vapor samples collected during this investigation. Toluene was detected in soil vapor samples from SVP-7 and SVP-9 at a maximum concentration of 910 $\mu g/m^3$ in sample SVP-9. Benzene, ethylbenzene and xylenes were not detected above laboratory detection limits in soil vapor samples collected during this investigation. However, laboratory detection limits were significantly elevated in all samples analyzed with the exception of SVP-10, due to elevated concentrations of the leak detection agent 1,1-DFA.

Low concentrations of other VOCs including acetone, 2-butanone, chloroform, ethanol, and tertiary butyl alcohol (TBA) were also detected at maximum respective concentrations of 1,400 $\mu g/m^3$, 7.3 $\mu g/m^3$, 3.4 $\mu g/m^3$, 1,100 $\mu g/m^3$, and 730 $\mu g/m^3$. Soil vapor analytical results are summarized in Table 1, and PCE, TCE, BTEX, and Freon-12 concentrations are shown on Figure 3. Laboratory analytical reports are included in Appendix D.

The leak detection agent 1,1-DFA was analyzed as part of the TO-15 analysis, and was detected in all six soil vapor samples at concentrations ranging from 7.9 $\mu g/m^3$ to 4,400,000 $\mu g/m^3$, and at concentration of 2,800,000 $\mu g/m^3$ in the

ambient shroud leak detect sample SVP-12-DFA. Leak detection gas analytical data are summarized in Table 1.

B. 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 Calscience 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 February 2013), and listed in *Table E - Environmental Screening Levels (ESLs) – Indoor Air and Soil Gas (Vapor Intrusion Concerns), Commercial / Industrial Land Use Only* (RWQCB, Interim Final, February 2013). The ESLs are based on a target cancer risk of 1.0 x 10^{-6} (1/1,000,000) for an average 8-hour per day exposure period in a commercial/industrial workplace setting. 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 2,100 µg/m^3, which was increased in the 2013 revision of the ESLs from the former 1,400 µg/m^3. PCE soil vapor concentrations in probes SVP-8 and SVP-12 exceeded the applicable commercial/industrial RWQCB ESL. PCE concentrations in all soil vapor probes exceeded the sub-slab screening level calculated per DTSC guidance. 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.

However, the soil gas ESLs assume a sample depth of 5 feet bgs. For calculating soil gas screening levels immediately below the floor slab, Appendix B of the DTSC *Vapor Intrusion Guidanc*e (DTSC, 2011) recommends dividing the applicable indoor air screening level by an assumed sub-slab attenuation factor. The DTSC has assumed a sub-slab attenuation factor of 0.05 for commercial slab-on grade buildings, based on United States Environmental Protection Agency (USEPA) data for residential buildings. The indoor air ESL for PCE in a commercial/industrial setting is 2.1 $\mu g/m^3$. Dividing by the commercial sub-slab attenuation factor of 0.05 yields a sub-slab soil vapor screening level of 42 $\mu g/m^3$ per the DTSC *Vapor Intrusion Guidanc*e (DTSC, 2011). Applicable sub-slab screening levels calculated by the indoor ESL and DTSC sub-slab attenuation factor are included in Table 1.

In AllWest's opinion, the DTSC's assumed commercial sub-slab attenuation factor of 0.05 is excessively conservative for commercial settings. PCE concentrations detected in sub-slab soil vapor and indoor air samples collected by AllWest at four different commercial dry cleaner sites indicates an average sub-slab attenuation factor of 0.00037, and a 90^{th} percentile sub-slab attenuation factor of 0.00074, which are approximately 2 orders of magnitude lower than the DTSC value. Dividing the PCE commercial indoor air ESL of 2.1 $\mu g/m^3$ by AllWest's average site-specific attenuation factor yields a sub-slab screening level of 5,676 $\mu g/m^3$, and a sub-slab screening level of 2,838 $\mu g/m^3$ when divided by AllWest's 90^{th} percentile attenuation factor.

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 or sanitary sewer lines.

C. Leak Detection Gas/Ambient Air Leak Dilution Factors

The leak detection agent 1,1-DFA was detected in all six soil vapor samples at concentrations of up to 4,400,000 $\mu g/m^3$ in SVP-7, 640,000 $\mu g/m^3$ in SVP-8, 3,100,000 $\mu g/m^3$ in SVP-9, 7.9 $\mu g/m^3$ in SVP-10, 2,500,000 in SVP-11 and 1,500,000 $\mu g/m^3$ in SVP-12. In the ambient shroud leak detect sample SVP-12-DFA, the detected concentration was 2,800,000 $\mu g/m^3$. This corresponds to a leak detection gas (ambient air leak) dilution factor ranging of approximately 157% in SVP-7, 23% in SVP-8, 111% in SVP-9, 0.00028 in SVP-10, 89% in SVP-11 and 54% in SVP-12. Five of the six soil vapor samples collected (all except SVP-10) contained elevated 1,1-DFA leak detection gas concentrations indicating ambient air leak dilution factors exceeding the highest acceptable

concentration of 5% as defined in Appendix C of the *Advisory – Active Soil Gas Investigations* (DTSC, 2012).

The leak detection agent analytical results obtained when using 1,1-DFA contrasted strongly with those obtained when using helium as a leak detection gas during the previous sub-slab soil vapor monitoring event. During the October 2012 event, helium concentrations were 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% as measured by a helium gas detection meter, and a detected concentration of 90% by laboratory analysis of the ambient shroud leak detect gas sample SVP-12-He. The calculated leak detection gas/ambient air leak dilution factors, using the ambient shroud sample SVP-12-He concentration were approximately 0.72% in SVP-7, 0.11% in SVP-8, 0.29% in SVP-9, 0.014% in SVP-10, 0.022 % in SVP-11 and 0.91 % in SVP-12, well under the DTSC acceptable level of 5%. Leak detection gas analytical data and dilution factors are summarized in Table 1.

AllWest is unable to determine the cause of the high concentrations of the leak detect agent 1,1-DFA in soil vapor samples collected during the April 2013 monitoring event. Identical sampling methods were using during the October 2012 and April 2013 monitoring events, with the exception of the type of leak detection gas used. In contrast, the relative consistency in PCE concentration levels between the October 2012 and April 2013 sampling events infers intact vapor sampling seals.

Relative differences in PCE concentrations detected during the April 2013 event compared to the October 2012 event ranged from approximately 31% lower in probe SVP-9 to approximately 35% higher in probe SVP-12. The standard deviation for PCE concentrations detected in the October 2012 event was 1,320 $\mu g/m^3$. The standard deviation was 1,090 $\mu g/m^3$ for PCE concentrations detected in the April 2013 event, indicating a relatively insignificant difference in data distribution between the two events.

The calculated leak detection gas/ambient air leak dilution factors for the April 2013 event were up to four orders of magnitude higher than for the October 2012 event, which is inconsistent with the difference in PCE soil vapor concentrations detected during the two events. It would be reasonable to expect much lower PCE concentrations in all probes with much higher dilution factors. Therefore, in our opinion the anomalous concentrations of 1,1-DFA detected in soil vapor samples did not significantly bias the April 2013 monitoring event analytical data.

Considering all the SUMMA sampling system manifolds passed the vacuum leak test during both monitoring events, AllWest considers it unlikely that significant dilution by ambient air occurred from vacuum leaks within the sampling system.

It is possible that 1,1-DFA, being denser than air (unlike helium), may have migrated downward through cracks in the floor slab to the sub-slab probes.

VII. RECOMMENDATIONS

AllWest recommended the following in our *Additional Soil Vapor Investigation and Indoor Air Monitoring Workplan* dated April 15, 2013:

1. Perform indoor air quality sampling inside the subject site building;

2. Install soil vapor probes to 5 feet bgs adjacent to the existing sub-slab probes, and collect samples to determine source and extent of PCE in soil vapor;

3. 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;

4. 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.

The workplan was approved by the ACHCS in their letter dated May 20, 2013, with the report to be submitted by February 20, 2014.

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

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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 µg/m³	Benzene µg/m³	1,3-Butadiene µg/m³	Chloroform µg/m³	Dichloro-difluoromethane (Freon 12) µg/m³	1,1-Difluoroethane (leak detector) µg/m3	Ethanol µg/m³	Ethyl-benzene µg/m³	Ethyl Acetate µg/m³	4-Ethyltoluene µg/m³	Helium (% v/v) (Leak detect gas)	Isopropyl Alcohol (IPA) µg/m³	4-Methyl-2-pentanone (MIBK) µg/m³	Naphthalene µg/m³	Propene µg/m³	Tetrachloro-ethene (PCE) µg/m³	Toluene µg/m³	Trichloro-ethene (TCE) µg/m³	1,2,4-Trimethyl-benzene µg/m³	1,3,5-Trimethyl-benzene µg/m³	Xylenes (Total) µg/m³	Other VOCs µg/m³	Leak Detection Gas Dilution %
SVP-1	1/4/2012	5	ND <120	13	ND <4.5	ND <9.9	34	NA	1,600	28	46	18	NA	91	ND <8.3	ND <11	ND <88	270	81	ND <11	66	23	200	ND (varies)	NA**
SVP-2	1/4/2012	5	ND <120	ND <6.5	ND <4.5	ND <9.9	51	NA	200	63	21	23	NA	ND <50	14	ND <11	ND <88	460	78	25	39	14	370	ND (varies)	NA**
SVP-3	1/4/2012	5	ND <120	ND <6.5	ND <4.5	97	370	NA	170	22	15	22	NA	ND <50	15	ND <11	ND <88	**8,100**	17	210	55	23	170	ND (varies)	NA**
SVP-4	1/4/2012	5	140	15	28	28	170	NA	1,500	18	76	30	NA	80	30	ND <11	770	550	42	ND <11	49	18	110	ND (varies)	NA**
SVP-5	1/4/2012	5	320	8.0	ND <4.5	ND <9.9	110	NA	1,900	17	250	32	NA	88	47	11	470	**4,600**	31	51	55	19	120	ND (varies)	NA**
SVP-6	1/4/2012	5	ND <120	16	76	ND <9.9	ND <10	NA	340	14	40	17	NA	ND <50	20	ND <11	ND <88	670	27	26	65	22	110	ND (varies)	NA**
SVP-7	10/27/2012	<1	220	15	ND <4.5	ND <9.9	ND <10	NA	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)	0.72
SVP-7	4/19/2013	<1	1,400	ND <400	NA	ND <610	ND <620	4,400,000	ND <2,400	ND <540	NA	ND <610	NA	NA	ND <1,500	ND <6,600	NA	970	700	ND <670	ND <1,800	ND <610	ND <540/<2,200*	ND (varies)	**157.14**
SVP-8	10/27/2012	<1	130	8.6	ND <4.5	ND <9.9	23	NA	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)	0.11
SVP-8	4/19/2013	<1	ND <190	ND <64	NA	ND <98	ND <99	640,000	ND <380	ND <87	NA	ND <98	NA	NA	ND <250	ND <1,000	NA	**3,200**	ND <75	ND <110	ND <290	ND <98	ND <87/<350*	ND (varies)	**22.86**
SVP-9	10/27/2012	<1	200	20	ND <4.5	ND <9.9	ND <10	NA	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)	0.29
SVP-9	4/19/2013	<1	1,200	ND <160	NA	ND <240	ND <250	3,100,000	1,100	ND <220	NA	ND <250	NA	NA	ND <610	ND <2,600	NA	650	910	ND <270	ND <740	ND <250	ND <220/<870*	730 (TBA), ND (others, reporting limits vary)	**110.71**
SVP-10	10/27/2012	<1	ND <120	7.8	ND <4.5	ND <9.9	16	NA	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)	0.014
SVP-10	4/19/2013	<1	56	ND <1.9	NA	3.4	ND <3.0	7.9	ND <11	ND <2.6	NA	ND <3.0	NA	NA	ND <7.4	ND <32	NA	700	ND <2.3	ND <3.3	ND <8.9	ND <3.0	ND <2.6/<11*	7.3 (2-butanone), ND (others, reporting limits vary)	0.00028
SVP-11	10/27/2012	<1	120	10	ND <4.5	ND <9.9	ND <10	NA	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)	0.022
SVP-11	4/19/2013	<1	ND <190	ND <64	NA	ND <98	ND <99	2,500,000	ND <380	ND <87	NA	ND <98	NA	NA	ND <250	ND <1,000	NA	590	ND <75	ND <110	ND <290	ND <98	ND <87/<350*	ND, reporting limits vary	**89.29**
SVP-12	10/27/2012	<1	130	10	ND <4.5	ND <9.9	ND <10	NA	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)	0.91
SVP-12	4/19/2013	<1	ND <190	ND <64	NA	ND <98	ND <99	1,500,000	ND <380	ND <87	NA	ND <98	NA	NA	ND <250	ND <1,000	NA	**2,300**	ND <75	ND <110	ND <290	ND <98	ND <87/<350*	ND, reporting limits vary	**53.57**

TABLE 1

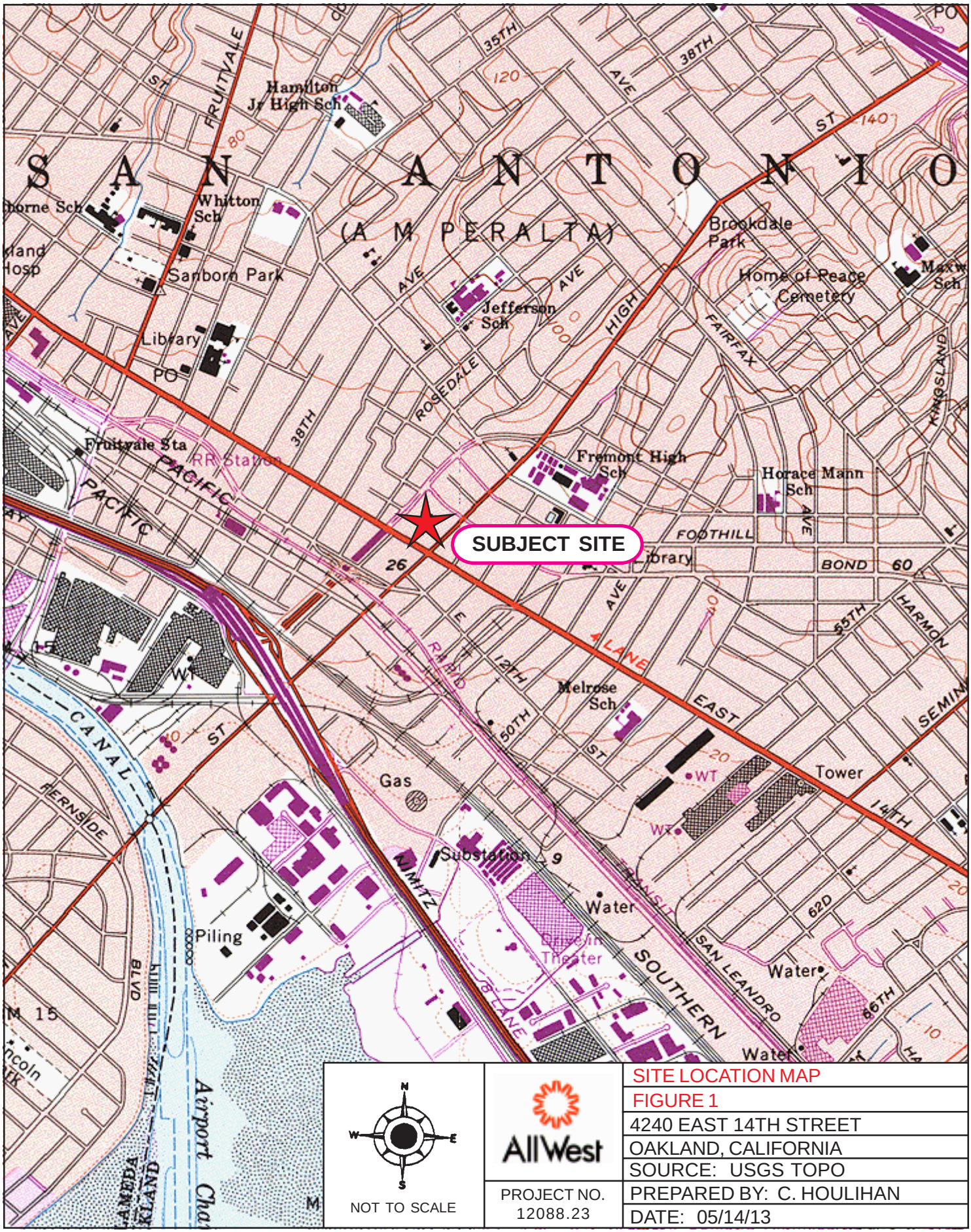
SUMMARY OF SOIL VAPOR SAMPLE ANALYTICAL DATA
O'REILLY AUTO SUPPLY
(FORMER GRAND AUTO SUPPLY #43)
OAKLAND, CALIFORNIA
AllWest Project No. 12088.23

Sample Number	Date	Sample Depth feet bgs	Acetone µg/m^3	Benzene µg/m^3	1,3-Butadiene µg/m^3	Chloroform µg/m^3	Dichloro-difluoromethane (Freon 12) µg/m^3	1,1-Difluoroethane (leak detector) µg/m3	Ethanol µg/m^3	Ethyl-benzene µg/m^3	Ethyl Acetate µg/m^3	4-Ethyltoluene µg/m^3	Helium (% v/v) (Leak detect gas)	Isopropyl Alcohol (IPA) µg/m^3	4-Methyl-2-pentanone (MIBK) µg/m^3	Naphthalene µg/m^3	Propene µg/m^3	Tetrachloro-ethene (PCE) µg/m^3	Toluene µg/m^3	Trichloro-ethene (TCE) µg/m^3	1,2,4-Trimethyl-benzene µg/m^3	1,3,5-Trimethyl-benzene µg/m^3	Xylenes (Total) µg/m^3	Other VOCs µg/m^3	Leak Detection Gas Dilution %
SVP-12-He	10/27/2012		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVP-12-DFA	4/19/2013		NA	NA	NA	NA	NA	2,800,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ESL	Commercial Soil Gas		**140,000,000**	**420**	NL	**2,300**	NL	NL	NL	**4,900**	NL	NL	NL	NL	NL	**360**	NL	**2,100**	**1,300,000**	**3,000**	NL	NL	**440,000**	methylene chloride **26,000**, others vary or NL	
ESL	Commercial Indoor Air		**140,000**	**0.42**	NL	**2.3**	NL	NL	NL	**4.9**	NL	NL	NL	NL	NL	**0.36**	NL	**2.1**	**1,300**	**3.0**	NL	NL	**440**	methylene chloride **26**, others vary or NL	
DTSC Sub-Slab Screening Level	Commercial Indoor Air / 0.05 sub-slab attenuation factor		**2,800,000**	**8.4**	NL	**46**	NL	NL	NL	**98**	NL	NL	NL	NL	NL	**7.2**	NL	**42**	**26,000**	**60**	NL	NL	**8,800**	methylene chloride **520**, others vary or NL	5%***

Notes:

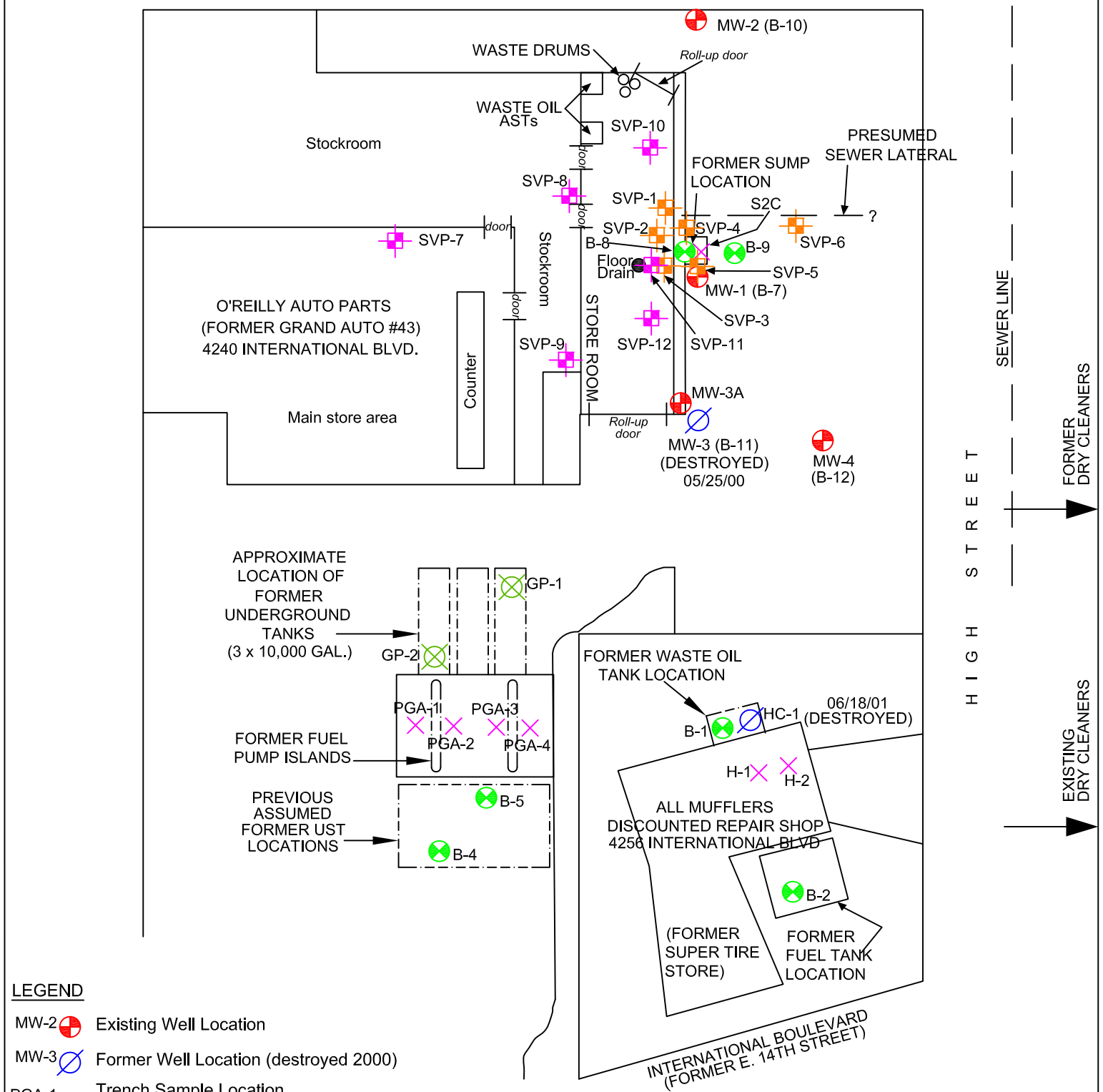
*	Separate reporting limits for o-xylene and m,p-xylene
VOCs	Volatile Organic Compounds by EPA Method TO-15, Calscience Environmental Laboratories, Inc., Garden Grove, CA (4/29/13), McCampbell Analytical, Inc., Pittsburg, CA (other dates)
TBA	Tertiary butyl alcohol
µg/m^3	Micrograms per cubic meter = 0.001 micrograms per liter
ND	Not detected at or below laboratory reporting limit
NA	Not Analyzed
NL	Not Listed
**	Leak detection gas not analyzed
Leak Detect Gas Dilution %	Leak detect gas concentration in soil vapor sample divided by leak detect gas concentration in ambient shroud sample X 100; equivalent to ambient air leak %
***	Maximum acceptable ambient air leak (ie: leak detection gas dilution) permitted by Appendix C DTSC 2011 Vapor Intrusion Guidance = 5%
Bold Font	Detected values exceed regulatory screening levels.
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, February 2013. Table E, Shallow Soil Gas Screening Levels, For Evaluation Of Potential Vapor Intrusion Concerns, Commercial/Industrial Land Use).
Sub-slab Screening level	Based on Appendix B, DTSC 2011 Vapor Intrusion Guidance = Indoor Air ESL/Subslab Attenuation Factor (commercial = 0.05)

FIGURES



NOT TO SCALE	PROJECT NO. 12088.23	SITE LOCATION MAP
		FIGURE 1
		4240 EAST 14TH STREET
		OAKLAND, CALIFORNIA
		SOURCE: USGS TOPO
		PREPARED BY: C. HOULIHAN
		DATE: 05/14/13

MISSION AUTOMOTIVE



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)

0 20 40 80
Scale in Feet

N

AllWest

PROJECT NO. 12088.23

SITE PLAN WITH BORING AND WELL LOCATIONS

FIGURE 2: O'REILLY AUTO PARTS

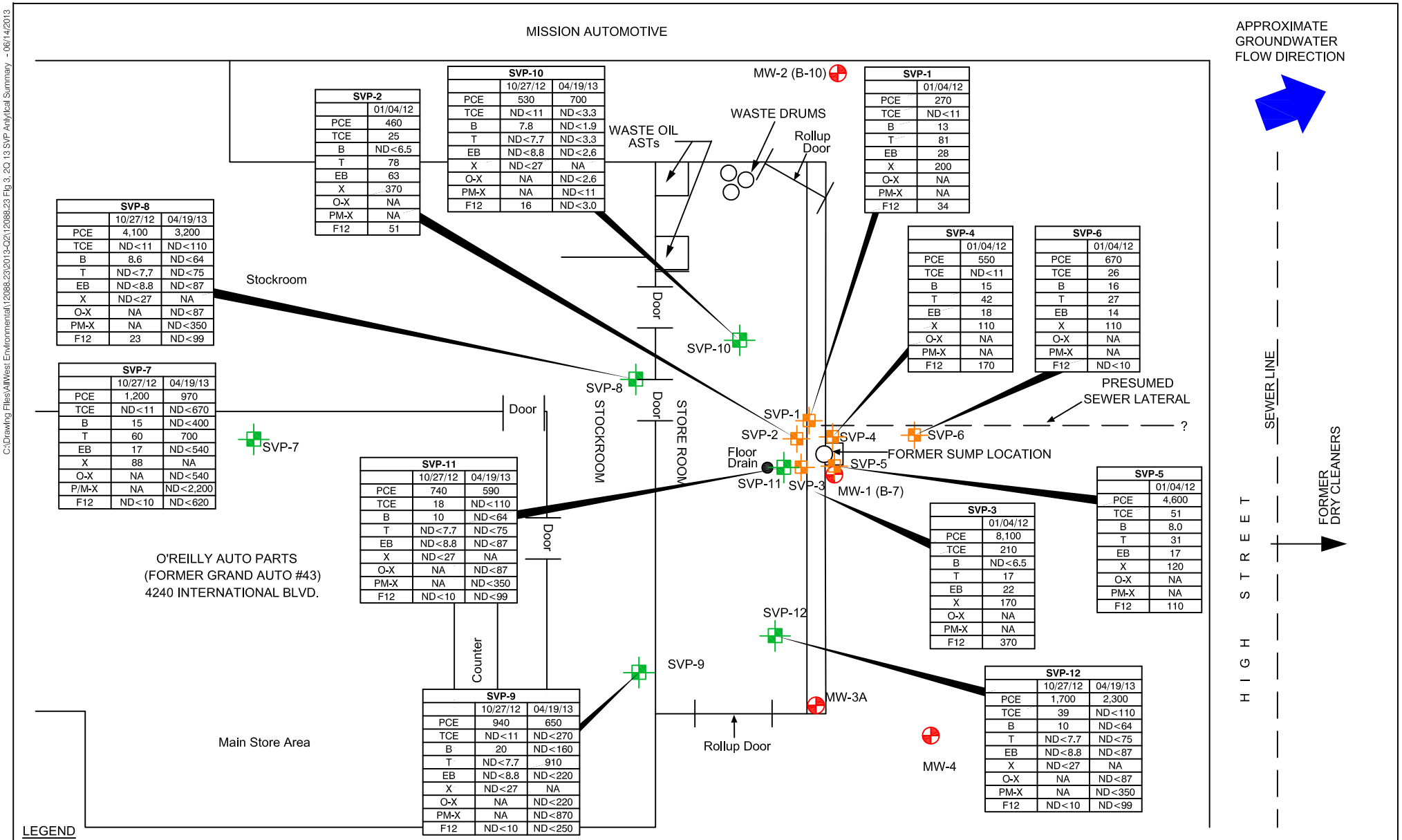
4240 INTERNATIONAL BOULEVARD

OAKLAND, CALIFORNIA

SOURCE: ALLWEST

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

C:\Drawing Files\AllWest Environmental\12088.23\2013-Q2\12088.23 Fig 3, 2Q 13 SVP Anlytical Summary - 06/14/2013



SVP-2	
	01/04/12
PCE	460
TCE	25
B	ND<6.5
T	78
EB	63
X	370
O-X	NA
PM-X	NA
F12	51

SVP-10		
	10/27/12	04/19/13
PCE	530	700
TCE	ND<11	ND<3.3
B	7.8	ND<1.9
T	ND<7.7	ND<3.3
EB	ND<8.8	ND<2.6
X	ND<27	NA
O-X	NA	ND<2.6
PM-X	NA	ND<11
F12	16	ND<3.0

SVP-1	
	01/04/12
PCE	270
TCE	ND<11
B	13
T	81
EB	28
X	200
O-X	NA
PM-X	NA
F12	34

SVP-8		
	10/27/12	04/19/13
PCE	4,100	3,200
TCE	ND<11	ND<110
B	8.6	ND<64
T	ND<7.7	ND<75
EB	ND<8.8	ND<87
X	ND<27	NA
O-X	NA	ND<87
PM-X	NA	ND<350
F12	23	ND<99

SVP-4	
	01/04/12
PCE	550
TCE	ND<11
B	15
T	42
EB	18
X	110
O-X	NA
PM-X	NA
F12	170

SVP-6	
	01/04/12
PCE	670
TCE	26
B	16
T	27
EB	14
X	110
O-X	NA
PM-X	NA
F12	ND<10

SVP-7		
	10/27/12	04/19/13
PCE	1,200	970
TCE	ND<11	ND<670
B	15	ND<400
T	60	700
EB	17	ND<540
X	88	NA
O-X	NA	ND<540
P/M-X	NA	ND<2,200
F12	ND<10	ND<620

SVP-11		
	10/27/12	04/19/13
PCE	740	590
TCE	18	ND<110
B	10	ND<64
T	ND<7.7	ND<75
EB	ND<8.8	ND<87
X	ND<27	NA
O-X	NA	ND<87
PM-X	NA	ND<350
F12	ND<10	ND<99

SVP-5	
	01/04/12
PCE	4,600
TCE	51
B	8.0
T	31
EB	17
X	120
O-X	NA
PM-X	NA
F12	110

SVP-3	
	01/04/12
PCE	8,100
TCE	210
B	ND<6.5
T	17
EB	22
X	170
O-X	NA
PM-X	NA
F12	370

SVP-9		
	10/27/12	04/19/13
PCE	940	650
TCE	ND<11	ND<270
B	20	ND<160
T	ND<7.7	910
EB	ND<8.8	ND<220
X	ND<27	NA
O-X	NA	ND<220
PM-X	NA	ND<870
F12	ND<10	ND<250

SVP-12		
	10/27/12	04/19/13
PCE	1,700	2,300
TCE	39	ND<110
B	10	ND<64
T	ND<7.7	ND<75
EB	ND<8.8	ND<87
X	ND<27	NA
O-X	NA	ND<87
PM-X	NA	ND<350
F12	ND<10	ND<99

LEGEND

MW-2 Existing Well Location

SVP-1 Temporary 5 feet bgs probe soil vapor sample location (AllWest, January 4, 2012)

SVP-7 Permanent sub-slab probe soil vapor sample location (AllWest, Apr. 1, 2013)

Concentrations in micrograms per cubic meter (µg/m³)

PCE = tetrachloroethene
TCE = trichloroethene
B = benzene
T = toluene
EB = ethyl benzene
X = xylenes (total)
O-X = o-xylene
PM-X = p/m-xylene
F12 = Freon 12 (dichloro-difluoromethane)

N

0 20 ft

AllWest

PROJECT NO. 12088.23

SOIL VAPOR SAMPLE ANALYTICAL SUMMARY, 01/04/12, 10/27/12, AND 04/19/13

FIGURE 3: FORMER GRAND AUTO #43

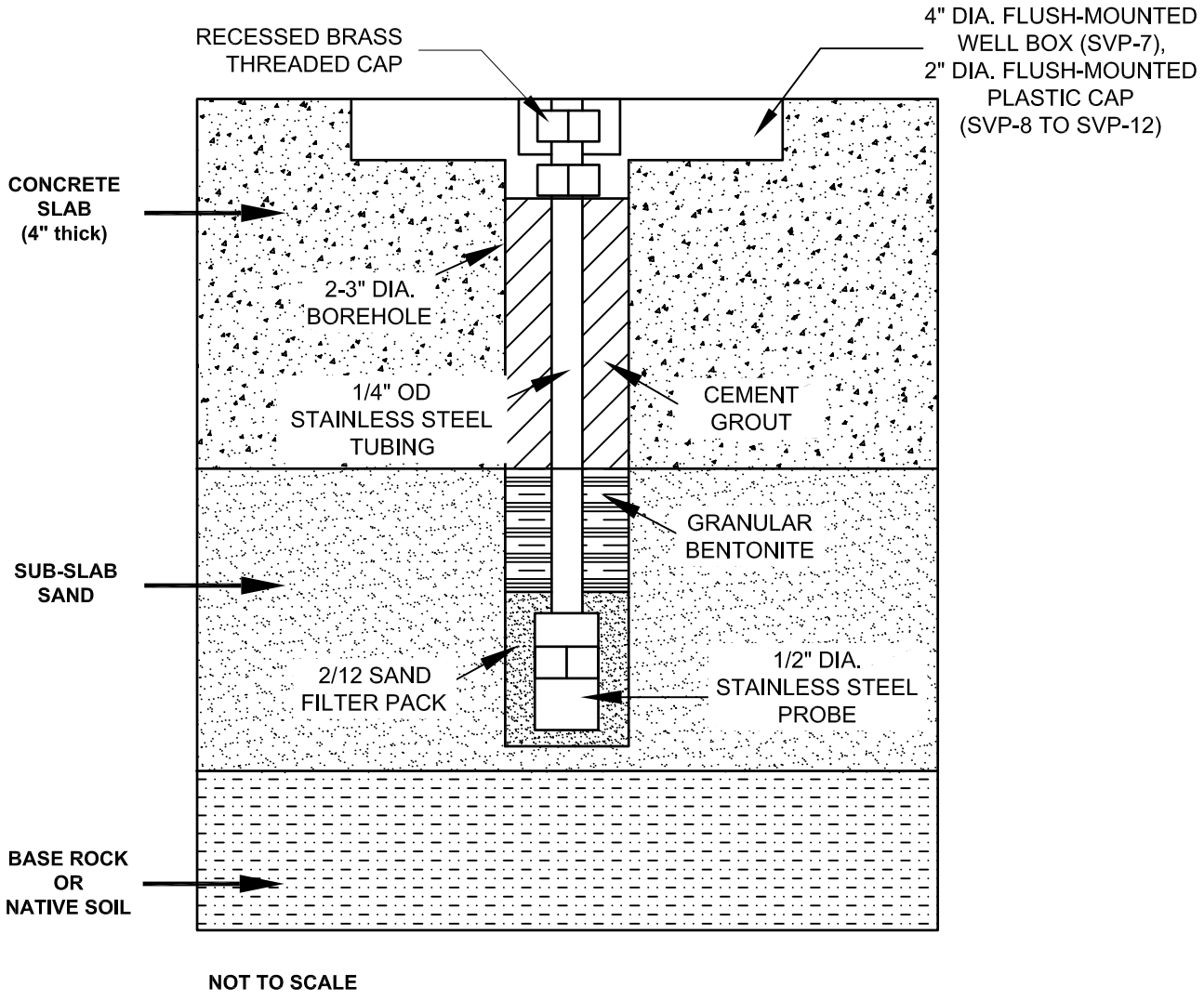
4240 EAST 14TH STREET (INTERNATIONAL BOULEVARD)

OAKLAND, CALIFORNIA

SOURCE: ALLWEST

PREPARED BY: CM (06/14/13)

Schematic of Sub-Slab Vapor Probes



AllWest	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

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

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

June 5, 2012

Ms. Vicki ZumBrunnen (*Sent via E-mail to: 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 ($\mu g/m^3$). 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 $\mu g/m^3$ of PCE exceeds the commercial land use California Human Health Screening Level (CHHSL) for PCE in soil vapor of 603 $\mu g/m^3$ 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. Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm.

Sincerely,

Digitally signed by Jerry Wickham
DN: cn=Jerry Wickham, o=Environmental Health, ou=Alameda County, email=jerry.wickham@acgov.org, c=US
Date: 2012.06.05 16:37:22 -07'00'

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

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

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

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

Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Jerry Wickham, ACEH (*Sent via E-mail to: 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/).

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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** July 20, 2010
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (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
   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 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.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

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

September 6, 2012

Ms. Vicki ZumBrunnen (*Sent via E-mail to: 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.

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. 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*)

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

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

GeoTracker, eFile

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT/DATA REQUESTS

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

ELECTRONIC SUBMITTAL OF REPORTS

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

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

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 7835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

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AGENCY OVERSIGHT

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

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

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- Reports must be named and saved using the following naming convention:

  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to .loptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

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   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.
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   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to .loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

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

Geoprobe® DPT PRT Temporary Soil Vapor Probe Advancement

The Geoprobe® Direct Push Technology (DPT) Post Run Tubing (PRT) soil vapor sampling process involves driving into the subsurface a disposable Geoprobe® DPT 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, typically 5 feet below ground surface (bgs) 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 2 hours following driving of the probe, to allow vapor conditions to equalize in subsurface materials and the bentonite surface seal to hydrate in general accordance with guidelines presented in the CalEPA Department of Toxic Substance Control (DTSC) *Advisory – Active Soil Gas Investigations*, April, 2012..

Geoprobe® DPT Borehole Advancement and Temporary Soil Vapor Probe Installation

Alternatively, borings will be advanced using truck-mounted or limited access Geoprobe® DPT equipment, or a hand-operated slide hammer, to drive 1-inch outside diameter (OD) rods and probes with expendable steel tips to 5 feet bgs, without recovering soil cores. Or, borings will be advanced using Geoprobe® DPT continuous coring equipment using a nominal 4-foot or 5-foot long, 2-inch OD stainless steel core barrel drive sampler and extension rods. The drive probe will be equipped with nominal 1 ½-inch inside diameter (ID) clear PETG plastic tubes that line the interior of the probe. Continuous soil sample cores are recovered for potential lithologic characterization and laboratory analysis. After the probes or core barrels are advanced to the specified depth, typically 5 feet bgs, the probes and drive rods are removed, leaving the borehole open with the expendable probe tip (if used) at the bottom.

Plastic or stainless steel soil vapor probes, ½-inch diameter by 2-inches long and tipped with porous plastic membranes, are then inserted to the bottom of the 1-inch diameter boreholes at 5 feet bgs. The probe tips are attached to 7-foot lengths of 0.25-inch OD Teflon™ tubing extending to the top of the floor slab. A fine sand filter pack is placed in the borehole annulus around the probe. Hydrated bentonite chips are then used to fill the annular space above the filter pack to the top of the floor slab. The bentonite is allowed to hydrate and borehole conditions to equalize for 2 hours prior to sampling activities, per DTSC vapor sampling guidelines. Temporary soil vapor probe installation procedures will be performed in general accordance with guidelines presented in the DTSC *Advisory – Active Soil Gas Investigations*, April, 2012.

AllWest

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 or plastic 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™ or stainless steel tubing extending to approximately 1 inch below the top of the floor slab. The top of the Teflon™ or stainless steel tubing in each probe will be attached to a brass threaded male Swagelock™ fitting and cap recessed below the concrete floor. A fine sand filter pack approximately 2 to 4 inches thick will be placed in the borehole annulus around the probes. A Teflon™ sealing disk will be placed around the tubing above the filter pack.

Dry granular bentonite will be placed in the borehole annulus above the Teflon™ sealing disk to above the base of the concrete floor slab. Hydrated granulated bentonite will then be used to fill the annular space above the dry granular to approximately 2 inches above the bottom of the floor slab, and will be hydrated from the surface using deionized water. Quick-drying cement/bentonite grout will then be used to fill the remaining annular space to the Swagelock fitting approximately ¾ to 1 inch below the top of the slab. A watertight plastic cap or metal vault box will be installed flush with the top of the floor slab within a 2 to 4-inch diameter countersunk hole to protect the probe fitting. At least 2 hours will elapse prior to collecting vapor samples to allow the bentonite and cement grout seal to hydrate and borehole conditions to equalize, per DTSC sub-slab vapor sampling guidelines (DTSC, 2011).

Soil Vapor Sampling via Summa Canister

Soil vapor sampling procedures will be similar for Geoprobe® PRT and continuously cored temporary soil vapor probes, and semi-permanent sub-slab soil vapor probes, and will be in general accordance with *and DTSC Advisory – Active Soil Gas Investigations*, April 2012. Soil vapor sampling will not be performed if significant precipitation (greater than ½ inch in a 24 hour period) has occurred within the previous five days.

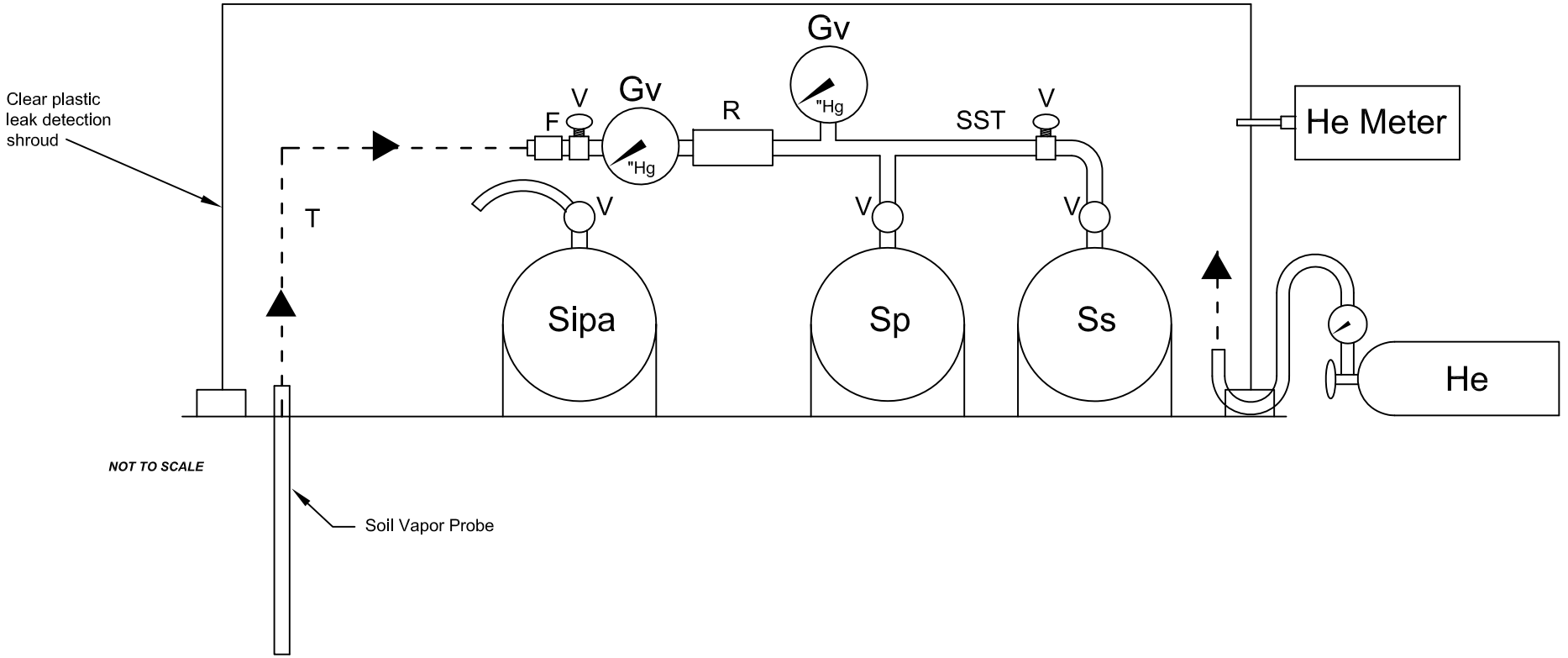
AllWest will collect soil vapor samples in laboratory prepared 1-liter capacity SUMMA canisters. Prior to vapor purging and sample collection, a vacuum leak shut-in test of the flow-controller/gauge manifold assembly we be performed for a minimum of 2 minutes. Prior to sample collection, approximately 3 sampling system volumes of soil vapor will be purged at a flow rate of approximately 150-200 milliliters per minute (ml/min) from each vapor probe using a dedicated 6-liter capacity SUMMA purge canister. Typical sampling system volumes are 4.5 ml/feet for ¼-inch OD/0.17-inch ID tubing, and 200 ml/feet for a 2-inch diameter borehole with sand filter pack (minus tubing volume). Assuming a 2-inch diameter borehole with a 0.5 feet sand filter pack interval, the typical system volume would be approximately 130 ml for a 5-feet bgs temporary probe, and 115 ml for a 1–feet bgs sub-slab probe, including 2-3 feet of tubing above grade. Therefore, 3 system volumes would typically be approximately 350 to 400 milliliters (ml) depending on tubing length and borehole diameter, depth and filter pack interval.

While sampling, a leak detection test is conducted using helium as a leak tracer inside an airtight plastic shroud covering the entire sampling apparatus, as recommended in the DTSC *Advisory – Active Soil Gas Investigations* (DTSC, 2012). The helium concentration within the shroud is monitored with a helium gas detection meter with a minimum precision of 0.1% to keep the concentration at approximately 10% (or two orders of magnitude above the minimum meter detection limit). The helium tracer gas will be

infused into the shroud at the required concentration at least 5 minutes prior to sample collection. To verify helium detection meter accuracy, one (1) ambient air sample per day is collected using a 1-liter SUMMA canister inside the leak detection shroud during the sampling of one probe to measure helium concentrations inside the shroud. Depending upon helium availability, other leak detection gases such as isopropyl alcohol (IPA) or difluoroethane may be substituted.

Flow rates of approximately 150-200 ml/min are used to fill the sample canisters. The canisters are filled to approximate 80% of capacity (approximately 5 inches of mercury vacuum remaining). All pertinent field observations, pressure, times and readings are recorded. After filling and closing the sample valve, all SUMMA canisters are removed from the manifold, labeled with sampling information, including initial and final vacuum pressures, placed in a dark container and transported under chain-of-custody to the analytical laboratory. The analytical laboratory will record the final SUMMA canister vacuum upon receipt.

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

AllWest

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

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:** PACCAR/O'Reilly

Date: 4/19/13 **Vapor Probe No:** SVP-7 **Serial No:** 1C727

Regulatory Agencies: ACHCS

Contractor: AllWest

Hole Diameter: 4" **Total Depth:** 6" **Grout/Bentonite:**

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

Tracer Gas: 1,1-DFA **Flow Regulator:** 150 (ml/min) SCM 213 **Leak Test:** Pass/Fail

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

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
0917	0 min	-23"	Start leak check
0922	5	-23"	Stop leak check
0924	0	-30"	Start purge
0929	5	-27.5"	stop purge
0948	0	-30"	Start Sample
0954	6	-3"	Stop Sample

Remarks:

Sampler:

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:** PACCAR / O'Reilly

Date: 4/19/13 **Vapor Probe No:** SVP-8 **Serial No:** LC217

Regulatory Agencies: ACHCS

Contractor: AllWest

Hole Diameter: 2" **Total Depth:** 6" **Grout/Bentonite:**

Probe Diameter: 1/2" **Line Length:** 2' SEM-139 **Purge Volume:** 500 mL (2.5" Hg)

Tracer ~~Gas~~: Liquid 1,1-DFA **Flow Regulator:** 150 (ml/min) **Leak Test: Pass/Fail**

Laboratory Name and Number: Calscience, TO-15(VOCs), 1,1-DFA

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1028	0	22"	Start leak check
1033	5	22"	Stop leak check
1034	0	27.5"	start purge
1037	3	25"	stop purge
1037	0	30"	start sample
1043	6	5"	stop sample

Remarks:

Sampler:

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:** PACCAR/O'Reilly

Date: 4/19/13 **Vapor Probe No:** SVP-9 **Serial No:** LC580

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" Hg)

Tracer Gas: 1,1-DFA **Flow Regulator:** 150 (ml/min) **Leak Test: Pass/Fail**

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

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1100	0	22"	Start leak check
1104	4	22"	Stop leak check
1109	0	25"	Start purge
1112	3	22.5"	Stop purge
1114	0	-30"	Start sample
1119	5	-5"	Stop sample

Remarks:

Sampler:

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:** PACCAR/O'Reilly

Date: 4/19/13 **Vapor Probe No:** SVP-10 **Serial No:** 1C772

Regulatory Agencies: ACHCS

Contractor: AllWest

Hole Diameter: 2" **Total Depth:** 9" **Grout/Bentonite:**

Probe Diameter: 1/2" **Line Length:** 2' SGM235 **Purge Volume:** 500 mL (2.5" Hg)

Tracer ~~Gas~~: Liquid 1,1-DFA **Flow Regulator:** 150 (ml/min) **Leak Test: Pass/Fail**

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

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1140	0	23"	Start leak check
1145	5	23"	Stop leak check
1156	0	22"	Start purge
1200	4	19.5"	Stop purge
1202	0	-30"	Start sample
1207	5	-5"	stop sample

Remarks:

Sampler:

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:** PACCAR / O'Reilly

Date: 4/19/13 **Vapor Probe No:** SVP-11 **Serial No:** LC764

Regulatory Agencies: ACHCS

Contractor: AllWest

Hole Diameter: 2" **Total Depth:** 6" **Grout/Bentonite:**

Probe Diameter: 1/2" OD **Line Length:** 2' SCM-130 **Purge Volume:** 500mL (2.5" Hg)

Tracer Gas: 1,1-DFA **Flow Regulator:** 150 (ml/min) **Leak Test:** Pass/Fail

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

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1331	0	-22"	leak check
1336	5	-22"	Stop leak check
1337	0	-30"	Start purge
1340	3	-27.5"	Stop purge
1341	0	-30"	Start sample
1347	5	-5"	Stop sample

Remarks:

Sampler: CMA

AllWest Environmental, Inc.
Specialists in Physical Due Diligence and Remedial Services
530 Howard Street, Suite 300
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SOIL GAS VAPOR FIELD LOG

Project No: 12088.23 **Project Name:** PACCAR/O'Reilly

Date: 4/19/13 **Vapor Probe No:** SVP-12 **Serial No:** LC116

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" hg)

Tracer Gas: 1,1-DFA **Flow Regulator:** 150 (ml/min) **Leak Test: Pass/Fail**
SGM224

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

SAMPLE COLLECTION

Start Time	Time Elapsed	Pressure	Remarks
1406	0	-27"	Start leak check
1409	3	-27"	stop leak check
1409	0	-27.5"	Start purge
1411	2	-25"	stop purge
1413	0	-30"	Start sample
1419	6	-5"	Stop sample

Remarks: 1 liter

500 mL = 2.5"

Sampler: MA

APPENDIX D

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 13-04-1481

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: AllWest Environmental, Inc.

Client Project Name: 12088.23

Attention: Christopher Houlihan
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Approved for release on 04/30/2013 by:
Kristin Beckley
Project Manager

ResultLink

Email your PM

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Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: 12088.23
Work Order Number: 13-04-1481

Calscience Environmental Laboratories, Inc.

Work Order Narrative

ACCREDITED IN ACCORDANCE WITH nelac

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 04/20/2013. They were assigned to Work Order 13-04-1481.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with an immediate holding time (HT </= 15 minutes --40CFR-136.3 Table II footnote 4), is considered a "field" test and reported samples results are not flagged unless the analysis is performed beyond 24 hours of the time of collection.

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Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontract Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Calscience Environmental Laboratories, Inc.

Client:	AllWest Environmental, Inc. 530 Howard Street, Suite 300 San Francisco, CA 94105-3019	Work Order:	13-04-1481
		Project name:	12088.23
		Received:	04/20/13 09:15
Attn:	Christopher Houlihan		

DETECTIONS SUMMARY

Client Sample ID Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
SVP-7 (13-04-1481-1)						
Acetone	1400		1200	ug/m3	EPA TO-15	N/A
Tetrachloroethene	970		850	ug/m3	EPA TO-15	N/A
Toluene	700		470	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	4400000		220000	ug/m3	EPA TO-15	N/A
SVP-8 (13-04-1481-2)						
Tetrachloroethene	3200		140	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	640000		22000	ug/m3	EPA TO-15	N/A
SVP-9 (13-04-1481-3)						
Acetone	1200		480	ug/m3	EPA TO-15	N/A
Ethanol	1100		940	ug/m3	EPA TO-15	N/A
Tert-Butyl Alcohol (TBA)	730		610	ug/m3	EPA TO-15	N/A
Tetrachloroethene	650		340	ug/m3	EPA TO-15	N/A
Toluene	910		190	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	3100000		220000	ug/m3	EPA TO-15	N/A
SVP-10 (13-04-1481-4)						
Acetone	56		5.7	ug/m3	EPA TO-15	N/A
2-Butanone	7.3		5.4	ug/m3	EPA TO-15	N/A
Chloroform	3.4		3.0	ug/m3	EPA TO-15	N/A
Tetrachloroethene	700		4.1	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	7.9		6.5	ug/m3	EPA TO-15	N/A
SVP-11 (13-04-1481-5)						
Tetrachloroethene	590		140	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	2500000		54000	ug/m3	EPA TO-15	N/A
SVP-12 (13-04-1481-6)						
Tetrachloroethene	2300		140	ug/m3	EPA TO-15	N/A
1,1-Difluoroethane	1500000		110000	ug/m3	EPA TO-15	N/A
SVP-12-DFA (13-04-1481-7)						
1,1-Difluoroethane	2800000		110000	ug/m3	EPA TO-15	N/A

Subcontracted analyses, if any, are not included in this summary.

*MDL is shown.

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-7	**13-04-1481-1-A**	**04/19/13 09:54**	**Air**	**GC/MS AA**	**N/A**	**04/28/13 03:34**	**130427L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	1400	1200	250		Ethyl-t-Butyl Ether (ETBE)	ND	2100	250	
Benzene	ND	400	250		Ethylbenzene	ND	540	250	
Benzyl Chloride	ND	1900	250		4-Ethyltoluene	ND	610	250	
Bromodichloromethane	ND	840	250		Hexachloro-1,3-Butadiene	ND	4000	250	
Bromoform	ND	1300	250		2-Hexanone	ND	1500	250	
Bromomethane	ND	490	250		Methyl-t-Butyl Ether (MTBE)	ND	1800	250	
2-Butanone	ND	1100	250		Methylene Chloride	ND	4300	250	
Carbon Disulfide	ND	1600	250		4-Methyl-2-Pentanone	ND	1500	250	
Carbon Tetrachloride	ND	790	250		Naphthalene	ND	6600	250	
Chlorobenzene	ND	580	250		o-Xylene	ND	540	250	
Chloroethane	ND	330	250		p/m-Xylene	ND	2200	250	
Chloroform	ND	610	250		Styrene	ND	1600	250	
Chloromethane	ND	260	250		Tert-Amyl-Methyl Ether (TAME)	ND	2100	250	
Dibromochloromethane	ND	1100	250		Tert-Butyl Alcohol (TBA)	ND	1500	250	
Dichlorodifluoromethane	ND	620	250		Tetrachloroethene	970	850	250	
Diisopropyl Ether (DIPE)	ND	2100	250		Toluene	700	470	250	
1,1-Dichloroethane	ND	510	250		Trichloroethene	ND	670	250	
1,1-Dichloroethene	ND	500	250		Trichlorofluoromethane	ND	1400	250	
1,2-Dibromoethane	ND	960	250		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	2900	250	
Dichlorotetrafluoroethane	ND	3500	250		1,1,1-Trichloroethane	ND	680	250	
1,2-Dichlorobenzene	ND	750	250		1,1,2-Trichloroethane	ND	680	250	
1,2-Dichloroethane	ND	510	250		1,3,5-Trimethylbenzene	ND	610	250	
1,2-Dichloropropane	ND	580	250		1,1,2,2-Tetrachloroethane	ND	1700	250	
1,3-Dichlorobenzene	ND	750	250		1,2,4-Trimethylbenzene	ND	1800	250	
1,4-Dichlorobenzene	ND	750	250		1,2,4-Trichlorobenzene	ND	3700	250	
c-1,3-Dichloropropene	ND	570	250		Vinyl Acetate	ND	1800	250	
c-1,2-Dichloroethene	ND	500	250		Vinyl Chloride	ND	320	250	
t-1,2-Dichloroethene	ND	500	250		1,1-Difluoroethane	4400000	220000	40000	
t-1,3-Dichloropropene	ND	1100	250		Isopropanol	ND	3100	250	
Ethanol	ND	2400	250						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	100	68-134		1,2-Dichloroethane-d4	100	67-133	
Toluene-d8	96	70-130					

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-8	**13-04-1481-2-A**	**04/19/13 10:43**	**Air**	**GC/MS AA**	**N/A**	**04/27/13 23:49**	**130427L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	190	40		Ethyl-t-Butyl Ether (ETBE)	ND	330	40	
Benzene	ND	64	40		Ethylbenzene	ND	87	40	
Benzyl Chloride	ND	310	40		4-Ethyltoluene	ND	98	40	
Bromodichloromethane	ND	130	40		Hexachloro-1,3-Butadiene	ND	640	40	
Bromoform	ND	210	40		2-Hexanone	ND	250	40	
Bromomethane	ND	78	40		Methyl-t-Butyl Ether (MTBE)	ND	290	40	
2-Butanone	ND	180	40		Methylene Chloride	ND	690	40	
Carbon Disulfide	ND	250	40		4-Methyl-2-Pentanone	ND	250	40	
Carbon Tetrachloride	ND	130	40		Naphthalene	ND	1000	40	
Chlorobenzene	ND	92	40		o-Xylene	ND	87	40	
Chloroethane	ND	53	40		p/m-Xylene	ND	350	40	
Chloroform	ND	98	40		Styrene	ND	260	40	
Chloromethane	ND	41	40		Tert-Amyl-Methyl Ether (TAME)	ND	330	40	
Dibromochloromethane	ND	170	40		Tert-Butyl Alcohol (TBA)	ND	240	40	
Dichlorodifluoromethane	ND	99	40		Tetrachloroethene	3200	140	40	
Diisopropyl Ether (DIPE)	ND	330	40		Toluene	ND	75	40	
1,1-Dichloroethane	ND	81	40		Trichloroethene	ND	110	40	
1,1-Dichloroethene	ND	79	40		Trichlorofluoromethane	ND	220	40	
1,2-Dibromoethane	ND	150	40		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	460	40	
Dichlorotetrafluoroethane	ND	560	40		1,1,1-Trichloroethane	ND	110	40	
1,2-Dichlorobenzene	ND	120	40		1,1,2-Trichloroethane	ND	110	40	
1,2-Dichloroethane	ND	81	40		1,3,5-Trimethylbenzene	ND	98	40	
1,2-Dichloropropane	ND	92	40		1,1,2,2-Tetrachloroethane	ND	270	40	
1,3-Dichlorobenzene	ND	120	40		1,2,4-Trimethylbenzene	ND	290	40	
1,4-Dichlorobenzene	ND	120	40		1,2,4-Trichlorobenzene	ND	590	40	
c-1,3-Dichloropropene	ND	91	40		Vinyl Acetate	ND	280	40	
c-1,2-Dichloroethene	ND	79	40		Vinyl Chloride	ND	51	40	
t-1,2-Dichloroethene	ND	79	40		1,1-Difluoroethane	640000	22000	4000	
t-1,3-Dichloropropene	ND	180	40		Isopropanol	ND	490	40	
Ethanol	ND	380	40						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	99	68-134		1,2-Dichloroethane-d4	95	67-133	
Toluene-d8	97	70-130					

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-9	**13-04-1481-3-A**	**04/19/13 11:19**	**Air**	**GC/MS AA**	**N/A**	**04/28/13 04:23**	**130427L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	1200	480	100		Ethyl-t-Butyl Ether (ETBE)	ND	840	100	
Benzene	ND	160	100		Ethylbenzene	ND	220	100	
Benzyl Chloride	ND	780	100		4-Ethyltoluene	ND	250	100	
Bromodichloromethane	ND	340	100		Hexachloro-1,3-Butadiene	ND	1600	100	
Bromoform	ND	520	100		2-Hexanone	ND	610	100	
Bromomethane	ND	190	100		Methyl-t-Butyl Ether (MTBE)	ND	720	100	
2-Butanone	ND	440	100		Methylene Chloride	ND	1700	100	
Carbon Disulfide	ND	620	100		4-Methyl-2-Pentanone	ND	610	100	
Carbon Tetrachloride	ND	310	100		Naphthalene	ND	2600	100	
Chlorobenzene	ND	230	100		o-Xylene	ND	220	100	
Chloroethane	ND	130	100		p/m-Xylene	ND	870	100	
Chloroform	ND	240	100		Styrene	ND	640	100	
Chloromethane	ND	100	100		Tert-Amyl-Methyl Ether (TAME)	ND	840	100	
Dibromochloromethane	ND	430	100		Tert-Butyl Alcohol (TBA)	730	610	100	
Dichlorodifluoromethane	ND	250	100		Tetrachloroethene	650	340	100	
Diisopropyl Ether (DIPE)	ND	840	100		Toluene	910	190	100	
1,1-Dichloroethane	ND	200	100		Trichloroethene	ND	270	100	
1,1-Dichloroethene	ND	200	100		Trichlorofluoromethane	ND	560	100	
1,2-Dibromoethane	ND	380	100		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1100	100	
Dichlorotetrafluoroethane	ND	1400	100		1,1,1-Trichloroethane	ND	270	100	
1,2-Dichlorobenzene	ND	300	100		1,1,2-Trichloroethane	ND	270	100	
1,2-Dichloroethane	ND	200	100		1,3,5-Trimethylbenzene	ND	250	100	
1,2-Dichloropropane	ND	230	100		1,1,2,2-Tetrachloroethane	ND	690	100	
1,3-Dichlorobenzene	ND	300	100		1,2,4-Trimethylbenzene	ND	740	100	
1,4-Dichlorobenzene	ND	300	100		1,2,4-Trichlorobenzene	ND	1500	100	
c-1,3-Dichloropropene	ND	230	100		Vinyl Acetate	ND	700	100	
c-1,2-Dichloroethene	ND	200	100		Vinyl Chloride	ND	130	100	
t-1,2-Dichloroethene	ND	200	100		1,1-Difluoroethane	3100000	220000	40000	
t-1,3-Dichloropropene	ND	450	100		Isopropanol	ND	1200	100	
Ethanol	1100	940	100						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	97	68-134		1,2-Dichloroethane-d4	99	67-133	
Toluene-d8	96	70-130					

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-10	**13-04-1481-4-A**	**04/19/13 12:07**	**Air**	**GC/MS AA**	**N/A**	**04/28/13 00:46**	**130427L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	56	5.7	1.21		Ethyl-t-Butyl Ether (ETBE)	ND	10	1.21	
Benzene	ND	1.9	1.21		Ethylbenzene	ND	2.6	1.21	
Benzyl Chloride	ND	9.4	1.21		4-Ethyltoluene	ND	3.0	1.21	
Bromodichloromethane	ND	4.1	1.21		Hexachloro-1,3-Butadiene	ND	19	1.21	
Bromoform	ND	6.3	1.21		2-Hexanone	ND	7.4	1.21	
Bromomethane	ND	2.3	1.21		Methyl-t-Butyl Ether (MTBE)	ND	8.7	1.21	
2-Butanone	7.3	5.4	1.21		Methylene Chloride	ND	21	1.21	
Carbon Disulfide	ND	7.5	1.21		4-Methyl-2-Pentanone	ND	7.4	1.21	
Carbon Tetrachloride	ND	3.8	1.21		Naphthalene	ND	32	1.21	
Chlorobenzene	ND	2.8	1.21		o-Xylene	ND	2.6	1.21	
Chloroethane	ND	1.6	1.21		p/m-Xylene	ND	11	1.21	
Chloroform	3.4	3.0	1.21		Styrene	ND	7.7	1.21	
Chloromethane	ND	1.2	1.21		Tert-Amyl-Methyl Ether (TAME)	ND	10	1.21	
Dibromochloromethane	ND	5.2	1.21		Tert-Butyl Alcohol (TBA)	ND	7.3	1.21	
Dichlorodifluoromethane	ND	3.0	1.21		Tetrachloroethene	700	4.1	1.21	
Diisopropyl Ether (DIPE)	ND	10	1.21		Toluene	ND	2.3	1.21	
1,1-Dichloroethane	ND	2.4	1.21		Trichloroethene	ND	3.3	1.21	
1,1-Dichloroethene	ND	2.4	1.21		Trichlorofluoromethane	ND	6.8	1.21	
1,2-Dibromoethane	ND	4.6	1.21		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	14	1.21	
Dichlorotetrafluoroethane	ND	17	1.21		1,1,1-Trichloroethane	ND	3.3	1.21	
1,2-Dichlorobenzene	ND	3.6	1.21		1,1,2-Trichloroethane	ND	3.3	1.21	
1,2-Dichloroethane	ND	2.4	1.21		1,3,5-Trimethylbenzene	ND	3.0	1.21	
1,2-Dichloropropane	ND	2.8	1.21		1,1,2,2-Tetrachloroethane	ND	8.3	1.21	
1,3-Dichlorobenzene	ND	3.6	1.21		1,2,4-Trimethylbenzene	ND	8.9	1.21	
1,4-Dichlorobenzene	ND	3.6	1.21		1,2,4-Trichlorobenzene	ND	18	1.21	
c-1,3-Dichloropropene	ND	2.7	1.21		Vinyl Acetate	ND	8.5	1.21	
c-1,2-Dichloroethene	ND	2.4	1.21		Vinyl Chloride	ND	1.5	1.21	
t-1,2-Dichloroethene	ND	2.4	1.21		1,1-Difluoroethane	7.9	6.5	1.21	
t-1,3-Dichloropropene	ND	5.5	1.21		Isopropanol	ND	15	1.21	
Ethanol	ND	11	1.21						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	104	68-134		1,2-Dichloroethane-d4	95	67-133	
Toluene-d8	100	70-130					

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-11	**13-04-1481-5-A**	**04/19/13 13:47**	**Air**	**GC/MS AA**	**N/A**	**04/28/13 01:57**	**130427L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	190	40		Ethyl-t-Butyl Ether (ETBE)	ND	330	40	
Benzene	ND	64	40		Ethylbenzene	ND	87	40	
Benzyl Chloride	ND	310	40		4-Ethyltoluene	ND	98	40	
Bromodichloromethane	ND	130	40		Hexachloro-1,3-Butadiene	ND	640	40	
Bromoform	ND	210	40		2-Hexanone	ND	250	40	
Bromomethane	ND	78	40		Methyl-t-Butyl Ether (MTBE)	ND	290	40	
2-Butanone	ND	180	40		Methylene Chloride	ND	690	40	
Carbon Disulfide	ND	250	40		4-Methyl-2-Pentanone	ND	250	40	
Carbon Tetrachloride	ND	130	40		Naphthalene	ND	1000	40	
Chlorobenzene	ND	92	40		o-Xylene	ND	87	40	
Chloroethane	ND	53	40		p/m-Xylene	ND	350	40	
Chloroform	ND	98	40		Styrene	ND	260	40	
Chloromethane	ND	41	40		Tert-Amyl-Methyl Ether (TAME)	ND	330	40	
Dibromochloromethane	ND	170	40		Tert-Butyl Alcohol (TBA)	ND	240	40	
Dichlorodifluoromethane	ND	99	40		Tetrachloroethene	590	140	40	
Diisopropyl Ether (DIPE)	ND	330	40		Toluene	ND	75	40	
1,1-Dichloroethane	ND	81	40		Trichloroethene	ND	110	40	
1,1-Dichloroethene	ND	79	40		Trichlorofluoromethane	ND	220	40	
1,2-Dibromoethane	ND	150	40		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	460	40	
Dichlorotetrafluoroethane	ND	560	40		1,1,1-Trichloroethane	ND	110	40	
1,2-Dichlorobenzene	ND	120	40		1,1,2-Trichloroethane	ND	110	40	
1,2-Dichloroethane	ND	81	40		1,3,5-Trimethylbenzene	ND	98	40	
1,2-Dichloropropane	ND	92	40		1,1,2,2-Tetrachloroethane	ND	270	40	
1,3-Dichlorobenzene	ND	120	40		1,2,4-Trimethylbenzene	ND	290	40	
1,4-Dichlorobenzene	ND	120	40		1,2,4-Trichlorobenzene	ND	590	40	
c-1,3-Dichloropropene	ND	91	40		Vinyl Acetate	ND	280	40	
c-1,2-Dichloroethene	ND	79	40		Vinyl Chloride	ND	51	40	
t-1,2-Dichloroethene	ND	79	40		1,1-Difluoroethane	2500000	54000	10000	
t-1,3-Dichloropropene	ND	180	40		Isopropanol	ND	490	40	
Ethanol	ND	380	40						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	101	68-134		1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	96	70-130					

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-12	**13-04-1481-6-A**	**04/19/13 14:19**	**Air**	**GC/MS AA**	**N/A**	**04/28/13 02:45**	**130427L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	190	40		Ethyl-t-Butyl Ether (ETBE)	ND	330	40	
Benzene	ND	64	40		Ethylbenzene	ND	87	40	
Benzyl Chloride	ND	310	40		4-Ethyltoluene	ND	98	40	
Bromodichloromethane	ND	130	40		Hexachloro-1,3-Butadiene	ND	640	40	
Bromoform	ND	210	40		2-Hexanone	ND	250	40	
Bromomethane	ND	78	40		Methyl-t-Butyl Ether (MTBE)	ND	290	40	
2-Butanone	ND	180	40		Methylene Chloride	ND	690	40	
Carbon Disulfide	ND	250	40		4-Methyl-2-Pentanone	ND	250	40	
Carbon Tetrachloride	ND	130	40		Naphthalene	ND	1000	40	
Chlorobenzene	ND	92	40		o-Xylene	ND	87	40	
Chloroethane	ND	53	40		p/m-Xylene	ND	350	40	
Chloroform	ND	98	40		Styrene	ND	260	40	
Chloromethane	ND	41	40		Tert-Amyl-Methyl Ether (TAME)	ND	330	40	
Dibromochloromethane	ND	170	40		Tert-Butyl Alcohol (TBA)	ND	240	40	
Dichlorodifluoromethane	ND	99	40		Tetrachloroethene	2300	140	40	
Diisopropyl Ether (DIPE)	ND	330	40		Toluene	ND	75	40	
1,1-Dichloroethane	ND	81	40		Trichloroethene	ND	110	40	
1,1-Dichloroethene	ND	79	40		Trichlorofluoromethane	ND	220	40	
1,2-Dibromoethane	ND	150	40		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	460	40	
Dichlorotetrafluoroethane	ND	560	40		1,1,1-Trichloroethane	ND	110	40	
1,2-Dichlorobenzene	ND	120	40		1,1,2-Trichloroethane	ND	110	40	
1,2-Dichloroethane	ND	81	40		1,3,5-Trimethylbenzene	ND	98	40	
1,2-Dichloropropane	ND	92	40		1,1,2,2-Tetrachloroethane	ND	270	40	
1,3-Dichlorobenzene	ND	120	40		1,2,4-Trimethylbenzene	ND	290	40	
1,4-Dichlorobenzene	ND	120	40		1,2,4-Trichlorobenzene	ND	590	40	
c-1,3-Dichloropropene	ND	91	40		Vinyl Acetate	ND	280	40	
c-1,2-Dichloroethene	ND	79	40		Vinyl Chloride	ND	51	40	
t-1,2-Dichloroethene	ND	79	40		1,1-Difluoroethane	1500000	110000	20000	
t-1,3-Dichloropropene	ND	180	40		Isopropanol	ND	490	40	
Ethanol	ND	380	40						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	97	68-134		1,2-Dichloroethane-d4	97	67-133	
Toluene-d8	102	70-130					

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-12-DFA	**13-04-1481-7-A**	**04/19/13 14:19**	**Air**	**GC/MS AA**	**N/A**	**04/28/13 05:12**	**130427L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	9500	2000		Ethyl-t-Butyl Ether (ETBE)	ND	17000	2000	
Benzene	ND	3200	2000		Ethylbenzene	ND	4300	2000	
Benzyl Chloride	ND	16000	2000		4-Ethyltoluene	ND	4900	2000	
Bromodichloromethane	ND	6700	2000		Hexachloro-1,3-Butadiene	ND	32000	2000	
Bromoform	ND	10000	2000		2-Hexanone	ND	12000	2000	
Bromomethane	ND	3900	2000		Methyl-t-Butyl Ether (MTBE)	ND	14000	2000	
2-Butanone	ND	8800	2000		Methylene Chloride	ND	35000	2000	
Carbon Disulfide	ND	12000	2000		4-Methyl-2-Pentanone	ND	12000	2000	
Carbon Tetrachloride	ND	6300	2000		Naphthalene	ND	52000	2000	
Chlorobenzene	ND	4600	2000		o-Xylene	ND	4300	2000	
Chloroethane	ND	2600	2000		p/m-Xylene	ND	17000	2000	
Chloroform	ND	4900	2000		Styrene	ND	13000	2000	
Chloromethane	ND	2100	2000		Tert-Amyl-Methyl Ether (TAME)	ND	17000	2000	
Dibromochloromethane	ND	8500	2000		Tert-Butyl Alcohol (TBA)	ND	12000	2000	
Dichlorodifluoromethane	ND	4900	2000		Tetrachloroethene	ND	6800	2000	
Diisopropyl Ether (DIPE)	ND	17000	2000		Toluene	ND	3800	2000	
1,1-Dichloroethane	ND	4000	2000		Trichloroethene	ND	5400	2000	
1,1-Dichloroethene	ND	4000	2000		Trichlorofluoromethane	ND	11000	2000	
1,2-Dibromoethane	ND	7700	2000		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	23000	2000	
Dichlorotetrafluoroethane	ND	28000	2000		1,1,1-Trichloroethane	ND	5500	2000	
1,2-Dichlorobenzene	ND	6000	2000		1,1,2-Trichloroethane	ND	5500	2000	
1,2-Dichloroethane	ND	4000	2000		1,3,5-Trimethylbenzene	ND	4900	2000	
1,2-Dichloropropane	ND	4600	2000		1,1,2,2-Tetrachloroethane	ND	14000	2000	
1,3-Dichlorobenzene	ND	6000	2000		1,2,4-Trimethylbenzene	ND	15000	2000	
1,4-Dichlorobenzene	ND	6000	2000		1,2,4-Trichlorobenzene	ND	30000	2000	
c-1,3-Dichloropropene	ND	4500	2000		Vinyl Acetate	ND	14000	2000	
c-1,2-Dichloroethene	ND	4000	2000		Vinyl Chloride	ND	2600	2000	
t-1,2-Dichloroethene	ND	4000	2000		1,1-Difluoroethane	2800000	110000	20000	
t-1,3-Dichloropropene	ND	9100	2000		Isopropanol	ND	25000	2000	
Ethanol	ND	19000	2000						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	98	68-134		1,2-Dichloroethane-d4	99	67-133	
Toluene-d8	101	70-130					

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-11,327**	**N/A**	**Air**	**GC/MS AA**	**N/A**	**04/27/13 20:01**	**130427L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	4.8	1		Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1	
Benzene	ND	1.6	1		Ethylbenzene	ND	2.2	1	
Benzyl Chloride	ND	7.8	1		4-Ethyltoluene	ND	2.5	1	
Bromodichloromethane	ND	3.4	1		Hexachloro-1,3-Butadiene	ND	16	1	
Bromoform	ND	5.2	1		2-Hexanone	ND	6.1	1	
Bromomethane	ND	1.9	1		Methyl-t-Butyl Ether (MTBE)	ND	7.2	1	
2-Butanone	ND	4.4	1		Methylene Chloride	ND	17	1	
Carbon Disulfide	ND	6.2	1		4-Methyl-2-Pentanone	ND	6.1	1	
Carbon Tetrachloride	ND	3.1	1		Naphthalene	ND	26	1	
Chlorobenzene	ND	2.3	1		o-Xylene	ND	2.2	1	
Chloroethane	ND	1.3	1		p/m-Xylene	ND	8.7	1	
Chloroform	ND	2.4	1		Styrene	ND	6.4	1	
Chloromethane	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1	
Dibromochloromethane	ND	4.3	1		Tert-Butyl Alcohol (TBA)	ND	6.1	1	
Dichlorodifluoromethane	ND	2.5	1		Tetrachloroethene	ND	3.4	1	
Diisopropyl Ether (DIPE)	ND	8.4	1		Toluene	ND	1.9	1	
1,1-Dichloroethane	ND	2.0	1		Trichloroethene	ND	2.7	1	
1,1-Dichloroethene	ND	2.0	1		Trichlorofluoromethane	ND	5.6	1	
1,2-Dibromoethane	ND	3.8	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1	
Dichlorotetrafluoroethane	ND	14	1		1,1,1-Trichloroethane	ND	2.7	1	
1,2-Dichlorobenzene	ND	3.0	1		1,1,2-Trichloroethane	ND	2.7	1	
1,2-Dichloroethane	ND	2.0	1		1,3,5-Trimethylbenzene	ND	2.5	1	
1,2-Dichloropropane	ND	2.3	1		1,1,2,2-Tetrachloroethane	ND	6.9	1	
1,3-Dichlorobenzene	ND	3.0	1		1,2,4-Trimethylbenzene	ND	7.4	1	
1,4-Dichlorobenzene	ND	3.0	1		1,2,4-Trichlorobenzene	ND	15	1	
c-1,3-Dichloropropene	ND	2.3	1		Vinyl Acetate	ND	7.0	1	
c-1,2-Dichloroethene	ND	2.0	1		Vinyl Chloride	ND	1.3	1	
t-1,2-Dichloroethene	ND	2.0	1		1,1-Difluoroethane	ND	5.4	1	
t-1,3-Dichloropropene	ND	4.5	1		Isopropanol	ND	12	1	
Ethanol	ND	9.4	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	97	68-134		1,2-Dichloroethane-d4	95	67-133	
Toluene-d8	98	70-130					

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-11,333**	**N/A**	**Air**	**GC/MS AA**	**N/A**	**04/29/13 16:53**	**130429L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	4.8	1		Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1	
Benzene	ND	1.6	1		Ethylbenzene	ND	2.2	1	
Benzyl Chloride	ND	7.8	1		4-Ethyltoluene	ND	2.5	1	
Bromodichloromethane	ND	3.4	1		Hexachloro-1,3-Butadiene	ND	16	1	
Bromoform	ND	5.2	1		2-Hexanone	ND	6.1	1	
Bromomethane	ND	1.9	1		Methyl-t-Butyl Ether (MTBE)	ND	7.2	1	
2-Butanone	ND	4.4	1		Methylene Chloride	ND	17	1	
Carbon Disulfide	ND	6.2	1		4-Methyl-2-Pentanone	ND	6.1	1	
Carbon Tetrachloride	ND	3.1	1		Naphthalene	ND	26	1	
Chlorobenzene	ND	2.3	1		o-Xylene	ND	2.2	1	
Chloroethane	ND	1.3	1		p/m-Xylene	ND	8.7	1	
Chloroform	ND	2.4	1		Styrene	ND	6.4	1	
Chloromethane	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1	
Dibromochloromethane	ND	4.3	1		Tert-Butyl Alcohol (TBA)	ND	6.1	1	
Dichlorodifluoromethane	ND	2.5	1		Tetrachloroethene	ND	3.4	1	
Diisopropyl Ether (DIPE)	ND	8.4	1		Toluene	ND	1.9	1	
1,1-Dichloroethane	ND	2.0	1		Trichloroethene	ND	2.7	1	
1,1-Dichloroethene	ND	2.0	1		Trichlorofluoromethane	ND	5.6	1	
1,2-Dibromoethane	ND	3.8	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1	
Dichlorotetrafluoroethane	ND	14	1		1,1,1-Trichloroethane	ND	2.7	1	
1,2-Dichlorobenzene	ND	3.0	1		1,1,2-Trichloroethane	ND	2.7	1	
1,2-Dichloroethane	ND	2.0	1		1,3,5-Trimethylbenzene	ND	2.5	1	
1,2-Dichloropropane	ND	2.3	1		1,1,2,2-Tetrachloroethane	ND	6.9	1	
1,3-Dichlorobenzene	ND	3.0	1		1,2,4-Trimethylbenzene	ND	7.4	1	
1,4-Dichlorobenzene	ND	3.0	1		1,2,4-Trichlorobenzene	ND	15	1	
c-1,3-Dichloropropene	ND	2.3	1		Vinyl Acetate	ND	7.0	1	
c-1,2-Dichloroethene	ND	2.0	1		Vinyl Chloride	ND	1.3	1	
t-1,2-Dichloroethene	ND	2.0	1		1,1-Difluoroethane	ND	5.4	1	
t-1,3-Dichloropropene	ND	4.5	1		Isopropanol	ND	12	1	
Ethanol	ND	9.4	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	97	68-134		1,2-Dichloroethane-d4	95	67-133	
Toluene-d8	100	70-130					

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: 04/20/13
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 12088.23

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-11,334**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**04/29/13 15:07**	**130429L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	4.8	1		Ethyl-t-Butyl Ether (ETBE)	ND	8.4	1	
Benzene	ND	1.6	1		Ethylbenzene	ND	2.2	1	
Benzyl Chloride	ND	7.8	1		4-Ethyltoluene	ND	2.5	1	
Bromodichloromethane	ND	3.4	1		Hexachloro-1,3-Butadiene	ND	16	1	
Bromoform	ND	5.2	1		2-Hexanone	ND	6.1	1	
Bromomethane	ND	1.9	1		Methyl-t-Butyl Ether (MTBE)	ND	7.2	1	
2-Butanone	ND	4.4	1		Methylene Chloride	ND	17	1	
Carbon Disulfide	ND	6.2	1		4-Methyl-2-Pentanone	ND	6.1	1	
Carbon Tetrachloride	ND	3.1	1		Naphthalene	ND	26	1	
Chlorobenzene	ND	2.3	1		o-Xylene	ND	2.2	1	
Chloroethane	ND	1.3	1		p/m-Xylene	ND	8.7	1	
Chloroform	ND	2.4	1		Styrene	ND	6.4	1	
Chloromethane	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	8.4	1	
Dibromochloromethane	ND	4.3	1		Tert-Butyl Alcohol (TBA)	ND	6.1	1	
Dichlorodifluoromethane	ND	2.5	1		Tetrachloroethene	ND	3.4	1	
Diisopropyl Ether (DIPE)	ND	8.4	1		Toluene	ND	1.9	1	
1,1-Dichloroethane	ND	2.0	1		Trichloroethene	ND	2.7	1	
1,1-Dichloroethene	ND	2.0	1		Trichlorofluoromethane	ND	5.6	1	
1,2-Dibromoethane	ND	3.8	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11	1	
Dichlorotetrafluoroethane	ND	14	1		1,1,1-Trichloroethane	ND	2.7	1	
1,2-Dichlorobenzene	ND	3.0	1		1,1,2-Trichloroethane	ND	2.7	1	
1,2-Dichloroethane	ND	2.0	1		1,3,5-Trimethylbenzene	ND	2.5	1	
1,2-Dichloropropane	ND	2.3	1		1,1,2,2-Tetrachloroethane	ND	6.9	1	
1,3-Dichlorobenzene	ND	3.0	1		1,2,4-Trimethylbenzene	ND	7.4	1	
1,4-Dichlorobenzene	ND	3.0	1		1,2,4-Trichlorobenzene	ND	15	1	
c-1,3-Dichloropropene	ND	2.3	1		Vinyl Acetate	ND	7.0	1	
c-1,2-Dichloroethene	ND	2.0	1		Vinyl Chloride	ND	1.3	1	
t-1,2-Dichloroethene	ND	2.0	1		1,1-Difluoroethane	ND	5.4	1	
t-1,3-Dichloropropene	ND	4.5	1		Isopropanol	ND	12	1	
Ethanol	ND	9.4	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	107	68-134		1,2-Dichloroethane-d4	102	67-133	
Toluene-d8	100	70-130					

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

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: N/A
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15

Project: 12088.23

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-11,327	**Air**	**GC/MS AA**	**N/A**	**04/27/13**	**130427L01**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Acetone	59.39	63.07	106	62.58	105	67-133	56-144	1	0-30	
Benzene	79.87	86.32	108	86.58	108	70-130	60-140	0	0-30	
Benzyl Chloride	129.4	134.4	104	136.8	106	38-158	18-178	2	0-30	
Bromodichloromethane	167.5	167.6	100	168.7	101	70-130	60-140	1	0-30	
Bromoform	258.4	266.3	103	271.1	105	63-147	49-161	2	0-30	
Bromomethane	97.08	88.55	91	87.66	90	70-139	58-150	1	0-30	
2-Butanone	73.73	81.50	111	80.54	109	66-132	55-143	1	0-30	
Carbon Disulfide	77.85	81.64	105	81.97	105	68-146	55-159	0	0-30	
Carbon Tetrachloride	157.3	147.6	94	148.9	95	70-136	59-147	1	0-30	
Chlorobenzene	115.1	119.3	104	121.9	106	70-130	60-140	2	0-30	
Chloroethane	65.96	54.45	83	56.33	85	65-149	51-163	3	0-30	
Chloroform	122.1	116.8	96	116.4	95	70-130	60-140	0	0-30	
Chloromethane	51.63	51.19	99	50.89	99	69-141	57-153	1	0-30	
Dibromochloromethane	213.0	217.3	102	221.4	104	70-138	59-149	2	0-30	
Dichlorodifluoromethane	123.6	105.8	86	113.1	91	67-139	55-151	7	0-30	
Diisopropyl Ether (DIPE)	104.5	97.88	94	98.19	94	63-130	52-141	0	0-30	
1,1-Dichloroethane	101.2	105.3	104	105.5	104	70-130	60-140	0	0-30	
1,1-Dichloroethene	99.12	98.81	100	100.0	101	70-135	59-146	1	0-30	
1,2-Dibromoethane	192.1	202.4	105	206.5	108	70-133	60-144	2	0-30	
Dichlorotetrafluoroethane	174.8	157.6	90	155.0	89	51-135	37-149	2	0-30	
1,2-Dichlorobenzene	150.3	151.2	101	153.1	102	48-138	33-153	1	0-30	
1,2-Dichloroethane	101.2	97.60	96	97.88	97	70-132	60-142	0	0-30	
1,2-Dichloropropane	115.5	125.3	108	126.7	110	70-130	60-140	1	0-30	
1,3-Dichlorobenzene	150.3	151.9	101	155.2	103	56-134	43-147	2	0-30	
1,4-Dichlorobenzene	150.3	151.5	101	154.2	103	52-136	38-150	2	0-30	
c-1,3-Dichloropropene	113.5	125.1	110	127.4	112	70-130	60-140	2	0-30	
c-1,2-Dichloroethene	99.12	107.7	109	108.4	109	70-130	60-140	1	0-30	
t-1,2-Dichloroethene	99.12	107.8	109	107.3	108	70-130	60-140	0	0-30	
t-1,3-Dichloropropene	113.5	127.3	112	128.8	114	70-147	57-160	1	0-30	
Ethanol	188.4	153.6	82	177.7	94	37-139	20-156	15	0-30	
Ethyl-t-Butyl Ether (ETBE)	104.5	104.2	100	104.5	100	67-130	56-140	0	0-30	
Ethylbenzene	108.6	113.2	104	115.8	107	70-130	60-140	2	0-30	

RPD - Relative Percent Difference , CL - Control Limit

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: N/A
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15

Project: 12088.23

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-11,327	**Air**	**GC/MS AA**	**N/A**	**04/27/13**	**130427L01**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
4-Ethyltoluene	122.9	124.3	101	126.3	103	68-130	58-140	2	0-30	
Hexachloro-1,3-Butadiene	266.6	221.3	83	224.0	84	44-146	27-163	1	0-30	
2-Hexanone	102.4	114.4	112	116.9	114	70-136	59-147	2	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	87.04	97	87.03	97	68-130	58-140	0	0-30	
Methylene Chloride	86.84	87.92	101	88.05	101	69-130	59-140	0	0-30	
4-Methyl-2-Pentanone	102.4	112.4	110	114.3	112	70-130	60-140	2	0-30	
Naphthalene	131.1	110.2	84	111.3	85	24-144	4-164	1	0-30	
o-Xylene	108.6	109.8	101	112.5	104	69-130	59-140	2	0-30	
p/m-Xylene	217.1	219.7	101	222.8	103	70-132	60-142	1	0-30	
Styrene	106.5	111.5	105	115.2	108	65-131	54-142	3	0-30	
Tert-Amyl-Methyl Ether (TAME)	104.5	119.8	115	121.2	116	69-130	59-140	1	0-30	
Tert-Butyl Alcohol (TBA)	151.6	207.0	137	205.2	135	66-144	53-157	1	0-30	
Tetrachloroethene	169.6	179.0	106	184.0	109	70-130	60-140	3	0-30	
Toluene	94.21	98.00	104	99.95	106	70-130	60-140	2	0-30	
Trichloroethene	134.3	138.5	103	139.6	104	70-130	60-140	1	0-30	
Trichlorofluoromethane	140.5	126.9	90	127.0	90	63-141	50-154	0	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	191.3	100	191.9	100	70-136	59-147	0	0-30	
1,1,1-Trichloroethane	136.4	131.0	96	131.0	96	70-130	60-140	0	0-30	
1,1,2-Trichloroethane	136.4	144.8	106	147.1	108	70-130	60-140	2	0-30	
1,3,5-Trimethylbenzene	122.9	122.0	99	124.2	101	62-130	51-141	2	0-30	
1,1,2,2-Tetrachloroethane	171.6	177.1	103	181.2	106	63-130	52-141	2	0-30	
1,2,4-Trimethylbenzene	122.9	122.9	100	125.3	102	60-132	48-144	2	0-30	
1,2,4-Trichlorobenzene	185.5	168.2	91	171.1	92	31-151	11-171	2	0-30	
Vinyl Acetate	88.03	98.62	112	98.92	112	58-130	46-142	0	0-30	
Vinyl Chloride	63.91	61.85	97	61.18	96	70-134	59-145	1	0-30	
1,1-Difluoroethane	67.54	74.26	110	74.16	110	70-131	60-141	0	0-30	
Isopropanol	61.45	65.20	106	65.26	106	57-135	44-148	0	0-30	

Total number of LCS compounds : 59
Total number of ME compounds : 0
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: N/A
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15

Project: 12088.23

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-11,333	**Air**	**GC/MS AA**	**N/A**	**04/29/13**	**130429L01**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Acetone	59.39	64.60	109	64.88	109	67-133	56-144	0	0-30	
Benzene	79.87	85.11	107	86.95	109	70-130	60-140	2	0-30	
Benzyl Chloride	129.4	139.5	108	137.1	106	38-158	18-178	2	0-30	
Bromodichloromethane	167.5	166.2	99	169.8	101	70-130	60-140	2	0-30	
Bromoform	258.4	270.3	105	270.1	105	63-147	49-161	0	0-30	
Bromomethane	97.08	90.73	93	91.24	94	70-139	58-150	1	0-30	
2-Butanone	73.73	84.96	115	85.19	116	66-132	55-143	0	0-30	
Carbon Disulfide	77.85	82.81	106	83.70	108	68-146	55-159	1	0-30	
Carbon Tetrachloride	157.3	146.5	93	148.1	94	70-136	59-147	1	0-30	
Chlorobenzene	115.1	119.8	104	120.7	105	70-130	60-140	1	0-30	
Chloroethane	65.96	57.90	88	58.74	89	65-149	51-163	1	0-30	
Chloroform	122.1	117.4	96	118.2	97	70-130	60-140	1	0-30	
Chloromethane	51.63	54.64	106	55.75	108	69-141	57-153	2	0-30	
Dibromochloromethane	213.0	220.0	103	220.0	103	70-138	59-149	0	0-30	
Dichlorodifluoromethane	123.6	109.1	88	121.4	98	67-139	55-151	11	0-30	
Diisopropyl Ether (DIPE)	104.5	103.1	99	104.2	100	63-130	52-141	1	0-30	
1,1-Dichloroethane	101.2	107.2	106	107.9	107	70-130	60-140	1	0-30	
1,1-Dichloroethene	99.12	102.0	103	101.5	102	70-135	59-146	1	0-30	
1,2-Dibromoethane	192.1	204.1	106	205.7	107	70-133	60-144	1	0-30	
Dichlorotetrafluoroethane	174.8	165.2	95	164.6	94	51-135	37-149	0	0-30	
1,2-Dichlorobenzene	150.3	150.0	100	150.8	100	48-138	33-153	1	0-30	
1,2-Dichloroethane	101.2	98.94	98	98.96	98	70-132	60-142	0	0-30	
1,2-Dichloropropane	115.5	126.9	110	129.0	112	70-130	60-140	2	0-30	
1,3-Dichlorobenzene	150.3	152.3	101	153.4	102	56-134	43-147	1	0-30	
1,4-Dichlorobenzene	150.3	152.1	101	151.7	101	52-136	38-150	0	0-30	
c-1,3-Dichloropropene	113.5	124.9	110	127.4	112	70-130	60-140	2	0-30	
c-1,2-Dichloroethene	99.12	106.7	108	108.6	110	70-130	60-140	2	0-30	
t-1,2-Dichloroethene	99.12	107.0	108	107.8	109	70-130	60-140	1	0-30	
t-1,3-Dichloropropene	113.5	127.0	112	128.2	113	70-147	57-160	1	0-30	
Ethanol	188.4	188.3	100	116.4	62	37-139	20-156	47	0-30	X
Ethyl-t-Butyl Ether (ETBE)	104.5	104.9	100	105.9	101	67-130	56-140	1	0-30	
Ethylbenzene	108.6	114.6	106	115.1	106	70-130	60-140	0	0-30	

RPD - Relative Percent Difference , CL - Control Limit

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: N/A
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15

Project: 12088.23

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-11,333	**Air**	**GC/MS AA**	**N/A**	**04/29/13**	**130429L01**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
4-Ethyltoluene	122.9	125.0	102	124.2	101	68-130	58-140	1	0-30	
Hexachloro-1,3-Butadiene	266.6	216.2	81	218.8	82	44-146	27-163	1	0-30	
2-Hexanone	102.4	121.2	118	119.6	117	70-136	59-147	1	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	86.24	96	86.87	96	68-130	58-140	1	0-30	
Methylene Chloride	86.84	88.09	101	88.36	102	69-130	59-140	0	0-30	
4-Methyl-2-Pentanone	102.4	114.6	112	115.9	113	70-130	60-140	1	0-30	
Naphthalene	131.1	110.0	84	111.2	85	24-144	4-164	1	0-30	
o-Xylene	108.6	113.0	104	112.7	104	69-130	59-140	0	0-30	
p/m-Xylene	217.1	224.7	104	224.4	103	70-132	60-142	0	0-30	
Styrene	106.5	112.7	106	113.2	106	65-131	54-142	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	104.5	119.0	114	120.0	115	69-130	59-140	1	0-30	
Tert-Butyl Alcohol (TBA)	151.6	211.3	139	208.0	137	66-144	53-157	2	0-30	
Tetrachloroethene	169.6	178.6	105	178.4	105	70-130	60-140	0	0-30	
Toluene	94.21	99.57	106	99.75	106	70-130	60-140	0	0-30	
Trichloroethene	134.3	137.8	103	140.3	104	70-130	60-140	2	0-30	
Trichlorofluoromethane	140.5	129.0	92	128.4	91	63-141	50-154	0	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	193.1	101	193.3	101	70-136	59-147	0	0-30	
1,1,1-Trichloroethane	136.4	130.6	96	131.4	96	70-130	60-140	1	0-30	
1,1,2-Trichloroethane	136.4	144.1	106	147.6	108	70-130	60-140	2	0-30	
1,3,5-Trimethylbenzene	122.9	123.8	101	123.8	101	62-130	51-141	0	0-30	
1,1,2,2-Tetrachloroethane	171.6	183.4	107	182.5	106	63-130	52-141	0	0-30	
1,2,4-Trimethylbenzene	122.9	124.6	101	123.9	101	60-132	48-144	1	0-30	
1,2,4-Trichlorobenzene	185.5	165.1	89	168.7	91	31-151	11-171	2	0-30	
Vinyl Acetate	88.03	102.3	116	102.7	117	58-130	46-142	0	0-30	
Vinyl Chloride	63.91	66.00	103	65.85	103	70-134	59-145	0	0-30	
1,1-Difluoroethane	67.54	77.11	114	77.11	114	70-131	60-141	0	0-30	
Isopropanol	61.45	68.87	112	68.29	111	57-135	44-148	1	0-30	

Total number of LCS compounds : 59
Total number of ME compounds : 0
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: N/A
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15

Project: 12088.23

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-11,334	**Air**	**GC/MS HH**	**N/A**	**04/29/13**	**130429L01**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Acetone	59.39	58.05	98	55.06	93	67-133	56-144	5	0-30	
Benzene	79.87	80.15	100	76.14	95	70-130	60-140	5	0-30	
Benzyl Chloride	129.4	145.4	112	130.8	101	38-158	18-178	11	0-30	
Bromodichloromethane	167.5	184.8	110	174.4	104	70-130	60-140	6	0-30	
Bromoform	258.4	308.2	119	274.0	106	63-147	49-161	12	0-30	
Bromomethane	97.08	99.15	102	94.33	97	70-139	58-150	5	0-30	
2-Butanone	73.73	69.89	95	67.47	92	66-132	55-143	4	0-30	
Carbon Disulfide	77.85	79.28	102	76.30	98	68-146	55-159	4	0-30	
Carbon Tetrachloride	157.3	181.8	116	171.0	109	70-136	59-147	6	0-30	
Chlorobenzene	115.1	125.8	109	112.4	98	70-130	60-140	11	0-30	
Chloroethane	65.96	64.70	98	63.07	96	65-149	51-163	3	0-30	
Chloroform	122.1	126.1	103	120.6	99	70-130	60-140	4	0-30	
Chloromethane	51.63	48.13	93	45.33	88	69-141	57-153	6	0-30	
Dibromochloromethane	213.0	255.8	120	226.8	106	70-138	59-149	12	0-30	
Dichlorodifluoromethane	123.6	134.7	109	127.4	103	67-139	55-151	6	0-30	
Diisopropyl Ether (DIPE)	104.5	98.72	94	94.99	91	63-130	52-141	4	0-30	
1,1-Dichloroethane	101.2	101.1	100	97.83	97	70-130	60-140	3	0-30	
1,1-Dichloroethene	99.12	103.6	105	99.87	101	70-135	59-146	4	0-30	
1,2-Dibromoethane	192.1	220.2	115	195.7	102	70-133	60-144	12	0-30	
Dichlorotetrafluoroethane	174.8	183.6	105	175.2	100	51-135	37-149	5	0-30	
1,2-Dichlorobenzene	150.3	159.8	106	143.9	96	48-138	33-153	10	0-30	
1,2-Dichloroethane	101.2	108.0	107	103.2	102	70-132	60-142	5	0-30	
1,2-Dichloropropane	115.5	114.2	99	107.2	93	70-130	60-140	6	0-30	
1,3-Dichlorobenzene	150.3	162.6	108	147.1	98	56-134	43-147	10	0-30	
1,4-Dichlorobenzene	150.3	162.2	108	147.4	98	52-136	38-150	10	0-30	
c-1,3-Dichloropropene	113.5	119.9	106	112.9	99	70-130	60-140	6	0-30	
c-1,2-Dichloroethene	99.12	100.4	101	96.10	97	70-130	60-140	4	0-30	
t-1,2-Dichloroethene	99.12	100.6	102	96.78	98	70-130	60-140	4	0-30	
t-1,3-Dichloropropene	113.5	124.1	109	117.6	104	70-147	57-160	5	0-30	
Ethanol	188.4	169.8	90	168.9	90	37-139	20-156	1	0-30	
Ethyl-t-Butyl Ether (ETBE)	104.5	104.1	100	99.70	95	67-130	56-140	4	0-30	
Ethylbenzene	108.6	118.8	109	107.0	99	70-130	60-140	10	0-30	

RPD - Relative Percent Difference , CL - Control Limit

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

AllWest Environmental, Inc.
530 Howard Street, Suite 300
San Francisco, CA 94105-3019

Date Received: N/A
Work Order No: 13-04-1481
Preparation: N/A
Method: EPA TO-15

Project: 12088.23

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-11,334	**Air**	**GC/MS HH**	**N/A**	**04/29/13**	**130429L01**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
4-Ethyltoluene	122.9	134.1	109	120.8	98	68-130	58-140	10	0-30	
Hexachloro-1,3-Butadiene	266.6	307.6	115	274.7	103	44-146	27-163	11	0-30	
2-Hexanone	102.4	109.1	106	97.71	95	70-136	59-147	11	0-30	
Methyl-t-Butyl Ether (MTBE)	90.13	92.42	103	89.36	99	68-130	58-140	3	0-30	
Methylene Chloride	86.84	88.31	102	84.40	97	69-130	59-140	5	0-30	
4-Methyl-2-Pentanone	102.4	101.0	99	94.93	93	70-130	60-140	6	0-30	
Naphthalene	131.1	146.2	112	132.6	101	24-144	4-164	10	0-30	
o-Xylene	108.6	121.5	112	108.1	100	69-130	59-140	12	0-30	
p/m-Xylene	217.1	247.9	114	220.9	102	70-132	60-142	12	0-30	
Styrene	106.5	116.0	109	104.1	98	65-131	54-142	11	0-30	
Tert-Amyl-Methyl Ether (TAME)	104.5	108.0	103	101.9	98	69-130	59-140	6	0-30	
Tert-Butyl Alcohol (TBA)	151.6	144.3	95	144.5	95	66-144	53-157	0	0-30	
Tetrachloroethene	169.6	193.1	114	172.9	102	70-130	60-140	11	0-30	
Toluene	94.21	101.8	108	91.23	97	70-130	60-140	11	0-30	
Trichloroethene	134.3	146.0	109	138.0	103	70-130	60-140	6	0-30	
Trichlorofluoromethane	140.5	159.1	113	151.1	108	63-141	50-154	5	0-30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	191.6	205.0	107	196.4	103	70-136	59-147	4	0-30	
1,1,1-Trichloroethane	136.4	149.4	110	142.4	104	70-130	60-140	5	0-30	
1,1,2-Trichloroethane	136.4	144.9	106	135.9	100	70-130	60-140	6	0-30	
1,3,5-Trimethylbenzene	122.9	134.1	109	120.6	98	62-130	51-141	11	0-30	
1,1,2,2-Tetrachloroethane	171.6	184.7	108	165.9	97	63-130	52-141	11	0-30	
1,2,4-Trimethylbenzene	122.9	134.8	110	121.0	98	60-132	48-144	11	0-30	
1,2,4-Trichlorobenzene	185.5	211.8	114	192.8	104	31-151	11-171	9	0-30	
Vinyl Acetate	88.03	82.92	94	80.63	92	58-130	46-142	3	0-30	
Vinyl Chloride	63.91	61.04	96	58.39	91	70-134	59-145	4	0-30	
1,1-Difluoroethane	67.54	62.02	92	61.62	91	70-131	60-141	1	0-30	
Isopropanol	61.45	55.47	90	54.94	89	57-135	44-148	1	0-30	

Total number of LCS compounds : 59
Total number of ME compounds : 0
Total number of ME compounds allowed : 3
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

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Calscience Environmental Laboratories, Inc.

Summa Canister Vacuum Summary

Work Order Number: **13-04-1481**

Sample Name	Vacuum Out		Vacuum In		Equipment	Description
SVP-7	-29.80	in Hg	-3.00	in Hg	LC727	Summa Canister 1L
SVP-8	-29.80	in Hg	-5.00	in Hg	LC217	Summa Canister 1L
SVP-9	-29.80	in Hg	-5.00	in Hg	LC580	Summa Canister 1L
SVP-10	-29.80	in Hg	-5.00	in Hg	LC772	Summa Canister 1L
SVP-11	-29.80	in Hg	-5.00	in Hg	LC764	Summa Canister 1L
SVP-12	-29.80	in Hg	-5.00	in Hg	LC116	Summa Canister 1L
SVP-12-DFA	-29.80	in Hg	-5.00	in Hg	LC451	Summa Canister 1L

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 13-04-1481

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

For any analysis identified as a "field" test with a holding time (HT) </= 15 minutes where the sample is received outside of HT, Calscience will adhere to its internal HT of 24 hours. In cases where sample analysis does not meet Calscience's internal HT, results will be appropriately qualified.

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 FAX: (714) 894-7501

AIR CHAIN OF CUSTODY RECORD

DATE: 4/19/13
PAGE: 1 OF 1

LABORATORY CLIENT: AllWest
ADDRESS: 530 Howard St. #300
CITY: San Francisco, CA 94105
TEL: 415-391-2510 E-MAIL: choulihan@allwest1.com

CLIENT PROJECT NAME / NUMBER: 12088.23
PROJECT ADDRESS: 4240 International Blvd.
CITY: Oakland, CA STATE: ZIP:
PROJECT CONTACT: Christopher Houlihan
SAMPLER(S): (NAME / SIGNATURE)

P.O.NO.:
LAB CONTACT OR QUOTE NO.
LAB USE ONLY **13-04-1481**

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☑ EDD Geotracker Global ID # T0601970507 5

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES: TO-15 VOCs; 1,1-DFA

LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type (I) Indoor (SV) Soil Vap. (A) Ambient	Sampling Equipment: Canister ID#	Canister Size 6L or 1L	Flow Controller ID #	Start Sampling Information: Date	Time (24 hr clock)	Canister Pressure ("Hg)	Stop Sampling Information: Date	Time (24 hr clock)	Canister Pressure ("Hg)	TO-15 VOCs	1,1-DFA
1	SVP-7	SVP-7	SV	LC727	1L	SGM213	4/19/13	0948	-30	4/19/13	0954	-3	X	X
2	SVP-8	SVP-8	SV	LC217	1L	SGM139		1037	-30		1043	-5	X	X
3	SVP-9	SVP-9	SV	LC580	1L	SGM251		1114	-30		1119	-5	X	X
4	SVP-10	SVP-10	SV	LC772	1L	SGM235		1202	-30		1207	-5	X	X
5	SVP-11	SVP-11	SV	LC764	1L	SGM130		1341	-30		1347	-5	X	X
6	SVP-12	SVP-12	SV	LC116	1L	SGM224		1413	-30		1419	-5	X	X
7	SVP-12-DFA	SVP-12-DFA	A	LC451	1L	SGM200	↓	1413	-30	↓	1419	-5	X	X

Relinquished by: (Signature)
Relinquished by: (Signature) Tom O'Malley TO ESO 4/19/13 1730
Relinquished by: (Signature)

Received by: (Signature) Tom O'Malley CEL
Received by: (Signature)
Received by: (Signature)

Date: 4/19/13 Time: 1455
Date: 4/20/13 Time: 0915
Date: Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

04/01/13 Revision

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GSO
GOLDEN STATE OVERNIGHT

WebShip > > > > >
800-322-5555 www.gso.com

Ship From:
ALAN KEMP
CAL SCIENCE- CONCORD
5063 COMMERCIAL CIRCLE #H
CONCORD, CA 94520

Ship To:
SAMPLE RECEIVING
CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
ALLWEST, TPG
Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 521610099

SDS

ORC

A

GARDEN GROVE

D92841A

11331994

Print Date : 04/19/13 15:42 PM

Package 1 of 2

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
STEP 2 - Fold this page in half.
STEP 3 - Securely attach this label to your package, do not cover the barcode.
STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

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1481

GSO
GLOBAL STATE OVERNIGHT

WebShip
800-322-5555 www.gso.com

Ship From:
ALAN KEMP
CAL SCIENCE- CONCORD
5063 COMMERCIAL CIRCLE #H
CONCORD, CA 94520

Ship To:
SAMPLE RECEIVING
CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
ALLWEST

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 521610100

SDS

ORC

A

GARDEN GROVE

D92841A

11331995

Print Date : 04/19/13 15:42 PM

Package 2 of 2

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
STEP 2 - Fold this page in half.
STEP 3 - Securely attach this label to your package, do not cover the barcode.
STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section. Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-04-1481

SAMPLE RECEIPT FORM

Cooler 0 of 0

CLIENT: AllWest DATE: 04/26/13

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature ____.____ °C - 0.2 °C (CF) = ____.____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☑ Air ☐ Filter **Initial:** YC

CUSTODY SEALS INTACT:

☐ Cooler ☑ Box ☐ No (Not Intact) ☐ Not Present ☐ N/A **Initial:** YC

☐ Sample ☐ _____ ☐ No (Not Intact) ☑ Not Present **Initial:** TN

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** TN

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** WC

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:**

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APPENDIX E

APPLICATION FOR AUTHORIZATION TO USE

REPORT TITLE: SECOND SEMIANNUAL SUB-SLAB SOIL VAPOR SAMPLING REPORT
O'REILLY AUTO PARTS (FORMER GRAND AUTO #43)
4240 INTERNATIONAL BLVD (E 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 $150 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**
_____	**AllWest Environmental, Inc.**
Applicant Company	
_____	_____
Print Name and Title	Print Name and Title
_____	_____
Signature and Date	Signature and Date

GENERAL CONDITIONS TO THE WORK AUTHORIZATION AGREEMENT

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

FEES AND COSTS

1. AllWest shall charge for work performed by its personnel at the rates identified in the Work Authorization. These rates are subject to reasonable increases by AllWest upon giving Client 30 days advance notice. Reimbursable Costs will be charged to the Client in addition to the fees for the basic services under this Agreement and all Additional Services (defined below) under the Agreement. Reimbursable Costs include, but are not limited to, expenses for travel, including transportation, meals, lodging, long distance telephone and other related expenses, as well as the costs of reproduction of all drawings for the Client's use, costs for specifications and type-written reports, permit and approval fees, automobile travel reimbursement, costs and fees of subcontractors, and soil and other materials testing. No overtime is accrued for time spent in travel. All costs incurred which relate to the services or materials provided by a contractor or subcontractor to AllWest shall be invoiced by AllWest on the basis of cost plus twenty percent (20%). Automobile travel reimbursement shall be at the rate of fifty- eight cents ($0.58) per mile. All other reimbursable costs shall be invoiced and billed by AllWest at the rate of 1.1 times the direct cost to AllWest. Reimbursable costs will be charged to the client only as outlined in the Work Authorization if the scope of work is for Phase I Environmental Site Assessment, Property Condition Assessment, Seismic Assessment or ALTA survey. Invoices for work performed shall be submitted monthly. Payment will be due upon receipt of invoice. Client shall pay interest on the balance of unpaid invoices which are overdue by more than 30 days, at a rate of 18% per annum as well as all attorney fees and costs incurred by AllWest to secure payment of unpaid invoices. AllWest may waive such fees at its sole discretion.

STANDARD OF CARE

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

LIMITATION OF REMEDIES

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

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

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

INDEMNIFICATION

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

MEDIATION & JUDICIAL REFERENCE

5. In an effort to resolve any conflicts or disputes that arise regarding the performance of this agreement, the Client & AllWest agree that all such disputes shall be submitted to non-binding mediation, using a mutually agreed upon mediation service experienced in the resolution of construction disputes. Unless the parties mutually agree otherwise, such mediation shall be a condition precedent to the initiation of any other adjudicative proceedings. 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

6. Client acknowledges that AllWest and its sub-contractors have played no part in the creation of any hazardous waste, pollution sources, nuisance, or chemical or industrial disposal problem, which may exist, and that AllWest has been retained for the sole purpose of performing the services set out in the scope of work within this Agreement, which may include, but is not necessarily limited to such services as assisting the Client in assessing any problem which may exist and in assisting the

Client in formulating a remedial program. Client acknowledges that while necessary for investigations, commonly used exploration methods employed by AllWest may penetrate through contaminated materials and serve as a connecting passageway between the contaminated material and an uncontaminated aquifer or groundwater, possibly inducing cross contamination. While back-filling with grout or other means, according to a state of practice design is intended to provide a seal against such passageway, it is recognized that such a seal may be imperfect and that there is an inherent risk in drilling borings of performing other exploration methods in a hazardous waste site.

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

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

FORCE MAJUERE

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

TERMINATION

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

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

DOCUMENTS

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

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

ACCESS TO PROJECT

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

CONFIDENTIAL INFORMATION

11. Both Client and AllWest understand that in conjunction with AllWest's performance of the Work on the project, both Client and AllWest may receive or be exposed to Proprietary Information of the other. As used herein, the term "Proprietary Information" refers to any and all information of a confidential, proprietary or secret nature which may be either applicable to, or relate in any way to: (a) the personal, financial or other affairs of the business of each of the Parties, or (b) the

research and development or investigations of each of the Parties. Proprietary Information includes, for example and without limitation, trade secrets, processes, formulas, data, know-how, improvements, inventions, techniques, software technical data, developments, research projects, plans for future development, marketing plans and strategies. Each of the Parties agrees that all Proprietary Information of the other party is and shall remain exclusively the property of that other party. The parties further acknowledge that the Proprietary Information of the other party is a special, valuable and unique asset of that party, and each of the Parties agrees that at all times during the terms of this Agreement and thereafter to keep in confidence and trust all Proprietary Information of the other party, whether such Proprietary Information was obtained or developed by the other party before, during or after the term of this Agreement. Each of the Parties agrees not to sell, distribute, disclose or use in any other unauthorized manner the Proprietary Information of the other party. AllWest further agrees that it will not sell, distribute or disclose information or the results of any testing obtained by AllWest during the performance of the Work without the prior written approval of Client unless required to do so by federal, state or local statute, ordinance or regulation.

INDEPENDENT CONTRACTOR

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

ENTIRE AGREEMENT

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

INTEGRATION

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

MODIFICATION / WAIVER / PARTIAL INVALIDITY

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

INUREMENT / TITLES

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

AUTHORITY

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

COUNTERPARTS

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

THIRD PARTY BENEFICIARIES / CONTROLLING LAW

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

TIME BAR TO LEGAL ACTION

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