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1:52 pm, Jul 13, 2007

Alameda County Environmental Health

July 12, 2007

Regarding

Soil Vapor Sampling Work Searway Property 949 Pacific Avenue Alameda, Ca. 94501

I declare under perjury that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Timber Dell Properties, LLC

Donald W. Lindsey, member



July 11, 2007 Trinity Project No. 103.004.006

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

Re: Sub-Slab Vapor Investigation Report
Searway Property (SLIC Case No. RO0002584)
649 Pacific Avenue
Alameda, California

Dear Mr. Wickham:

This document, prepared by Trinity Source Group, Inc. (Trinity) on behalf of Timber Del Properties, L.L.C., c/o Mr. Donald Lindsey, presents a *Sub-Slab Vapor Investigation Report* for the referenced site (Figures 1 and 2). This report summarizes work proposed in the *Soil Vapor Sampling Workplan* dated May 15, 2006 and the *Soil Vapor Sampling Workplan Addendum* dated April 6, 2007, both submitted by Trinity on behalf of Timber Del Properties. In a letter dated March 17, 2006, the Alameda County Health Care Services Agency (ACHCSA) requested submittal of the earlier workplan to evaluate the potential for indoor air vapor intrusion of total volatile hydrocarbons due to the previously identified Stoddard solvent impacts to soil and groundwater beneath the site. Based on the results of the initial soil vapor sampling, additional work was proposed in the later workplan, as requested by ACHCSA via email. ACHCSA correspondence is included with this report as Attachment A. This report includes discussions of the site description, previous environmental investigation activities, the scope of work completed for each of the two soil vapor investigations, investigation results, conclusions, and recommendations for additional work.

#### SITE DESCRIPTION

The site is located at the intersection of Pacific Avenue and Webster Street in Alameda, California. The site was formerly the location of a dry cleaning operation from the 1940's until

at least 1979. The project site building is currently used as a Kelly-Moore Paints store. The general land use in the site vicinity is commercial and residential.

Previous investigations have shown total volatile hydrocarbons as Stoddard solvent (TVHss) to be present in shallow soil and groundwater beneath a portion of the site. Elevated concentrations of total extractable hydrocarbons (TEH) have also been detected in previously collected soil and grab-groundwater samples. The detection range of the TVH and TEH analytical methods overlap for the higher boiling point compounds contained in Stoddard solvent. Stoddard solvent is a mixture of  $C_7$  to  $C_{12}$  hydrocarbons primarily containing straight and branched chain alkanes (30 to 50%), cycloalkanes (30 to 40%) and alkyl aromatic hydrocarbons (10 to 20%)<sup>1</sup>. The TVH analysis includes detection of  $C_7$  to  $C_{12}$  hydrocarbons while the TEH analysis includes detection of  $C_{10}$  to  $C_{24}$  hydrocarbons. The TVH analysis is an appropriate and representative analysis for quantifying Stoddard solvent.

#### SUMMARY OF PREVIOUS INVESTIGATION ACTIVITIES

On March 8, 2003, Stellar Environmental Solutions, Inc. (Stellar) performed subsurface investigation activities at the site; investigation work was reported in Stellar's March 18, 2003 *Subsurface Site Investigation Report*. Four borings, designated BH-01 through BH-04 were advanced at the site. Soils encountered during drilling consisted of base rock fill to approximately 2.5 feet below ground surface (bgs), underlain by a fine-grained sand to a depth of approximately 5.5 feet bgs. The sand layer is underlain by clayey sand to depths ranging from 10 feet bgs to 15 feet bgs, the maximum depth explored. In boring BH-01, the clayey sand was underlain by a medium-grained sand from a depth of approximately 10 feet bgs to 12 feet bgs. Groundwater was encountered at depths ranging from 10 feet bgs to 13 feet bgs in each of the borings. Based on regional topography and information from monitoring activities performed at a site on the corner of Webster Street and Pacific Avenue from 1993 to 1995, groundwater flow at the site is generally west.

Soil samples were collected at depths ranging from 6.5 feet bgs to 12.5 feet bgs; and grab-groundwater samples were collected from each of the boreholes. All samples were analyzed in the laboratory for gasoline range and Stoddard solvent range total volatile hydrocarbons (TVHg and TVHss, respectively) and diesel range and motor oil range total extractable hydrocarbons (TEHd and TEHmo, respectively) by Environmental Protection Agency (EPA) Method 8015 modified; benzene, toluene, ethyl benzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE) by EPA Method 8021B; and volatile organic compounds (VOCs) by EPA Method 8260B. In soil, TVHg were detected in two of the four samples at concentrations of 4.7 parts per million (ppm) and 8,800 ppm. TVHss were detected in two of the four samples

U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registery (June 1995), Toxicological Profile for Stoddard Solvent.

at concentrations of 3.1 ppm and 5,800 ppm. The laboratory reported that the TVHg and TVHss results did not match the chromatogram standard for gasoline and Stoddard solvent. BTEX compounds, MTBE, TEHd, and TEHmo were not detected in any of the soil samples collected. No detectable concentrations of VOCs were found in any of the soil samples collected.

In groundwater, TVHg were detected in two of the four samples at concentrations of 360 parts per billion (ppb) and 270 ppb. TVHss were detected at concentrations of 270 ppb and 280 ppb. BTEX compounds were detected in one of the four samples with benzene detected at a concentration of 0.68 ppb. MTBE was detected in three of the four samples at concentrations ranging from 2.1 ppb to 7.4 ppb. TEHd were detected in all four samples at concentrations ranging from 86 ppb to 8,400 ppb. TEHmo were detected in two of the four samples at concentrations of 470 ppb and 2,600 ppb. Grab-groundwater samples contained chloroform in one of four samples at a concentration of 1.0 ppb; trichloroethene (TCE) in two of four samples at concentrations of 1.3 ppb and 1.9 ppb; tetrachloroethene (PCE) in two of four samples at concentrations ranging of 1.9 ppb and 2.6 ppb, trans 1,2-dichloroethene (trans 1,2-DCE) in one of four samples at a concentration of 0.5 ppb and cis 1,2-dichloroethene (cis 1,2-DCE) in one of four samples at a concentration of 0.7 ppb. Four additional borings (BH-05 through BH-08) were advanced at the 1713 Webster Street address, adjacent to the subject site. These borings are outside the area of investigation related to 649 Pacific Avenue, and are not discussed further. Furthermore, no further investigation is required at this time for the suspected underground storage tank at 1713 Webster Street as indicated by ACHCSA in a letter dated March 17, 2006.

Based on the findings of the investigation, Stellar recommended review of additional environmental records to identify the sources of the impact discovered, the advancement of additional borings to define the lateral extent of Stoddard solvent impact, notification of relevant regulatory agencies regarding the findings, and an eventual site closure assessment after completion of additional assessment work.

On March 25, 2003, Stellar performed additional soil sampling along an exposed sanitary sewer trench at the site. This phase of the investigation was reported in Stellar's April 2, 2003 Report of Soil Analytical Results, Sanitary Sewer Line Trench at 649 Pacific Avenue, Alameda, California. Soil conditions along the trench were not logged during this phase of the investigation. A total of 9 soil samples were collected along the trench and 1 soil sample was collected from the base of the floor drain leading to the sanitary sewer line. Soil samples from along the sewer trench were collected from two depths at each of four locations. All samples were analyzed for TVHss, BTEX, and MTBE. TVHss was detected in three of the nine samples at concentrations ranging from 960 ppm to 2,700 ppm; all the samples with detected TVHss concentrations were from the lower soil strata at depths ranging from 7.5 feet to 8.0 feet bgs. Trace concentrations of ethyl benzene and xylenes were detected in the same three samples. MTBE was not detected in any of the samples collected.

Remedial investigation activities performed by Stellar between March and July 2003 were documented in Stellar's July 31, 2003 Site Remedial Investigation Report. Some of the data discussed in the July 31, 2003 report were previously reported in Stellar's March 18, 2003 and April 2, 2003 reports. The July 31, 2003 report summarized new findings and the findings of these previous investigation activities. A total of 16 additional soil borings were advanced on July 9 and July 10, 2003. Groundwater was encountered at depths ranging from ranging from 10 feet bgs to 13 feet bgs in each of the borings. A total of 14 soil samples collected from the borings were selected for laboratory analyses; samples were analyzed for TVHss, BTEX compounds, and MTBE. Four of the samples were also analyzed for TEH. TVHss were detected in two of the soil samples at concentrations of 17 ppm and 1,900 ppm. TEH range hydrocarbons were detected in three soil samples at concentrations ranging from 9.4 ppm to 3,700 ppm. BTEX compounds and MTBE were not detected in any of the soil samples analyzed. A total of 9 grab-groundwater samples were collected and analyzed for TVHss, BTEX compounds, and MTBE. Four of the grab-groundwater samples were also analyzed for TEH. TVHss were detected in one of the samples at a concentration of 99,000 ppb. TEH were detected in all four samples at concentrations ranging from 100 to 250 ppb. Trace concentrations of toluene (2 samples) and total xylenes (one sample) were detected. MTBE was detected in 7 of the 9 grab-groundwater samples at concentrations ranging from 3.3 ppb to 12 ppb. During July 2003, five additional borings (BH-13, BH-14, and BH-31 through BH-33) were advanced at the 1713 Webster Street address, adjacent to the subject site. These borings are outside the area of investigation related to 649 Pacific Avenue, and thus are not discussed by this report.

Based on the results of previous investigations, Stellar attributed the soil and groundwater impact to former uses of the 649 Pacific Avenue building and potential discharges from the sanitary sewer line. After review of investigation data, RRM, Inc. (RRM) has also concluded that the sanitary sewer is the most likely source of Stoddard solvent impact at the site.

Based on the findings of investigation activities performed at the site, Stellar prepared a corrective action plan (CAP) dated July 31, 2003. The corrective action for the site proposed by Stellar included excavation of soil from beneath the floor of the 649 Pacific Avenue site. Stellar estimated that approximately 150 tons of impacted soil would be removed during the excavation activities to remove impacted soil to concentrations at or below 100 ppm. Stellar also proposed confirmation soil sampling following the removal of impacted soils. After completion of soil excavation and site restoration activities, Stellar proposed the installation of four groundwater monitoring wells and the performance of quarterly groundwater monitoring activities to confirm the effectiveness of the remedial excavation.

Pursuant to the recommendations made by Stellar and RRM, Inc. (RRM), RRM recommended in the March 2004 work plan that a soil and groundwater investigation be performed. The general scope for this investigation included installing five groundwater monitoring wells, well development, sampling, and surveying, and laboratory analyses of soil and groundwater samples.

Borings MW-1 though MW-5 were advanced to 20 feet below ground surface, and completed as 2-inch diameter groundwater monitoring wells. Wells MW-1 and MW-2 were completed inside the building at 649 Pacific Avenue, and wells MW-3, MW-4 and MW-5 were located in the parking lot immediately west of the building. These well locations were selected to delineate soil and groundwater conditions in the vicinity and downgradient of the previously identified Stoddard solvent detections.

Selected soil samples were analyzed in the laboratory for TPHss and BTEX. Groundwater samples from each well were analyzed in the laboratory for TPHss, TPHg, and BTEX. Soils beneath the site consisted predominantly of silty sand to the maximum depth explored of 20 feet bgs. Wells MW-2, MW-3, MW-4 and MW-5 also penetrated a clayey sand layer ranging in thickness from approximately 1 to 4 feet, within the depth interval from 4 to 11 feet bgs. Groundwater was encountered and stabilized at depths of approximately 5.0 to 5.6 feet bgs on March 1, 2005. Groundwater flow direction was calculated toward the northeast at a gradient of approximately 0.004 feet/foot. The soil analytical data indicate non-detectable concentrations of TPHss in all borings except for Well MW-1, which had 380 ppm TPHss at a depth of 10 feet bgs, and 7 ppm TPHss at 20 feet bgs. BTEX concentrations were below detection limits in all soil samples analyzed. The groundwater analytical data indicate non-detectable concentrations of TPHss and TPHg in all wells except Well MW-1, which had 550 ppb TPHss. BTEX concentrations were also non-detectable, except for toluene in wells MW-1 and MW-2. These wells had 0.73 and 0.53 ppb toluene detected, respectively. Based on the results of this investigation, RRM recommended quarterly monitoring of the five wells for a period of at least one year to provide data for evaluation of plume stability.

Based on two years of groundwater monitoring in 2005 and 2006 of wells MW-1 through MW-5, groundwater levels have ranged from 5.30 feet to 7.89 feet below top of well casing. Groundwater flow has been consistently to the northeast at gradients magnitudes ranging from 0.01 to 0.07 feet/feet. Groundwater beneath the site may be tidally influenced based on the proximity of the San Francisco Bay. Only low levels of TPHss, TPHg, toluene, PCE, TCE and chloroform have been detected in groundwater. The dissolved plume is stable and decreasing. Soil data indicates that the bulk of Stoddard solvent affected soil was encountered between approximately 6.5 and 8 feet bgs, soil which is now submerged below groundwater.

In the *Groundwater Monitoring Results – Fourth Quarter 2005* report, RRM recommended that the site be evaluated for low-risk closure based on four quarters of groundwater monitoring data. In response, the ACHCSA requested submission of a work plan to evaluate the potential for indoor air vapor intrusion of total volatile hydrocarbons due to Stoddard solvent impacts to soil and groundwater.

Trinity submitted the requested workplan on May 15, 2006, and proposed the installation and sampling of three semi-permanent soil vapor probes. The work was completed in October 2006,

and is documented in this report. With the approval of ACHCSA, Trinity installed the sub-slab probes rather than semi-permanent soil gas probes in soil borings. In general, the sub-slab vapor probes (VS-1, VS-2, and VS-3) yielded elevated concentrations of Stoddard solvent as well as several chlorinated volatile organic compounds (VOCs) in the vadose zone immediately beneath the building foundation slab.

To further delineate the extent of the Stoddard solvent and VOCs beneath the site building, Trinity submitted a workplan addendum dated April 6, 2007 proposing the installation and sampling of six additional sub-slab vapor probes. These probes evaluated the concentrations of Stoddard solvent and VOCs in the vapor immediately beneath the foundation slab of the site building and beneath the adjacent parking lot. The results of this work are presented below.

#### SCOPE OF WORK

The scope of work for this investigation was conducted in two phases. The first phase included installation and sampling of three sub-slab vapor probes (VS-1, VS-2 and VS-3) inside the building at 649 Pacific Avenue. The second phase included installation and sampling of six additional sub-slab vapor probes (VS-4 through VS-9) in and around the site building per the *Soil Vapor Sampling Workplan Addendum* dated April 6, 2007. Sub-slab vapor probe locations are shown on Figure 2.

The following tasks detail the scope of work performed to complete the proposed Phase I subslab vapor investigation. Field procedures are included as Attachment B, and field data sheets are included as Attachment C.

- Prepared a Health and Safety Plan which was maintained on-site during field work activities.
- On September 3, 2006, installed sub-slab vapor probes VS-1 through VS-3 inside the building of Kelly-Moore Paints at 649 Pacific Avenue.
- On October 25, 2006, sampled probes VS-1 through VS-3 for the presence of Stoddard solvent using Modified EPA Method TO-3 and volatile organic compounds (VOCs) Modified EPA Method TO-15 Full Scan.
- Prepared and submitted a Soil Vapor Sampling Workplan Addendum to ACHCSA on April 6, 2007. The addendum included vapor sampling results for probes VS-1 through VS-3 and additional step-out proposed probe locations to further define the identified Stoddard solvent and VOCs vapor plume.
- On April 29, 2007, installed sub-slab vapor probes VS-4 through VS-8 inside the building of Kelly-Moore Paints at 649 Pacific Avenue, and probe VS-9 in the parking lot located west of the building near Well MW-4.

- On May 7, 2007, sampled probes VS-3 through VS-9 for the presence of (VOCs) using Modified EPA Method TO-15 Full Scan.
- On May 7, 2007, during vapor sampling using summa canisters, collected a tedlar bag sample from the sampling shroud atmosphere for probes VS-7 (VS-7-QC) and VS-8 (VS-8-QC) and analyzed the bag samples for the presence of isopropyl alcohol using Modified EPA Method TO-15 Full Scan.
- On June 4, 2007, sampled probes VS-3 through VS-9 for the presence of Stoddard solvent using Modified EPA Method TO-3, the leak test compound isopropyl alcohol using direct inject Modified EPA Method TO-15, and methane, oxygen and carbon dioxide using Modified Natural Gas Analysis method ASTM D-1946.
- On June 4, 2007, during vapor sampling using summa canisters, collected a tedlar bag sample from the sampling shroud atmosphere for probe VS-7 (VS-7-QC) and analyzed the bag sample for the presence of isopropyl alcohol using direct inject Modified EPA Method TO-15.
- All the aforementioned analyses were conducted by a California State-certified laboratory within 14 days of collection. Analytical reports and chain-of-custody documentation is presented as Attachment D.
- Prepared this Sub-Slab Vapor Investigation Report.

#### RESULTS

#### Phase I Sub-Slab Vapor Investigation

Phase I sub-slab vapor sampling was conducted on October 25, 2006. Analytical results for Stoddard solvent, VOCs, and the leak test compound isopropyl alcohol are discussed below.

**Stoddard Solvent:** Vapor sampling results for probes VS-1, VS-2, and VS-3 indicate that Stoddard solvent was detected in three out of three samples analyzed at concentrations ranging from 1,600 micrograms per cubic meter ( $\mu g/m^3$ ) in probe VS-2 to 9,100  $\mu g/m^3$  in probe VS-3.

**VOCs:** Chloroform was detected in three out of three samples analyzed at concentrations ranging from 490  $\mu g/m^3$  in probe VS-3 to 2,500  $\mu g/m^3$  in probe VS-1.

Carbon Tetrachloride was detected in three out of three samples analyzed at concentrations ranging from 1,400  $\mu g/m^3$  in probe VS-3 to 42,000  $\mu g/m^3$  in probe VS-1.

PCE was detected in three out of three samples analyzed at concentrations ranging from 5,800  $\mu g/m^3$  in probe VS-2 to 11,000  $\mu g/m^3$  in probe VS-3.

Trans-1,2-DCE, cis-1,2-DCE, and TCE were detected in one out of three samples analyzed at concentrations of 70  $\mu$ g/m<sup>3</sup>, 47  $\mu$ g/m<sup>3</sup>, and 98  $\mu$ g/m<sup>3</sup> in probe VS-3, respectively.

**Isopropyl Alcohol:** The leak test compound isopropyl alcohol was not detected in any of the samples analyzed during Phase I work.

Results of Phase I soil vapor sampling and the San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) which are shallow soil gas screening levels for evaluation of potential vapor intrusion concerns (Table E-2) for commercial and industrial land use scenarios (SFRWQCB – February 2005) are presented in Table 1. Chemical concentration maps showing the vapor concentrations in sub-slab samples for Stoddard solvent, chloroform, carbon tetrachloride, and PCE are presented as Figures 3 through 6, respectively.

#### Phase II Sub-Slab Vapor Investigation

Based on the results of the Phase I investigation, a Phase II investigation comprised of six additional probes was implemented to define the lateral extent of Stoddard solvent and VOCs beneath the building's concrete slab. Phase II sub-slab vapor sampling was conducted on May 7, and June 4, 2007. Analytical results for Stoddard solvent, VOCs, oxygen, methane, carbon dioxide, and the leak test compound isopropyl alcohol are discussed below.

**Stoddard Solvent:** Vapor sampling results for probes VS-3 through VS-9 indicate that Stoddard solvent was detected in six out of seven samples analyzed at concentrations ranging from 870  $\mu g/m^3$  in probe VS-5 to 21,000  $\mu g/m^3$  in probe VS-3. Stoddard solvent was not detected in probe VS-9 located in the parking lot.

**VOCs:** Chloroform was detected in seven out of seven samples analyzed at concentrations ranging from 8.3  $\mu g/m^3$  in probe VS-7 to 1,600  $\mu g/m^3$  in probe VS-5.

Carbon Tetrachloride was detected in six out of seven samples analyzed at concentrations ranging from 94  $\mu g/m^3$  in probe VS-8 to 15,000  $\mu g/m^3$  in probe VS-4. Carton Tetrachloride was not detected in probe VS-9 located in the parking lot.

PCE was detected in seven out of seven samples analyzed at concentrations ranging from  $42 \mu g/m^3$  in probe VS-9 to  $9,500 \mu g/m^3$  in probe VS-3.

Trans-1,2-DCE, cis-1,2-DCE and TCE were not detected in any of the Phase II vapor samples collected.

Acetone, at concentrations just above the detection limit, was detected in five out of seven samples at concentrations ranging from  $16 \mu g/m^3$  in probe VS-7 to  $160 \mu g/m^3$  in probe VS-9.

Freon 11 was only detected in probe VS-7 at a concentration of 20 µg/m<sup>3</sup>.

Carbon Disulfide was detected in two out of seven samples analyzed at concentrations of  $6.8~\mu g/m^3$  in probe VS-7 and  $73~\mu g/m^3$  in probe VS-9.

Chloroethane and Methyl Ethyl Ketone were only detected in probe VS-9 at concentrations of  $4.1~\mu g/m^3$  and  $12~\mu g/m^3$ , respectively.

Oxygen, Methane and Carbon Dioxide: Oxygen and carbon dioxide were detected in seven out of seven samples analyzed as shown in Table 2. Methane was not detected in any of the seven samples analyzed above the method detection limit of <0.00022%. The presence of methane in soil gas is a good indicator that anaerobic bacteria capable of degrading the constituents of concern (COCs) are present. The absence of methane does not indicate that the COCs are not naturally attenuating because methane is produced under strongly anaerobic conditions, the same conditions that allow the reductive dechlorination of VOC degradation products to occur. Oxygen concentrations were either 19 or 20% in each sample analyzed. Carbon dioxide concentrations ranged from 0.72% in probe VS-5 to 2.5% in probe VS-3. Background oxygen concentrations in soil gas typically range from 15 to 21% and background carbon dioxide is typically around 0.5%. Compared to typical background concentrations, lower oxygen in soil gas (less than 2% vol/vol) and higher carbon dioxide in soil gas (greater than 2%) coupled with elevated VOC vapors are an indicator that bacteria capable of degrading VOCs are present.

**Isopropyl Alcohol:** The leak test compound isopropyl alcohol was not detection in any of the samples analyzed for VOCs on October 25, 2006 and May 7, 2007. However, it was detected in five out of seven samples collected on June 4, 2007 for Stoddard solvent analysis at concentrations ranging from 42  $\mu$ g/m³ in probe VS-6 to 36,000  $\mu$ g/m³ in probe VS-3. The detections of isopropyl alcohol in samples collected from probes VS-3, VS-7 and VS-8 at concentrations of 36,000, 15,000, and 4,600  $\mu$ g/m³, respectively, may have biased low the Stoddard solvent results from these probe locations.

Isopropyl alcohol concentrations of 99,000  $\mu g/m^3$ , 150,000  $\mu g/m^3$ , and 530,000  $\mu g/m^3$  were detected in shroud Tedlar air bag confirmation samples VS-7QC (May 7, 2007 sample date), VS-7QC (June 4, 2007 sample date), and VS-8QC (May 7, 2007 sample date).

Results of Phase II soil vapor sampling and the SFRWQCB ESLs for commercial and industrial land use scenarios (SFRWQCB – February 2005) are presented in Table 1. Chemical concentration maps showing the vapor concentrations in sub-slab samples for Stoddard solvent, chloroform, carbon tetrachloride, and PCE are presented as Figures 3 through 6, respectively.

#### CONCLUSIONS

Based on the results of the Phase I and II soil gas investigation results, Stoddard solvent and VOCs are present beneath the concrete slab at the Kelly Moore Paints store building located at

649 Pacific Avenue. The sub-slab vapor COCs that have exceeded a particular ESL for commercial or industrial land use are as follows:

- Chloroform as detected in probes VS-1 and VS-5.
- Carbon tetrachloride as detected in probes VS-1 through VS-7.
- PCE as detected in probes VS-1 through VS-8.

The COC vapor plume located beneath 649 Pacific Avenue is not defined and needs further definition to the north and east. Additional vapor probe installation and sampling is warranted in portions of the buildings with addresses of 1713 Webster Street (East Ocean Seafood Restaurant) and 653 and 651 Pacific Avenue (Kelly Moore Paints).

Other constituents that have been detected in sub-slab vapor samples but which are not a concern for the site based on ESLs for commercial and industrial land use are Stoddard solvent, Trans-1,2-DCE, cis-1,2-DCE, TCE, acetone, Freon 11, carbon disulfide, chloroethane, and methyl ethyl ketone.

The high concentrations of isopropyl alcohol (up to 530,000  $\mu$ g/m³) detected in the shroud atmosphere Tedlar bag samples confirm that leak test compound was present beneath the sampling shroud during the collection of vapor samples.

The detections of isopropyl alcohol in samples collected from probes VS-3, VS-7 and VS-8 at high concentrations (>4,600  $\mu$ g/m³) may have biased low the Stoddard solvent results from these probe locations. Even though these sample results may be biased low, the highest Stoddard solvent detection from the Phase I investigation, where no leak test compound was detected, was 9,100  $\mu$ g/m³, which is well below the commercial/industrial land use ESL for Stoddard solvent of 75,000  $\mu$ g/m³. No detections of leak test compound for the remaining vapor samples indicate that the vapor sample analytical results are representative of sub-slab conditions.

Natural attenuation or degradation of sub-slab VOC vapors appears to be occurring based on the slightly elevated carbon dioxide levels observed in selected probe locations. High carbon dioxide readings (greater than 2%) compared to background (generally 0.5%) are an indicator that the bacteria capable of degrading COCs are present.

#### RECOMMENDATIONS

Based on the results of the Phase I and II soil gas investigation, Trinity recommends conducting the following scope of work:

Conduct a Phase III sub-slab vapor sampling investigation to the north and east by
installing five additional vapor probes at the locations shown on Figure 7. If necessary,
install additional step-out vapor probes beneath the building until COCs are non-detect or

below their respective ESLs for commercial/industrial land use. The Phase III investigation will be conducted in a similar manner as the Phase II investigation described in Trinity's *Soil Vapor Sampling Workplan Addendum* dated April 6, 2007.

- Inspect the building foundation for all COC vapor entry points such as cracks in the slab
  or foundation, gaps in fieldstone walls, construction joints between walls and slabs,
  annulus space around utility pipes, open sumps, etc. Possible entry points will be
  monitored with a part per billion range photo-ionization detector.
- Seal off all possible entry routes, if possible, to prevent the entrance of sub-slab vapors and enhance the sub-slab negative pressure field when a sub-slab depressurization (SSD) system is in operation.
- Perform diagnostic testing of the air flow characteristics and capacity of the material(s) beneath the slab for the purpose of designing a SSD system. As indicated in the Guidelines For The Design, Installation, and Operation of Sub-Slab Depressurization Systems, Massachusetts Department of Environmental Protection, December 1995: "The purpose of the SSD system is to create a negative pressure field directly under the building in relation to the building ambient pressure. This negative pressure field becomes a "sink" for any gases present in the vicinity of the structure. VOCs caught in the advective sweep of this negative pressure field are collected and piped to an ambient air discharge point."

The diagnostic testing results will determine the type of fan or blower used for the SSD system. Generally, one of two types of system will be specified: low pressure/high flow or high pressure/low flow.

 Based on the results of the aforementioned diagnostic testing, design, permit, install, and operate a SSD system to mitigate VOC vapor intrusion concerns for the site structure(s).

#### DISTRIBUTION

A copy of this report has been forwarded to the following:

Mr. Don Lindsey Timber Del Properties, L.L.C. 2424 Central Avenue Alameda, California 94501

Mr. Carl Searway 3032 Dakota Street Oakland, California 94501 Mr. Mark Russel The Mechanics Bank 343 Sansome Street, Suite 101 San Francisco, California 94101

If you have any questions regarding this investigation report, please call Trinity at (831) 685-1217.

Sincerely,

Attachments

TRINITY SOURCE GROUP, ING

David A. Reinsma, PG

President and Principal Geologist

Principal Geologist

Table 1 – Sub-Slab Vapor Sample Analytical Data

(Stoddard Solvent and Volatile Organic Compounds)

Debra J. Moser, PG, CEG, CHG

. REINSMA

Table 2 – Sub-Slab Vapor Sample Analytical Data (Oxygen, Methane and Carbon Dioxide)

Figure 1 – Site Location Map

Figure 2 – Sub-Slab Vapor Probe Location Map

Figure 3 - Stoddard Solvent in Sub-Slab Vapor Concentration Map

Figure 4 - Chloroform in Sub-Slab Vapor Concentration Map

Figure 5 - Carbon Tetrachloride in Sub-Slab Vapor Concentration Map

Figure 6 – PCE in Sub-Slab Vapor Concentration Map

Figure 7 - Proposed Additional Sub-Slab Vapor Probe Location Map

Attachment A - ACHCSA Correspondence

Attachment B – Field Procedures

Attachment C - Field Data Sheets

Attachment D – Certified Analytical Reports and Chain-of-Custody Documentation

## **TABLES**

Table 1
Sub-Slab Soil Vapor Probe Sample Analytical Data
(Stoddard Solvent and Volatile Organic Compounds)

Searway Property 649 Pacific Avenue Alameda, California

		Modified EPA Analytical Test Methods											
	Sample Date	TO-3											
Sample ID		Stoddard Solvent (µg/m³)	Chloroform (μg/m³)	Carbon Tetra- chloride (µg/m³)	PCE (µg/m³)	Trans-1,2- Dichloro- ethene (μg/m³)	cis-1,2- Dichloro- ethene (µg/m³)	TCE (µg/m³)	Acetone (µg/m³)	Freon 11 (µg/m³)	Carbon Di- sulfide (μg/m³)	Chloro- ethane (µg/m³)	Leak Test Compounds 2-propanol (µg/m3)
Sub-Slab S	oil Vapor Pro	be Sample	es						,,,	(10-11-7	(1-5/ )	(1-3)	(рулпо)
VS-1	10/25/2006	4,100	2,500	42,000	6,700	< 87	< 87	< 120	<210	<120	<68	<58	<220
VS-1 DUP	10/25/2006	4,100	2,400	40,000	7,000	< 170	< 170	< 240	<420	<250	<140	<120	<430
VS-2	10/25/2006	1,600	740	8,400	5,800	< 17	< 17	< 23	<41	<24	<13	<11	<42
VS-3	10/25/2006	9,100	490	1,400	11,000	70	47	98	<56	<33	<18 ···	<16	<58
VS-3	5/7/2007		430	1,500	9,500	51	47	88	41	<24	<13	<11	<42
VS-3	6/4/2007	21,000											36,000
VS-3 DUP	6/4/2007	21,000											36,000
VS-4	5/7/2007		93	15,000	1,600	<34	<34	<46	<82	<49	<27	<23	<85
VS-4	6/4/2007	980										<del></del> -	<28
VS-5	5/7/2007		1,600	5,300	1,700	<12	<12	<16	30	<17	<9.3	<7.9	<29
VS-5	6/4/2007	870											160
VS-5 DUP	6/4/2007												140
VS-6	5/7/2007	*	420	7,500	2,500	< 17	< 17	<23	<41	<24	<13	<11	<42
V\$-6	6/4/2007	920											42
VS-7	5/7/2007		8.3	550	1,900	<4.4	<4.4	<5.9	16	20	6.8	<2.9	<11
VS-7	6/4/2007	8,800											15,000
VS-8	5/7/2007		44	94	1,500	<4.4	<4.4	<6.0	18	<6.3	<3.5	<3.0	<11
VS-8	6/4/2007	2,800											4,600
VS-9ª	5/7/2007		590	<7.0	42	<4.4	<4.4	<6.0	160	<6.3	73	4.1	<11
VS-9 <sup>a</sup>	6/4/2007	<310										<del></del>	200

# Table 1 Sub-Slab Soil Vapor Probe Sample Analytical Data (Stoddard Solvent and Volatile Organic Compounds)

Searway Property 649 Pacific Avenue Alameda, California

		Modified EPA Analytical Test Methods											
		TO-3 TO-15											
Sample ID	Sample Date	Stoddard		Carbon Tetra-		Trans-1,2- Dichloro-	cis-1,2- Dichloro-				Carbon Di-	Chloro-	Leak Test
		Solvent (µg/m³)	Chloroform (µg/m³)	chloride (µg/m³)	PCE (µg/m³)	ethene (µg/m³)	ethene (µg/m³)	TCE (µg/m³)	Acetone (µg/m³)	Freon 11 (µg/m³)	sulfide (µg/m³)	ethane (µg/m³)	Compounds 2-propanol (µg/m3)
Shroud Atı	Shroud Atmosphere Samples for Leak Test Compound Confirmation												
VS-7QC	5/7/2007												99,000
VS-7-QC	6/4/2007												150,000
VS-8QC	5/7/2007												530,000 E
		SFRWQCB ESLs (μg/m³) Commercial/Industrial Property Use											
		72,000	1,500	190	1,400	41,000	20,000	4,100	1,800,000	NA	NA	9,900	NA

NA = not available or applicable

E = exceeds instrument calibration range

-- = not analyzed

#### Notes:

DUP = Duplicate sample

EPA = Environmental Protection Agency

PCE = Tetrachloroethene

TCE = Trichloroethene

μg/m³ = micrograms per cubic meter

< = not detected at or above value shown

SFRWQCB ESLs = San Francisco Regional Water Quality Control Board Environmental Screening Levels (ESLs), shallow gas screening levels for evaluation of potential vapor intrusion concerns (Table E-2), Commercial/Industrial Land use, - February 2005

BOLD = chemical exceeds its respective ESL

a = 2-Butanone (Methyl Ethyl Ketone) at  $12 \mu g/m^3$ 

The leak test compound, Isopropyl Alcohol (2-propanol), was not dected in any sub-slab probe sample analyzed

# Table 2 Sub-Slab Vapor Sample Analytical Data (Oxygen, Methane Carbon Dioxide)

Searway Property 649 Pacific Avenue Alameda, California

		Modified ASTM D-1946						
Sample ID	Sample Date	Oxygen (%)	Methane (%)	Carbon Dioxide (%)				
VS-3	6/4/2007	19	<0.00022	2.5				
VS-4	6/4/2007	20	<0.00022	1.5				
VS-5	6/4/2007	20	<0.00022	0.72				
VS-6	6/4/2007	19	<0.00022	1.8				
VS-7	6/4/2007	19	<0.00022	1.7				
VS-8	6/4/2007	20	<0.00022	1.3				
VS-9 VS-9	6/4/2007	19	<0.00022	2.3				
Duplicate	6/4/2007	19	<0.00022	2.3				

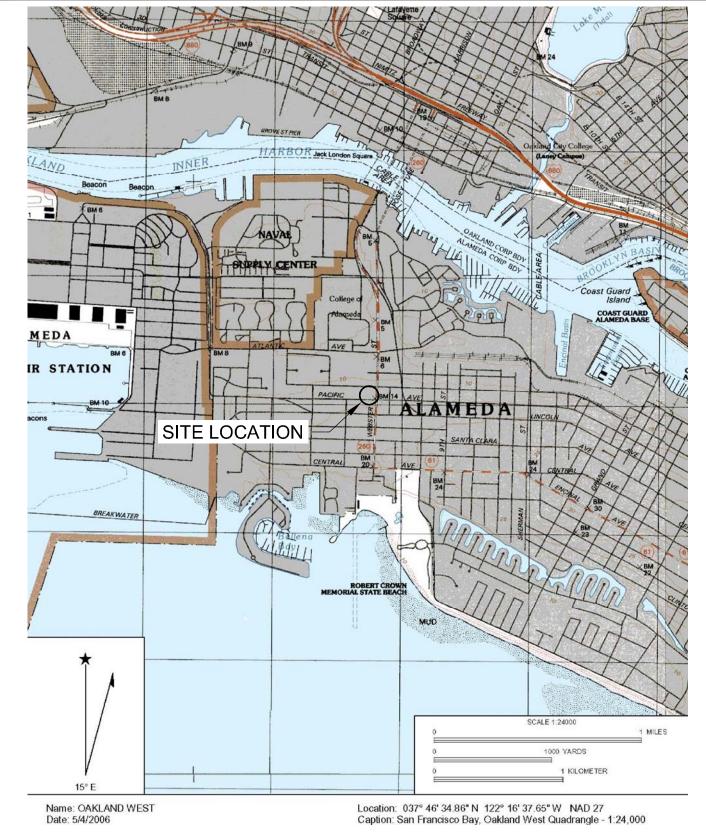
#### Notes:

ASTM = American Society for Testing Material

% = percent

< = not detected at or above value shown

## **FIGURES**



REF. 103\_002\SLM.DWG BASEMAP FROM MAPTECH, INC.

TRINITY
Source group, inc.
910 Mesa Grande Road
Aptos, CA. 95003

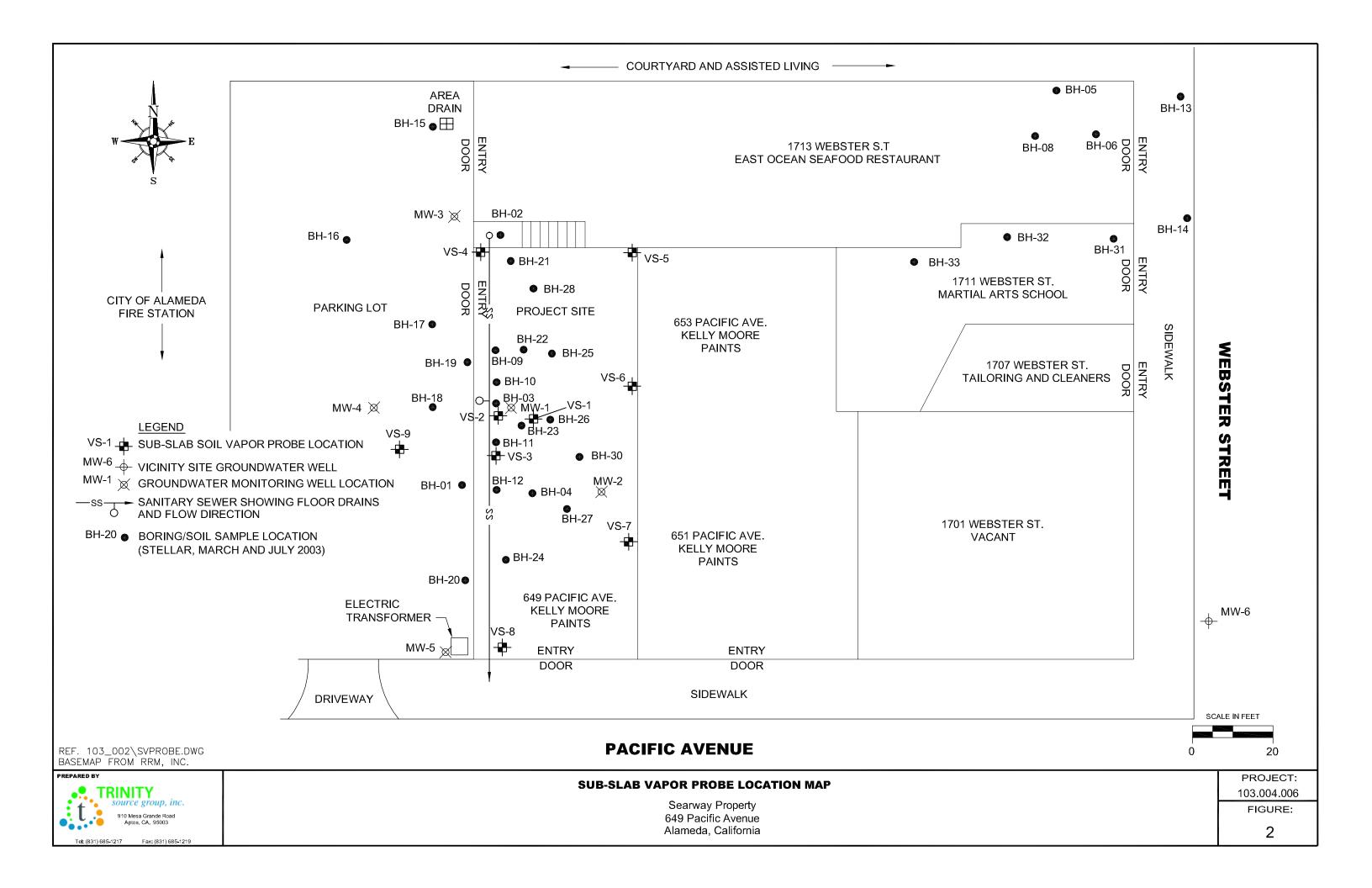
Tel: (831) 685-1217 Fax: (831) 685-1219

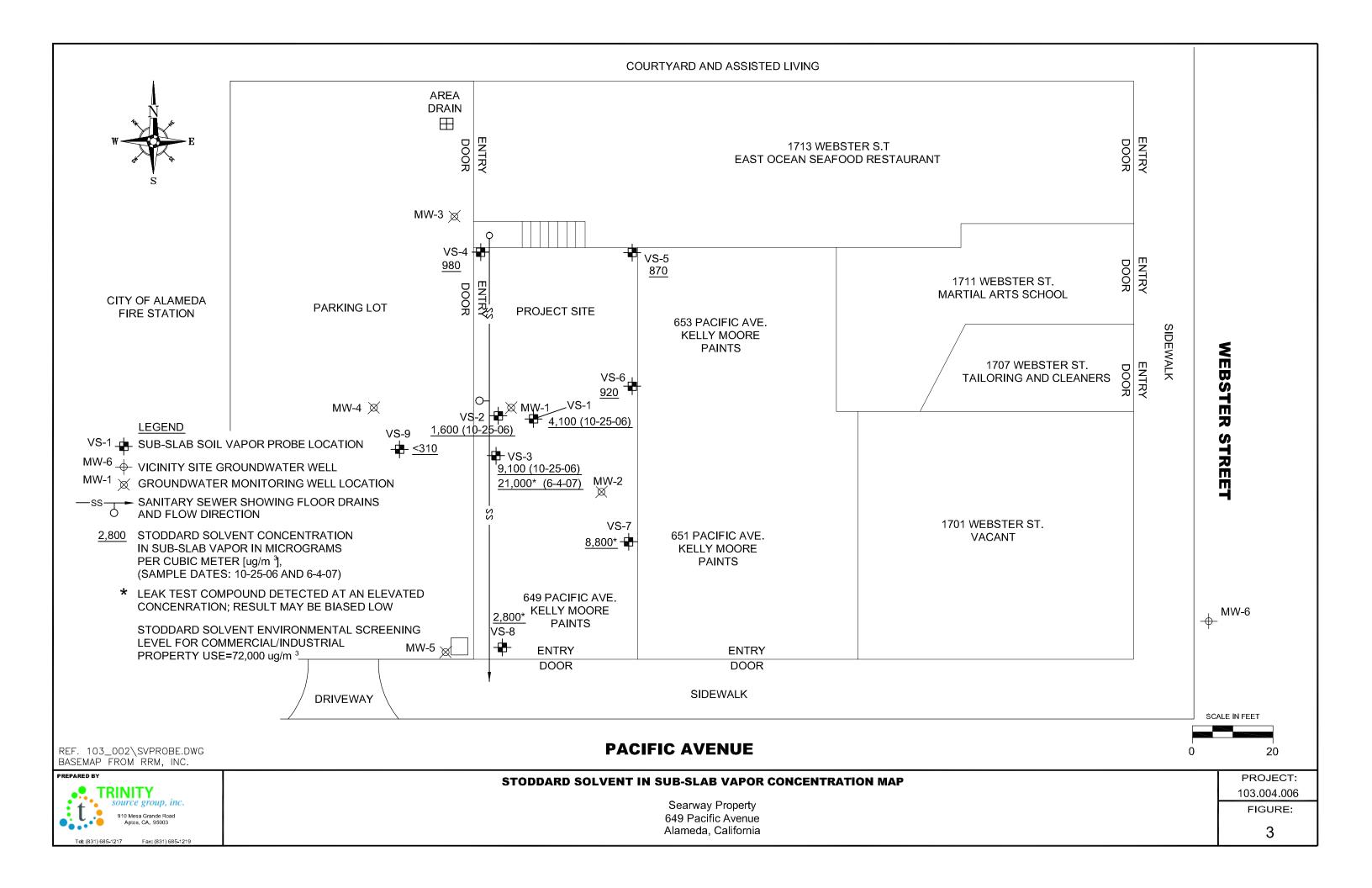
#### **SITE LOCATION MAP**

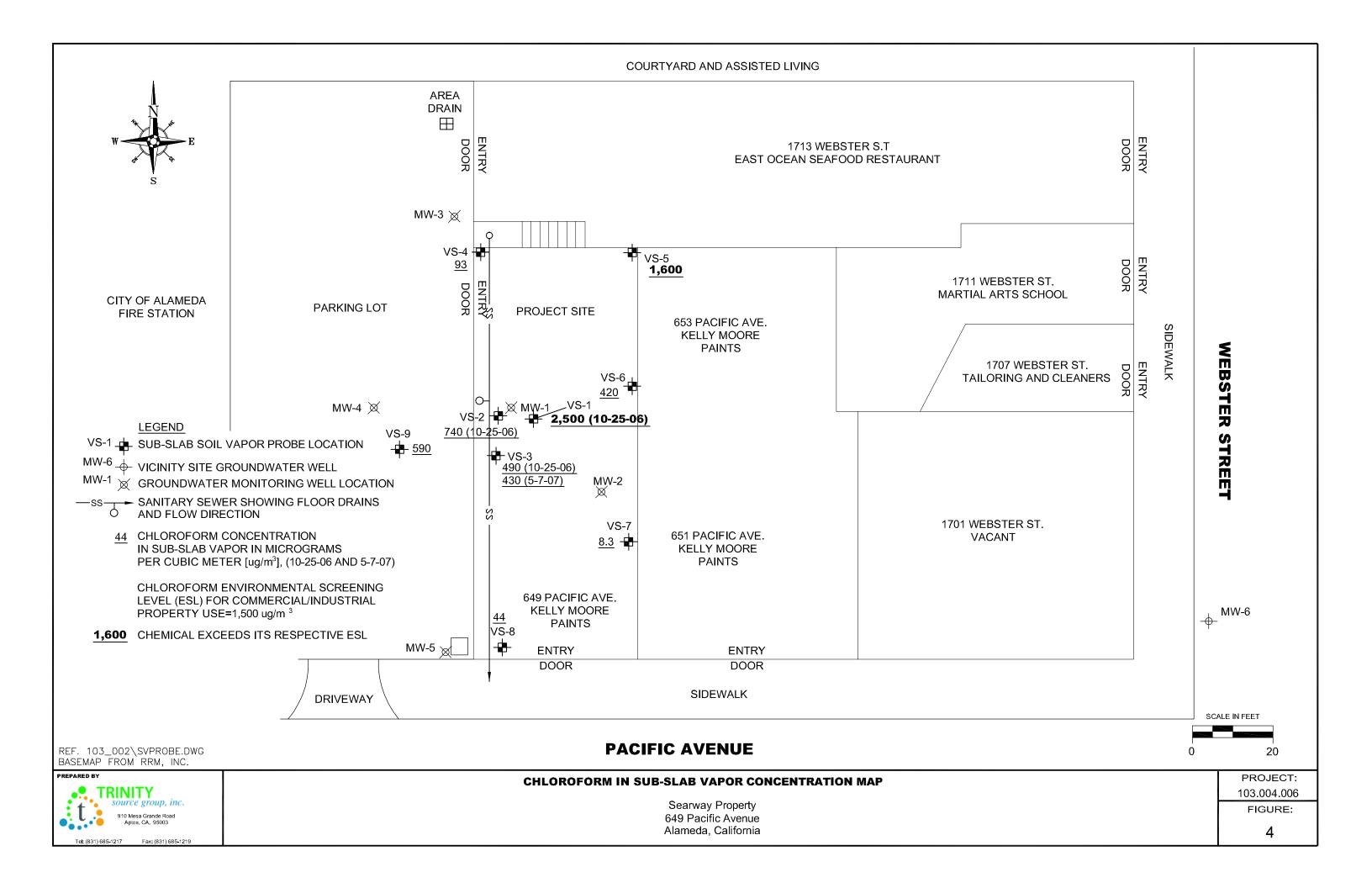
Searway Property 649 Pacific Avenue Alameda, California PROJECT: 103.004.006

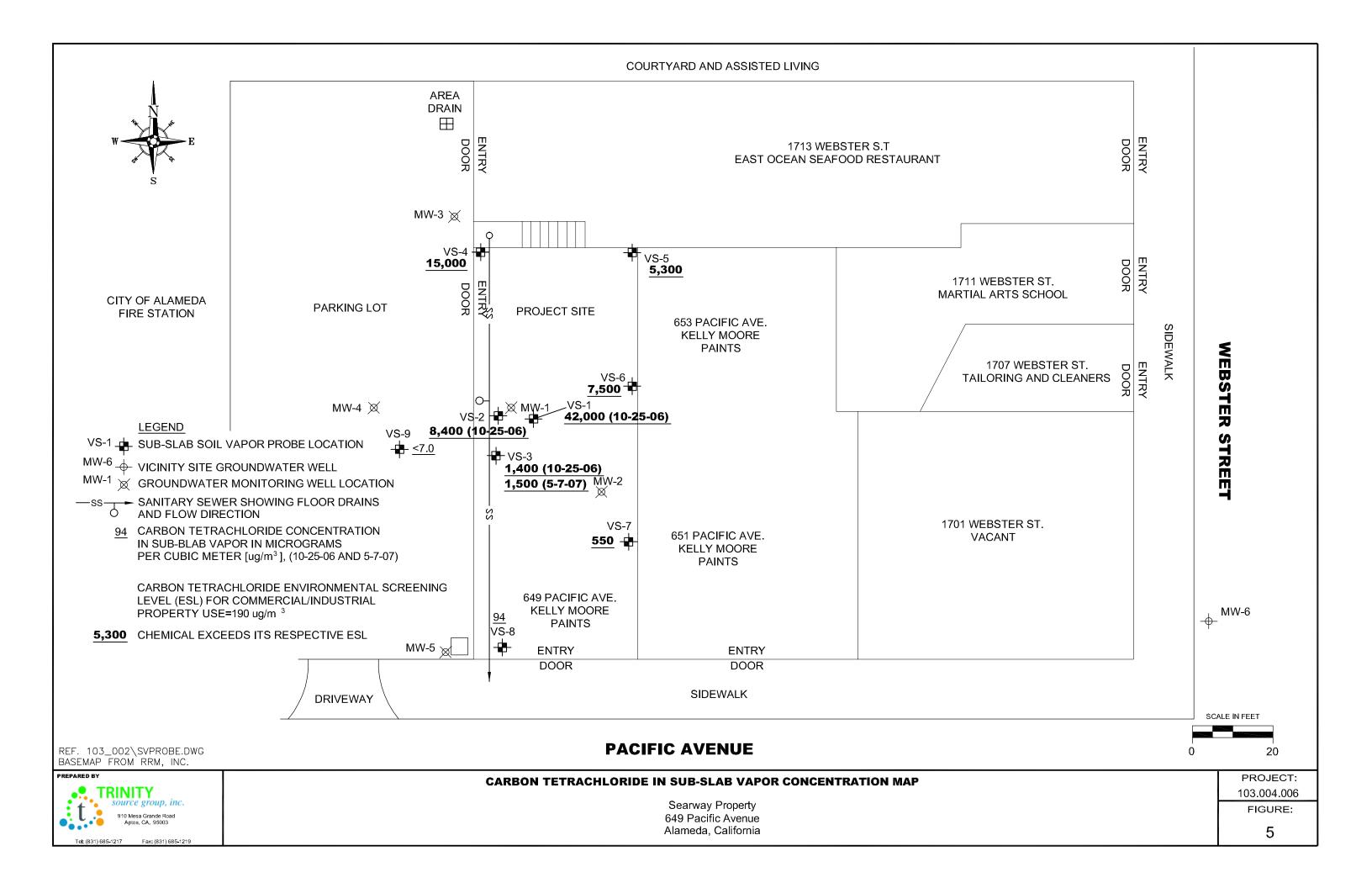
FIGURE:

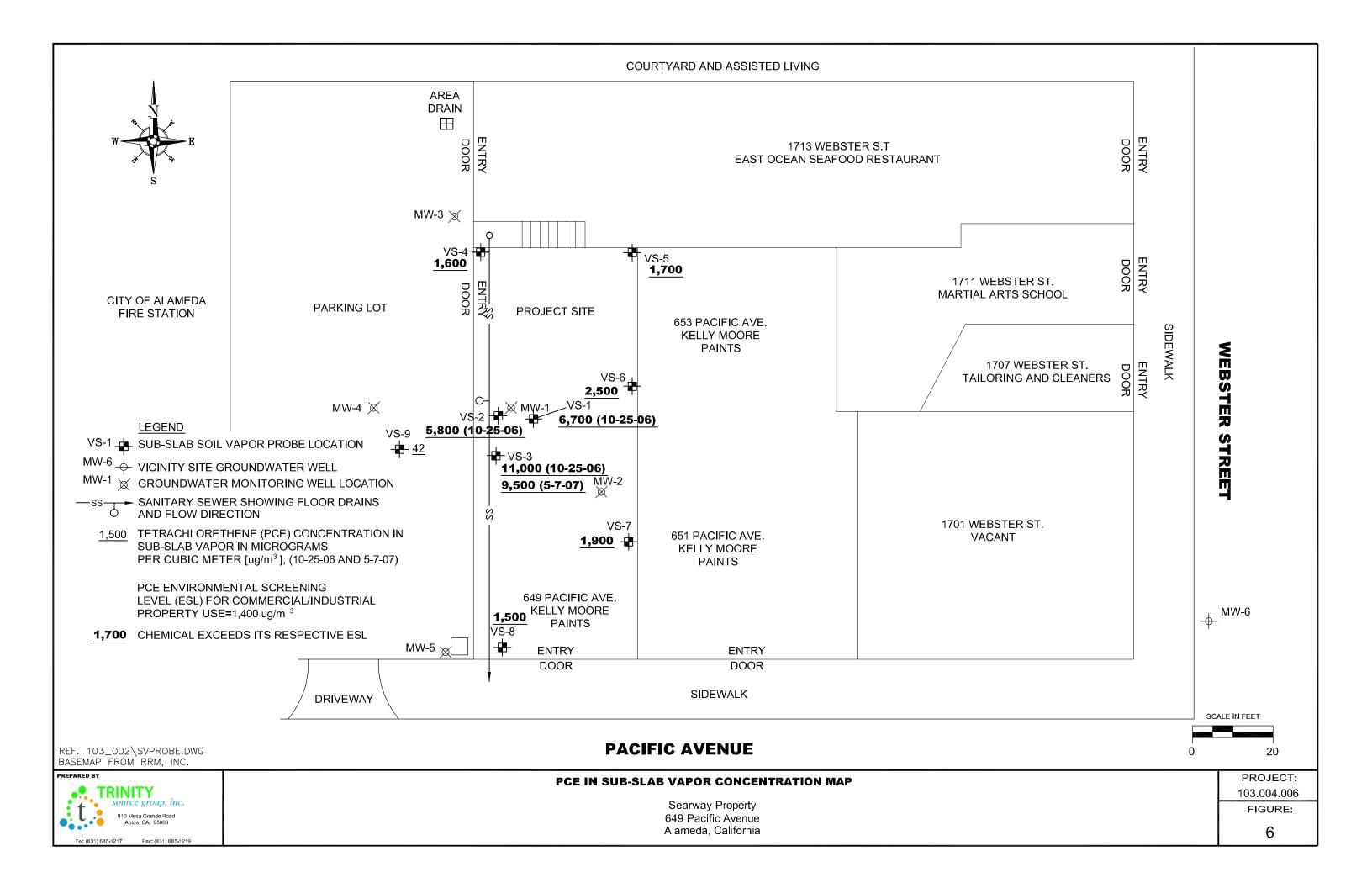
1

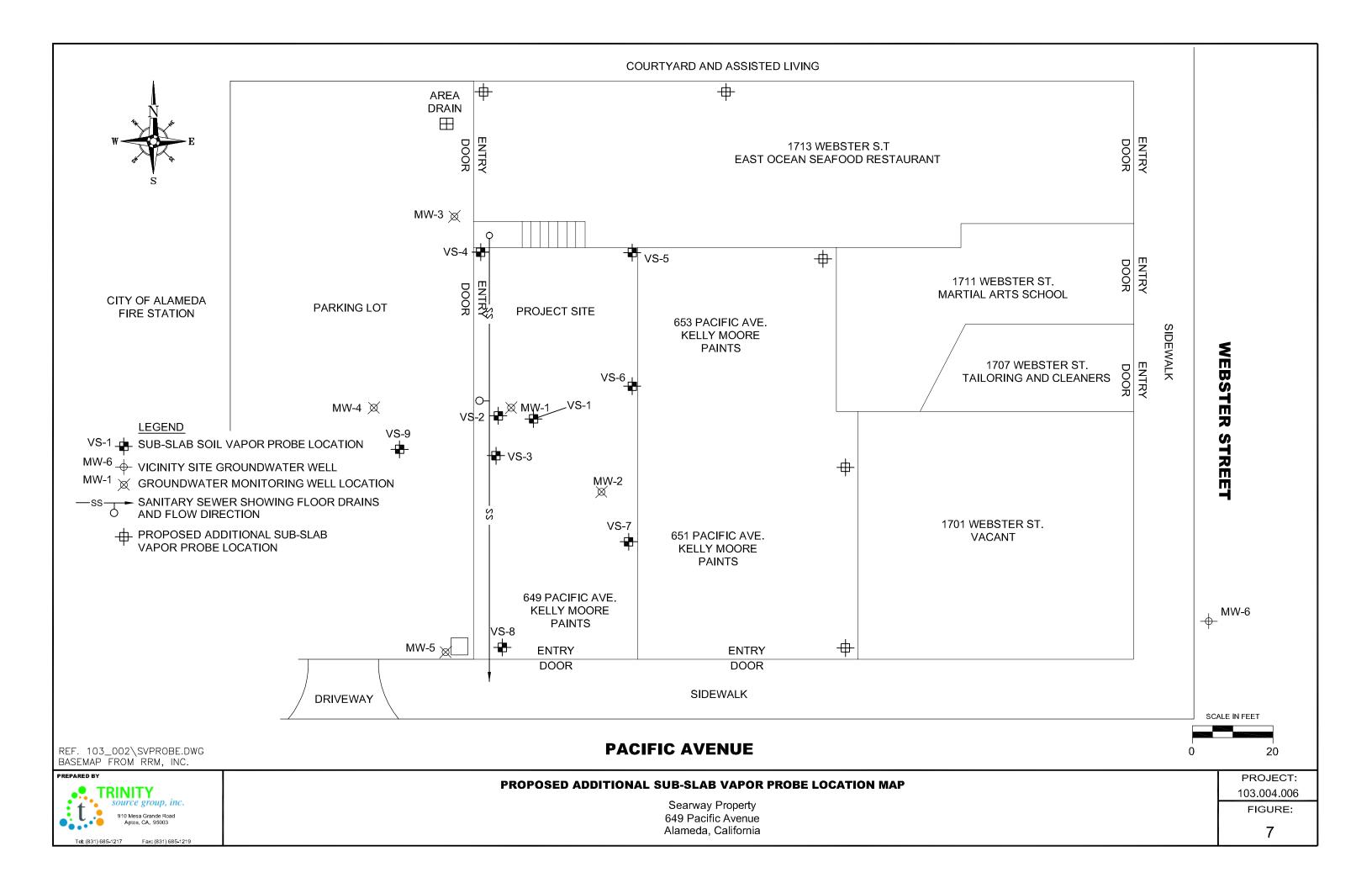












# ATTACHMENT A ACHCSA CORRESPONDENCE

#### **ALAMEDA COUNTY**

#### **HEALTH CARE SERVICES**

**AGENCY** 

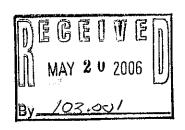


DAVID J. KEARS, Agency Director

May 19, 2006

Mr. Donald Lindsey Gallegher and Lindsey 2424 Central Avenue Alameda, CA 94501

Mr. Carl Searway 3032 Dakota Street Oakland, Ca 94602



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

Subject: SLIC Case No. RO0002584, Searway Property, 649 Pacific Avenue, Alameda, CA – Work Plan Approval

Dear Mr. Lindsey and Mr. Searway:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the document entitled, "Soil Vapor Sampling Workplan," dated May 15, 2006 and prepared on your behalf by Trinity Source Group, Inc. The Work Plan proposes to advance three soil borings within the area where soil and groundwater contamination was previously detected and collect soil vapor samples for laboratory analysis of total volatile hydrocarbons as Stoddard solvent, BTEX, and MTBE. We concur with the proposed scope of work.

We request that you perform the proposed work and send us the reports described below.

#### TECHNICAL REPORT REQUEST

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

- July 15, 2006 Semiannual Monitoring Report for Second Quarter 2006
- September 19, 2006 Soil Vapor Sampling Report

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

#### **ELECTRONIC SUBMITTAL OF REPORTS**

Effective January 31, 2006, 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

Don Lindsey Carl Searway May 19, 2006 Page 2

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. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

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. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for 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 monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (<a href="http://www.swrcb.ca.gov/ust/cleanup/electronic reporting">http://www.swrcb.ca.gov/ust/cleanup/electronic reporting</a>).

#### 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.

#### 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.

Don Lindsey Carl Searway May 19, 2006 Page 3

if you have any questions, please call me at (510) 567-6791.

Sincerely,

Jerry Wickham

Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

pavid Reinsma, Trinity Source Group, 910 Mesa Grande Road, Aptos, CA 95003

Donna Drogos, ACEH Jerry Wickham, ACEH

File

#### **David Reinsma**

From:

Wickham, Jerry, Env. Health [jerry.wickham@acgov.org]

Sent:

Tuesday, September 19, 2006 4:52 PM

To:

David Reinsma

Cc:

djb@tsgcorp.net; Debra Moser

Subject: RE: 649 Pacific Avenue, Alameda - update

Based upon your request, the schedule for submittal of the Site Investigation report is extended to October 19, 2006.

Regards,

Jerry Wickham
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Suite 250
Alameda, CA 94502-6577
510-567-6791 phone
510-337-9335 Fax
jerry.wickham@acgov.org

**From:** David Reinsma [mailto:dar@tsgcorp.net] **Sent:** Tuesday, September 19, 2006 3:19 PM

**To:** Wickham, Jerry, Env. Health **Cc:** djb@tsgcorp.net; 'Debra Moser'

Subject: 649 Pacific Avenue, Alameda - update

#### Jerry,

I wanted to give you an update on this project. We installed the concrete-slab soil gas probes at the site on 9/7/06 and collected soil gas samples the same day using Summa canisters. The soil gas samples were submitted to Torrent Laboratories for analyses. I'm still waiting for all the data from Torrent and I hope to have it this week. The report was due today, September 19, 2006, for documentation of the soil gas probe sampling as documented in our Work Plan dated May 15, 2006.

I am requesting a report due date extension until October 19, 2006 for the aforementioned technical report. This will allow me sufficient time to prepare a draft document, have my client review it and then send a final report to you via Geotracker.

If you have any questions, please call.

Thank you,

David

#### David A. Reinsma

President, and Principal Geologist

Trinity Source Group, Inc. 910 Mesa Grande Road Aptos, CA 95003

Tel: (831) 685-1217 Fax: (831) 685-1219 Cell: (831) 227-4724

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#### **David Reinsma**

From:

Wickham, Jerry, Env. Health [jerry.wickham@acgov.org]

Sent:

Thursday, January 04, 2007 1:25 PM

To:

David Reinsma

Cc:

Don Lindsey

Subject: RE: Soil gas sampling results - 649 Pacific Avenue

#### David,

Yes, I would like to discuss these results. I am available from 8:30 am to 9:30 am or anytime between 1:30 and 5:30 pm tomorrow, 1/5. Otherwise, I am not available until Tuesday 1/9 in the afternoon.

Regards, Jerry

Jerry Wickham Alameda County Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94502-6577 510-567-6791 phone 510-337-9335 fax jerry.wickham@acgov.org

**From:** David Reinsma [mailto:dar@tsqcorp.net] Sent: Thursday, January 04, 2007 12:01 PM

To: Wickham, Jerry, Env. Health

Cc: 'Don Lindsev'

Subject: Soil gas sampling results - 649 Pacific Avenue

Attached is a table and figure showing the results of our second round of soil gas sampling at the 649 Pacific Avenue property (former Searway Property) in Alameda, CA. The first round of soil gas sampling data was not valid as the laboratory had some holding time errors and data validation errors. We changed labs to Air Toxics and the second soil gas sampling event and resulting soil gas data appear to be accurate and representative of site conditions. For your information, the building is now a Kelly Moore Paint Store; something to consider for indoor air sampling if ever necessary.

As you'll see when you look at the soil gas data, we exceed soil gas ESLs for evaluation of potential vapor intrusion concerns for three chemicals: Chloroform, Carbon Tetrachloride, and Tetrachloroethene (PCE). We did not exceed the Stoddard Solvent ESL for any of the soil gas samples. The leak test compound used during field sampling, 2-propanol, was not detected in any sample analyzed, indicating a tight soil gas sampling event for each sub-slab soil gas sampling point.

What appears to have happened here is that the above chemicals are locked up in clay soils beneath the concrete slab of the building. Historic grab-gw samples did contain trace (very low) levels of these compounds as indicated on the attached tables. It does not appear that soil samples contained VOCs. I added an 8260B full scan to the groundwater sampling event we just completed at the site in December 2006 to determine if these chemicals have made it to groundwater in site wells.

I want to discuss with you what the next steps should be on this project. I was moving the site toward closure but now we seem to have a soil gas problem to address. When do you have time for a call to discuss the above?

Regards,

#### David

#### David A. Reinsma

President, and Principal Geologist

Trinity Source Group, Inc. 910 Mesa Grande Road Aptos, CA 95003

Tel: (831) 685-1217 Fax: (831) 685-1219 Cell: (831) 227-4724

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#### David Reinsma

From:

Wickham, Jerry, Env. Health [jerry.wickham@acgov.org]

Sent:

Friday, March 16, 2007 5:07 PM

To:

David Reinsma

Subject: RE: 649 Pacific Avenue, Alameda, CA

David,

The proposed sub slab soil vapor sampling locations are acceptable; however, we request that one sampling location be added in the northeastern corner of the 649 Pacific space. The soil gas sampling report, which was requested in our correspondence dated May 19, 2006, is overdue by several months. Based on the preliminary soil vapor sampling results, we request that you make completion of the soil vapor sampling and report a priority.

Regards,

Jerry Wickham Alameda County Environmental Health 1131 Harbor Bay Parkway Alameda, CA 94502-6577 510-567-6791 phone 510-337-9335 fax jerry.wickham@acgov.org

From: David Reinsma [mailto:dar@tsgcorp.net]

Sent: Friday, March 16, 2007 4:15 PM To: Wickham, Jerry, Env. Health

Subject: 649 Pacific Avenue, Alameda, CA

Jerry,

Thanks for the phone call today regarding the additional soil gas sampling step-out we need to do at the subject site. I appreciate your patience on this next scope of work. I'll give my client a phone call today and let him know that we need to perform this additional scope of work and finalize our report sooner than later.

Attached is a figure showing additional proposed sub-slab soil vapor probe locations for your review. If you want to change the location or number of proposed probes, please give me a call to discuss.

Thank you,

David

#### David A. Reinsma

President, and Principal Geologist

Trinity Source Group, Inc. 910 Mesa Grande Road Aptos, CA 95003

Tel: (831) 685-1217 Fax: (831) 685-1219 Cell: (831) 227-4724

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# ALAMEDA COUNTY HEALTH CARE SERVICES

AGENCY



DAVID J. KEARS, Agency Director

April 11, 2007

Mr. Donald Lindsey Timber Del Properties, LLC 2424 Central Avenue Alameda, CA 94501

Mr. Carl Searway 3032 Dakota Street Oakland, Ca 94602



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

Subject: SLIC Case No. RO0002584 and Geotracker Global ID SL0600150413, Searway Property, 649 Pacific Avenue, Alameda, CA 94501 – Work Plan Approval

Dear Mr. Lindsey and Mr. Searway:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Soil Vapor Sampling Workplan Addendum," dated April 6, 2007 and prepared on your behalf by Trinity Source Group, Inc. The Work Plan proposes to advance six additional subslab probes for the collection of soil vapor samples. Soil vapor samples are to be collected from the six additional soil vapor probes and existing soil vapor probe VS-3. This investigation is required to evaluate elevated concentrations of carbon tetrachloride and tetrachloroethene that were detected in samples collected from three existing subslab soil vapor probes located within an active paint store at the site. The proposed scope of work in the "Soil Vapor Sampling Workplan Addendum," is acceptable.

We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

#### **TECHNICAL COMMENTS**

Groundwater Monitoring. Please continue semi-annual groundwater monitoring using the
existing wells at the site. The groundwater samples are to be analyzed for TPH as Stoddard
solvent by EPA Method 8015M and the full target list of volatile organic compounds by EPA
Method 8260B. Please present results of the semi-annual groundwater sampling in the
monitoring reports requested below.

Don Lindsey Carl Searway April 11, 2007 Page 2

#### TECHNICAL REPORT REQUEST

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

- July 11, 2007 Soil Vapor Sampling Report
- August 15, 2007 Semiannual Monitoring Report for First to Second Quarter 2007
- February 15, 2008 Semiannual Monitoring Report for Third to Fourth Quarter 2007

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**

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. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

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#### 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.

Don Lindsey Carl Searway April 11, 2007 Page 3

#### 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.

#### AGENCY OVERSIGHT

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

If you have any questions, please call me at (510) 567-6791.

Sincerely.

Jerry Wickham

Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: David Reinsma, Trinity Source Group, 910 Mesa Grande Road, Aptos, CA 95003

Donna Drogos, ACEH Jerry Wickham, ACEH File

# ATTACHMENT B FIELD PROCEDURES

### ATTACHMENT B FIELD PROCEDURES

#### Phase I and II Pre-Field Activities

#### Permitting

Permits for the installation of sub-slab vapor probes were not required.

#### Health and Safety Plan

Site safety procedures involved the preparation of a site-specific health and safety plan identifying potential chemical and physical hazards which may be encountered during the course of field activities. All Trinity personnel involved in conducting the field activities met OSHA 40 Hour Hazardous Waste Operations and Emergency Response Training.

#### Phase I and II Sub-Slab Vapor Sampling Protocol

#### Preparation of Site Building for Interior Work

The 649 Pacific Avenue structure is currently being used as a Kelly-Moore Paints store. Therefore, any obstructions and/or floor coverings were cleared or removed prior to initiation of probe installation.

#### **Sub-Slab Vapor Sampling**

Sub-slab vapor probes VS-1, VS-2 and VS-3 were installed on September 3, 2006, and probes VS-4 through VS-9 were installed on April 29, 2007.

All nine sub-slab soil gas probes were installed to float in the concrete slab and asphalt parking area. The installation procedure was consistent with that described by USEPA<sup>2</sup>. Sampling and analysis procedure generally followed the guidelines contained in San Mateo County's "Using a Geoprobe to Collect Subsurface Vapor Samples for Human Health Risk Evaluation" (GPP

<sup>&</sup>lt;sup>2</sup> United States Environmental Protection Agency (2006), Assessment of Vapor Intrusion in Homes Near the Raymark Superfund Site Using Basement and Sub-Slab Air Samples, and United States Environmental Protection Agency, Draft Standard Operating Procedure for Installation of Sub-Slab Vapor Probes and Sampling Using EPA Method TO-15 to Support Vapor Intrusion Investigations.

Guidelines, Draft GPP Staff Guidance updated 3/9/06)<sup>3</sup>, San Mateo County's Draft "Subsurface Vapor Sampling for Human Health Risk Evaluation" (Revised 11/14/06) and the California Department of Toxic Substances Control (DTSC) Advisory for Active Soil Gas Investigations dated January 28, 2003<sup>4</sup>.

The probe installation and sub-slab vapor sample collection procedures are summarized below:

Previous investigation indicated that the concrete slab is 4 to 5 inches thick. Therefore, to install a sub-slab probe, a one-inch diameter hole in the concrete slab was drilled to a depth of approximately 2 to 3 inches using a rotary drill. Prior to penetrating the concrete slab, the drill hole was vacuumed out to remove cuttings. The drill bit was then changed to 5/16-inch, and the hole was advanced approximately an additional 2 to 3 inches through the slab and into the underlying sub-slab material. The sub-slab soil gas probe was assembled using a 2-inch long by ¼-inch inner-diameter (ID) stainless steel or copper tube attached to a stainless steel threaded fitting and Swagelok cap or plug. This assembly was placed into the drilled hole, and grouted into place using non-shrink, quick-setting cement. The cement installation was recessed so that the plug was accessible. The top of the plug was set flush with the top of the concrete slab.

The slab venting probes were allowed to equilibrate for a minimum of one week prior to sample collection.

Mobilization for sub-slab sampling was not conducted if measurable precipitation or site irrigation near the sampling locations occurred in the previous 5 days.

**Sampling Set-up:** Prior to sampling, the plug on the sub-slab vapor probe was removed and quickly replaced with a closed Swagelok valve. A tee fitting was connected to two one-liter Summa canisters with a pressure gauge installed on top of each of these fittings. Trinity used one-liter purge and sample canisters for this application, in order to collect a sub-slab sample that was most representative of the local area penetrated.

The two Summa canisters were connected by less then 1 foot of copper tubing and a third tee fitting. The vacuum reading on each canister was confirmed and recorded before proceeding. The initial vacuum reading was between 26 to 35 inches mercury (Hg). On the downhole side of the third tee fitting, a 100 to 200 milliliter per minute (ml/min) flow regulator followed by a laboratory supplied particulate filter was installed. On the downhole side of the particulate filter, a vapor-tight valve was installed to connect the sampling equipment with the sub-slab probe tube.

**Vacuum Leak Testing:** A vacuum test was conducted on the connections between the Summa canisters and the valve on the downhole side of the regulator for 10 minutes by opening and closing the purge canister valve to place a test vacuum on the assembly.

San Mateo County (2006), Using a Geoprobe to Collect Subsurface Vapor Samples for Human Health Risk Evaluation (GPP Guidelines).

California Environmental Protection Agency, Department of Toxic Substances Control (2003), Advisory – Active Soil Gas Investigations.

**Purging:** If the vacuum test was successful, purging followed. The purge canister valve and the valve on the downhole side of the particulate filter was opened and the time was recorded. The purge canister valve was closed after three volumes of air were purged from the sample apparatus and drilled probe hole. The purge volume was calculated based on the internal volume of the drilled hole, tubing and probe apparatus. The amount of air purged was measured based on the time that the flow-control orifice was opened, with a flow rate of 100-ml/minute, and based on a discernable vacuum drop on the purge canister pressure gauge. The time at which purging was terminated was recorded on field data sheets (Attachment C).

**Soil Gas Sampling:** If the vacuum test was successful and at least 30 minutes has passed since the top bentonite seal was hydrated, purging began. The purge canister valve and the valve on the downhole side of the particulate filter was opened and the time was recorded on field data sheets. The purge canister valve was closed after three volumes of air were purged from the sample apparatus and vapor probe. The purge volume was calculated based on the volume of the probe tip and the internal volume of the tubing. The amount of air purged was determined by the incremental drop in vacuum readings on the purge Summa canister. The time at which purging terminated will be recorded.

Following purging, the sample Summa canister valve was opened to begin sample collection. The time at which sample collection began was recorded. Leak test compound (isopropyl alcohol) moistened gauze was placed at the top of the bentonite seal surrounding the probe tubing and on the downhole side of the valve located on the borehole side of the particulate filter. Aluminum foil was used to hold the gauze in place. The gauze was remoistened with leak test compound every five minutes.

Once the sample Summa canister pressure gauge indicated approximately 5 inches of mercury, the sample canister valve was closed and the time recorded. The tee fitting on the sample canister was replaced with a laboratory supplied brass plug. The sample canister was labeled and chain-of-custody maintained by recording: sample name, sample date, sample time, final vacuum, canister and flow controller serial numbers, initials of sample collector, and the compounds to be analyzed by the certified laboratory. The sample canisters was stored in a container that blocks sunlight to the opaque canister. None of the Summa canisters were subject to changes in pressure and temperature. The sample canisters were delivered to the analytical laboratory via ground transportation under chain-of-custody documentation.

The flow-control orifice was maintained at 100 to 200 ml/min, and was kept open until the sample Summa canister pressure gauge indicated approximately 5 inches Hg. Once 5 inches of Hg was achieved, the sample canister valve was closed and the time recorded. The tee fitting on the sample canister was replaced with a laboratory supplied brass plug.

During sampling of probes VS-4 through VS-9, a modified and improved leak testing procedure was performed by placing a shroud over the sampling assembly, and maintaining an isopropyl alcohol-enriched atmosphere under the shroud. The shroud was emplaced after purging the vapor probe, but before the sub-slab vapor sample was collected. Isopropyl alcohol

saturated wipes were placed under the shroud. A photoionization detector (PID) was used to monitor the atmosphere beneath the shroud during sampling. Tedlar bag samples were collected from the shroud atmosphere at selected probe locations using a hand-vacuum pump and analyzed at the laboratory. The purpose of the tedlar bag sample analysis was to quantitatively compare shroud atmosphere isopropyl alcohol concentrations to concentrations observed using a PID field instrument, and to document that an isopropyl alcohol-enriched atmosphere was maintained during vapor sampling. Shroud PID field readings for isopropyl alcohol for each probe location are noted on the field data sheets presented as Attachment C.

**Abandonment of Sub-Slab Venting Probes:** The sub-slab vapor probes will be left in place until site data indicates that they are no longer needed. After that time, the probes will be abandoned. To abandon the probes, a roto-hammer will be used to core the grout around the probe assembly. The assembly will be removed from the hole, and the hole will be filled with non-shrinking, quick-setting grout to match finish grade. Surface materials and/or covering will be repaired to match existing conditions.

# ATTACHMENT C FIELD DATA SHEETS

#### SOIL GAS INVESTIGATION **PURGE, SAMPLE & LEAK TEST - FIELD DATA SHEET**

103003001

649 Pacific Ave Alameda

Project No.: 103.002.001

**Facility Name:** 

Address:

Staff:

Kelly Moore Paint Store-Searway Property

Purge Test Location:

VS-1, VS-2 and VS-3

Purge Method:

Summa Canister

Leak Test Compound (DL of 10 µg/L):Isopropanol

Flow Control Orifice (ml/min):

10/25/06 Date:

DJB

Tubing Size (in):

1/4" ID: 3/8" OD

Bore Hole Dia Jin): 3/8" OD

					-	174 10, 376		ume Calc		ia. (in): 3/8" QD					
Inner Tubing Radius (inches)	Area of Inner Tubing Radius (r2)	Tubing Length (ft)	Convert feet to inches	Total Tubing Volume (ml)	Bore Hole Radius (inches)	Area of Bore Hole	Length of Bore Hole	Total Bore	No. of Tubing + Bore Hole Volumes to	Conv. of cubic inches to ml		Total Purge Volume (L) JL= ml/1000]	Max. Purge rate (ml/min)	Est. Purge Time (min)	
0.085	0.007	0.5	6	2.232	0.4	0.160	0.5	1.648	1	16.387	3,880	0.004	100	0.04	0.5
0.085	0.007	0.5	6	2.232	0.4	0.160	0.5	1.648	3	16.387	11.639	0.012	100	0.12	0.5
0.085 Notes:	0.007	0.5	6	2.232	0.4	0.160	0.5	1.648	7	16.387	27.157	0.027	100	0.27	0.5

Purge volume for tubing can be calculated as follows:

(a) 3.141593(Pi) \* tubing radius r<sup>2</sup> \* inches of tubing \* 16.3870641(conversion of cubic inches to milliliters)

Purge volume for the bore hole can be calculated as follow:

(b) 3.141593(Pi) \* bore hole r<sup>2</sup> \* inches of bore hole \* 16.3870641(conversion of cubic inches to milliliters)

Total purge volume can be calculated as follows:

a + b \* number of tubing/bore hole volume to be purged = total purge volume

Estimated purge time can be calculated as follows:

total purge volume (ml) ÷ purge rate (max of 167 ml/min)

ourging (24 hr)	Time Stop		Volume		Time Stop Sampling (24 hr)		lso- propanol Applied (yes/no)	Train Leak	Vacuum Train Test Start Time/ Vacuum (Hg")	Vacuum Train Test Stop Time/ Vacuum (Hg")	Probe install Date	Probe Install Time	Purge Volumes	Probe Depth (Feet)
305	/3/9	-30	10/2	1305	1319	-3	yes	pus	1230/30	1240/30	9/3/2006	1045	3	0.5
309 1	1326	-27	1012	1309	1326	-3	yes	pass	1235	1245	9/3/2006	* 1100	3	0.5
<u> 311  </u> 1	1323	-26	1000	13/1	1323	-3	yes	pas	1247	1257	9/3/2006	1115	3	0.5
								/						
3 3 3	4 hr) 05 09 (	4 hr) (24 hr) 05 /3/9 09 /326 31/ /323	4 hr) (24 hr) (Hg") 05 /3/9 -30 09 /326 -27 31/ /323 -26	4 hr) (24 hr) (Hg") (ml) 05 /3/9 -30 LO/2 09 /326 -27 /0/2 31/ /323 -26 /000	4 hr) (24 hr) (Hg") (ml) (24 hr) 05 /3/9 -30 LO/2 1305 09 1326 -27 1012 1309 311 1323 -26 1000 1311	4 hr) (24 hr) (Hg") (ml) (24 hr) (24 hr) 05 /3/9 -30 LO/2 1305 13/9 09 1326 -27 10/2 1309 1326 31/ 1323 -26 1000 13/1 1323	4 hr) (24 hr) (Hg") (ml) (24 hr) (24 hr) (Hg")  05 /3/9 -30 LO/2 1305 13/9 -3  09 1326 -27 10/2 1309 1326 -3  31/ 1323 -26 1000 13/1 1323 -3	4 hr) (24 hr) (Hg") (ml) (24 hr) (24 hr) (Hg") (yes/no)  05 /3/9 -30 (D/2 1305 1319 -3 yes)  09 1326 -27 1012 1309 1326 -3 yes  311 1323 -26 1000 1311 1323 -3 yes	4 hr) (24 hr) (Hg") (ml) (24 hr) (24 hr) (Hg") (yes/no) (pass/fail)  05 /3/9 -30 LO/2 1305 13/9 -3 yes pass  09 1326 -27 10/2 1309 1326 -3 yes pass  31/ 1323 -26 1000 13/1 1323 -3 yes pass	4 hr) (24 hr) (Hg") (ml) (24 hr) (24 hr) (Hg") (yes/no) (pass/fail) (Hg") (Hg") (13/4 hr) (13/4 hr) (13/4 hr) (13/4 hr) (Hg")	4 hr) (24 hr) (Hg") (ml) (24 hr) (24 hr) (Hg") (yes/no) (pass/fail) (Hg") (Hg"	4 hr) (24 hr) (Hg") (ml) (24 hr) (24 hr) (Hg") (yes/no) (pass/fail) (Hg") (Hg") Probe Install Date  05 /3/9 -30 (0/2 /305 /3/9 -3 yes pas /235 /240/30 9/3/2006  09 /326 -27 /0/2 /309 /326 -3 yes pas /235 /245 9/3/2006  31/ /323 -26 /000 /3/1 /323 -3 yes pas /247 /257 9/3/2006	4 hr) $(24 \text{ hr})$ $(Hg'')$ $(Hg'')$ $(Hg'')$ $(24 \text{ hr})$ $(Hg'')$ $($	4 hr) (24 hr) (Hg") (ml) (24 hr) (24 hr) (Hg") (yes/no) (pass/fail) (Hg") (Hg") Date Time Volumes  05 /3/9 -30 LO/2 1305 13/9 -3 Yes Pass 1235 1245 9/3/2006 1045 3  09 /326 -27 /0/2 1309 1326 -3 Yes Pass 1235 1245 9/3/2006 1100 3  1/ 1323 -26 /000 13/1 /323 -3 Yes Pass 1247 1257 9/3/2006 1115 3

0:\admin\forms\soil vapor sampling form.xis

### SOIL GAS INVESTIGATION PURGE, SAMPLE & LEAK TEST - FIELD DATA SHEET



 Project No.:
 103.004.004
 Purge Test Location:
 VS-3, VS-4 through VS-9

 Facility Name:
 Kelly Moore Paint Store-Searway Property
 Purge Method:
 Summa Canister 1000 ml

 Address:
 649 Pacific Ave Alameda
 Leak Test Compound (DL of 10 μg/L):
 Isopropanol

 Staff:
 Dan Birch
 Flow Control Orifice (ml/min):
 100

Date: 5-7-07 Tubing Size (in): 1/4" ID; 3/8" OD Bore Hole Dia. (in): 3/8" OD

Area of Inner Tubing Inner Tubing Radius (inches) Radius (r2) (ft) Inches (ml) (inches) Radius (r2) (ft) Radius (r2) (ft) Radius (r2) (r2) (r2) (r3) (r4) (r4) (r4) (r4) (r4) (r4) (r4) (r4	Dept
Inner Tubing Convert Tubing Bore Hole Bore Hole Length of Total Bore Hole Bore Hole Total Purge Purge Pu	
Import Tubing Convert Tubing Pare Hele Pare Hele Language Trial Pare	Prob
Area of Total Area of Tubing +	

Notes:

Purge volume for tubing can be calculated as follows:

(a) 3.141593(Pi) \* tubing radius r' \* inches of tubing \* 16.3870641(conversion of cubic inches to milliliters)

Purge volume for the bore hole can be calculated as follow:

(b) 3.141593(Pi) \* bore hole r² \* inches of bore hole \* 16.3870641(conversion of cubic inches to milliliters)

Total purge volume can be calculated as follows:

a + b \* number of tubing/bore hole volume to be purged = total purge volume

Estimated purge time can be calculated as follows:

total purge volume (ml) + purge rate (max of 167 ml/min)

I Va Time Start Time Stop G	nitial ulative cuum Total											
Va Time Start Time Stop G	i i											
	auge Volume ading Purged Hg") (ml)	Time Start Sampling (24 hr)	Time Stop Sampling (24 hr)	Final Vacuum Gauge Reading (Hg")	(PO BE MINISTER PROPERTY IN CONCENTRATION IN SHITOUG- (PPMV)	Vacuum Train Leak Check (pass/fail)	Vacuum Train Test Start/Stop Time	Shroud Iso- Propanol Tedlar Bag Sample/Time	Probe Install Date	Probe Install Time	Purge Volumes	Probe Depth (Feet)
vs-3 1125 1126 -	30 ~	1127	1137	-/·D	0.512	Pass	111/1121	NOT	9/3/2006	1045	3	#RET!
Notes: 1113 - 3.6 PPMJ	1115 6.	VM99 P	1117	- 19-2	DDMA: 1	119 - 2		SHROU	D CON(.			
vs-4 (151 1152 -	30	1152	1200	-3.0	0.117	Pass	1147/157	NOT	4/29/2007	940	3	0.5
Notes: 1149 - 3-1PPMV	1151-8	3-21 PPM1	V; 115	3 - 16.	2 PPMV ; 1	55-27	2-2 PPMV	scti	100 A00 4			
vs-5 1219 (220 -	30	1221	1230	-4-5	<0.001	Pass	1207/1217	NOT	4/29/2007	1010	3 -	# <u></u>
Notes: 1209 - 2-21PPM	W; 1211-	- 7.21APA	UV: 12	13 - 2	O. / PP MY	1215 -	23.6PPM 1	/ 5HF	2007 CON	. 1		
100 1000	31	/242	1250	-4.0	<0.001	Pass	1230/1240	NOT	4/29/2007	1030	3	0.5
Notes: 1230 - 3.11PPMV	/ ; 1232 -	6-29 PFM	V , 123	4-16-	2PPMV; 1		21-1 PPMV	SHR	LOVO CON	(·	!	
vs-7   1312   1313 -	3D	13/4	/325	-4.0	<0.001	Pass	1301/1310	C/320	4/29/2007	1100	3	0.5
Notes: /3/7 ~ 5.89 PPM	V ; 1318 -	- 14-2PPH	14 ) 13.	20 17-6	SPPMV; 13	22 - 27	APPMU , 13	23-35.	7 PPMV	SHR	os aus	W,
vs-8 1346 1347 -	30	1348	/358	-4.0	0.018	Pass	1335/1345	C1356	4/29/2007	1128	3	0.5
Notes: 1336 - 4-21 PpM	IV ; 1338	- 16.2 P	PMV; 1	340-	25.9PPMV	, 13 × Z	-33.2 PP	mv. SER	40) GUC	C ·		
	3D	103D	1040	-4·D	CO.001	Pass	1015/1025	NUT	4/29/2007	1200	3	0.5
Notes: 1017 - 6.11 PPA	1V 1019-	- 17.2P	PMV /	021-	21-6PPMV	; 1023	- 30.2 PPM	v - s	FROUD	1400	·	

#### **SOIL GAS INVESTIGATION PURGE, SAMPLE & LEAK TEST - FIELD DATA SHEET**

source group, inc. Environmental Consultants

**Purge Test Location:** VS-3, VS-4 through VS-9 Project No.: 103.004.004 Summa Canister 1000 ml Purge Method: Facility Name: Kelly Moore Paint Store-Searway Property Leak Test Compound (DL of 10 μg/L): isopropano! 649 Pacific Ave Alameda Address: MIN 175 M1 Flow Control Orifice (ml/min): Staff: Dan Birch Bore Hole Dia. (in): 3/8" OD Tubing Size (in): 1/4" ID: 3/8" OD

						Jack La	a turning to		and the last				i jant		
Inner Tubing Radius (inches)	Area of Inner Tubing Radius (r2)	Tubing Length (ft)	Convert feet to inches	Total Tubing Volume (ml)	Bore Hole Radius (inches)		Length of Bore Hole (in)		Tubing + Bore Hole Volumes to Purge	Conv. of cubic inches to ml		Total Purge Volume (L) [L= ml/1000]	Max. Purge rate (ml/min)	Est. Purge Time (min)	Probe Depth (Feet)
0.085	0.007	0.5	6	2.232	0.4	0.160	0.5	4.119	3	16.387	19.053	0.019	100	0.19	0.5

Notes:

Date:

Purge volume for tubing can be calculated as follows:

(a) 3.141593(PI) \* tubing radius rf \* inches of tubing \* 16.3870641(conversion of cubic inches to milliliters)

Purge volume for the bore hole can be calculated as follow:

(b) 3.141593(Pi) \* bore hole r<sup>2</sup> \* inches of bore hole \* 16.3870641(conversion of cubic inches to milliliters)

Total purge volume can be calculated as follows:

a + b \* number of tubing/bore hole volume to be purged = total purge volume

Estimated purge time can be calculated as follows:

total purge volume (ml) + purge rate (max of 167 ml/min)

												/ i			
Sub slab Probe	Time Start Purging	Time Stop Purging	Initial Vacuum Gauge Reading	ulative Total Volume Purged	Time Start Sampling	TIM LOA (-O-C Time Stop Sampling	Vacuum Gauge Reading	INITIAL PROBE concentration in Field	Vacuum Train Leak Check	Vacuum Train Test Start/Stop	Shroud Iso- Propanol Tediar Bag	Probe Install Date	Probe Install Time	Purge Volumes	Probe Depth
Number	(24 hr)	(24 hr)	(Hg")	(ml)	(24 hr)	(24 hr)	(Hg <sup>r</sup> )	(PPMV)	(pass/fail)	Time	Sample/Time	Date	Inne	Voluntes	
VS-3	1415	1416	-35		1416	1425	-5	0.194	Pass	1404/1414	none	9/3/2006	1045	3	0.5
Notes: 3	OUPPM	V @ 141	6; 60	(७ ।पा	1) 16.00	@14183	24.801	1419 3 30.3	01420	<u>; 33.3@/'</u>	122;61.	00/423	ALCOHO	L/N341	EDUZI
VS-4	1234	1235	-35		1236	1247	-5	20.001	Pass	1220/1230	none	4/29/2007	940	3	0.5
	2-35PPW	W@ 123	37; 12	.2012	39; 18.	201246	7; 22-	3@1242; 2	26.6@124	4;30.3€	1246 AL	coHOL IN	54RU	(זעו	
VS-5	1300	1301	- 33		1302	1310	-5	10.001	Pass	1250/1300		4/29/2007	1010	3	0.5
Notes: /	10 € 13	02;5	29@ 130	33 11	2@ /30	4:15.7	10/305	1/14.70	1307	14-6@ 130	9 ALCOH	OL 1N 5	HROUL	)	ļ
VS-6	1321	1322	-33		1323	13 32	-5	LO-DO1	Pass	1311/1321	none	4/29/2007	1030	3	0.5
Notes:	2.07 PPI	NV@ 13	24; 5:	17@13	25; /3	3·10 13	26;2	14.0@132	7;24.	7 <u>@1328:</u>	25·10/37	9; 26.1	@1330	ALG (	01(-
VS-7	1438	1139	-35		1439	1448	- 5	0.017	Pass		US-7-QC C1446		1100	3	0.5
	-20 PPM	VQ 143	9; /3.	6@ 14Y	0;17.9	G 1441	: 27.1	@1442;	25.20	1443 ) 2	7.10 /444	3/10	1445	ALCIC	0116.
VS-8	13 47	1348	-35		1348	1357	-5	10.001	Pass	1337/1347	none	4/29/2007	1128	3	0.5
	SSPPM	W@ 134	9:6:	280 is	350;1	7.1@	1351;	27.80	352;	31.1@135	3) 22.26	1354	16.1(2)	<u>1355 A</u>	LC-CON.
VS-9	1202	1203	-35		1204	1217	- 5	0.223	Pass	1150 /1200	1	4/29/2007	1200	3	0.5
Notes:	14.7 PPM	CO 120	53 16	5.5@,	1206;	22.9	@120	7:12.60	1208;	18.0 @12	10; 200	06/212	16:10	1214	

### **ATTACHMENT D**

# CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTAQTION



#### Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- · Work order Summary;
- Laboratory Narrative;
- · Results; and
- Chain of Custody (copy).

#### WORK ORDER #: 0610588BR1

Work Order Summary

CLIENT:

Mr. Dan Birch

BILL TO: Mr. Dan Birch

Trinity Source Group

Trinity Source Group

910 Mesa Grande Rd.

910 Mesa Grande Rd.

Aptos, CA 95003

Aptos, CA 95003

PHONE:

831-685-1217

P.O. # 103.003.001

FAX:

PROJECT #

103.003.001 649 Pacific Ave.

DATE RECEIVED:

10/27/2006 11/22/2006

CONTACT: Kyle Vagadori

DATE COMPLETED: DATE REISSUED:

12/20/2006

FRACTION# NAME 01A VS-1 01AAVS-1 Duplicate 02A VS-2 03A VS-3 04A Lab Blank 05A **CCV** 

	RECEIPT
TEST	VAC/PRES.
Modified TO-3	2.5 "Hg
Modified TO-3	2.5 "Hg
Modified TO-3	2.0 "Hg
Modified TO-3	4.5 "Hg
Modified TO-3	NA
Modified TO-3	NA

CERTIFIED BY:

Sinda d. Truman

12/20/06 DATE:

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07 Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



# LABORATORY NARRATIVE Modified TO-3 Trinity Source Group Workorder# 0610588BR1

Three 1 Liter Summa Canister samples were received on October 27, 2006. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. See the data sheets for the reporting limits for each compound.

Requirement	TO-3	ATL Modifications
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch = 20 samples.</td
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

#### **Receiving Notes**

There were no receiving discrepancies.

#### Analytical Notes

There were no analytical discrepancies.

THE WORKORDER WAS REISSUED ON DECEMBER 20, 2006 TO REPORT RESULTS IN UG/M3 PER CLIENT'S REQUEST.

#### **Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.



- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



#### Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: VS-1

Lab ID#: 0610588BR1-01A

Compound	Rpt. Limit	Amount	Rpt. Limit	Amount
	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.066	0.71	380	4100

Client Sample ID: VS-1 Duplicate

Lab ID#: 0610588BR1-01AA

Compound	Rpt. Limit	Amount	Rpt. Limit	Amount
	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.066	0.70	380	4100

Client Sample ID: VS-2

Lab ID#: 0610588BR1-02A

Compound	Rɒt. Limit	Amount	Rpt. Limit	Amount
	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.065	0.28	380	1600

Client Sample ID: VS-3

Lab ID#: 0610588BR1-03A

Compound	Rpt. Limit	Amount	Rpt. Limit	Amount
	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.071	1.6	410	9100



#### Client Sample ID: VS-1

#### Lab ID#: 0610588BR1-01A

Flie Name:	6112014 2.20		Date of Collection:	00/25/06
DIL Factor:	2.20		Date ci Analyels: 1	
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.066	0.71	380	4100
Container Type: 1 Liter Sumn	na Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		95		75-150



#### Client Sample ID: VS-1 Duplicate

#### Lab ID#: 0610588BR1-01AA

		110010-3001			
File Name: DIL Factor:	6112017 2.20		Date of Collection: -10/25/06 Date of Analysis: 11/20/06 09:43 P		
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Stoddard Solvent	0.066	0.70	380	4100	
Container Type: 1 Liter Sumr	na Canister				
Surrogates		%Recovery		Method Limits	
Fluorobenzene (FID)		96		75-150	



#### Client Sample ID: VS-2

#### Lab ID#: 0610588BR1-02A

File Name:	6112015 2.16		Date of Collection:	
Compound	2:16 Rpt. Limit (ppmv)	Amount (ppmv)	Bate of Analysis: 1: Rpt. Limit (uG/m3)	/20/06 08:04 Pf Amount (uG/m3)
Stoddard Solvent	0.065	0.28	380	1600
Container Type: 1 Liter Sumr Surrogates	na Canister			Method
Fluorobenzene (FID)		%Recovery 95		Limits 75-150



#### Client Sample ID: VS-3

#### Lab ID#: 0610588BR1-03A

File Name: DIL Factor:	6112016 2,38		Date of Collection: 10/25/06 Date of Analysis: 11/20/06.08:40 PM			
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)		
Stoddard Solvent	0.071	1.6	410	9100		
Container Type: 1 Liter Sumn	na Canister					
Surrogates		%Recovery		Method Limits		
Fluorobenzene (FID)		96		75-150		



#### Client Sample ID: Lab Blank

#### Lab ID#: 0610588BR1-04A

File Name: Dit Factor:	6112005 1.00		Date of Collection: NA Date of Analysis: 11/20/06 12:22 PM			
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)		
Stoddard Solvent	0.030	Not Detected	170	Not Detected		
Container Type: NA - Not Applic	able					
Surrogates		%Recovery		Method Limits		
Fluorobenzene (FID)		94		75-150		



#### Client Sample ID: CCV

#### Lab ID#: 0610588BR1-05A

Fluorobenzene (FID)	100	75-150
Surrogates	%Recovery	Method Limits
Container Type: NA - Not Applicable		
Stoddard Solvent		102
Compound		%Recovery
DII. Factor:	112003a Date of 1,00 Date of	Gollection: NA Apalysis: 11/20/06 10:26 AM
Elle Name:	140000.	

Sample Transportation Notice

Relinguishing signature on this document indicates that sample is being shipped iff compliance with all applicable local State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxxes Lighted assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold hamiless, defend, and indemnify Air Roxics Limited against any doing demand, or action, of any kind, related to the collection, handling, or shipping of samples. B.G.T. Hottine (800) 457-4922.



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#### Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- · Work order Summary;
- · Laboratory Narrative;
- · Results; and
- Chain of Custody (copy).



WORK ORDER #: 0610588A

Work Order Summary

CLIENT:

Mr. Dan Birch

BILL TO: Mr. Dan Birch

Trinity Source Group 910 Mesa Grande Rd.

Aptos, CA 95003

Trinity Source Group 910 Mesa Grande Rd.

Aptos, CA 95003

PHONE:

831-685-1217

P.O. #

103.003.001

FAX:

10/27/2006

PROJECT #

103.003.001 649 Pacific Ave.

DATE RECEIVED: DATE COMPLETED:

11/12/2006

CONTACT:

Kyle Vagadori

FRACTION#	NAME	TEST	RECEIPT VAC./PRES.
01A	VS-1	Modified TO-15	2.5 "Hg
01AA	VS-1 Duplicate	Modified TO-15	2.5 'Hg
02A	VS-2	Modified TO-15	2.0 "Hg
03A	VS-3	Modified TO-15	4.5 "Hg
04A	Lab Blank	Modified TO-15	NA S
04B	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
05B	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA
06B	LCS	Modified TO-15	NA

CERTIFIED BY:

Sinda d. Fruman

DATE: <u>11/12/06</u>

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004

NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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# LABORATORY NARRATIVE Modified TO-15 Trinity Source Group Workorder# 0610588A

Three 1 Liter Summa Canister samples were received on October 27, 2006. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples are summarized in the below table. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	+- 30% Difference	= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers</td
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

#### Receiving Notes

There were no receiving discrepancies.

#### Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

The reported LCS for each daily batch has been derived from more than one analytical file.

#### **Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction no performed).
  - J Estimated value.
  - E Exceeds instrument calibration range.
  - S Saturated peak.
  - Q Exceeds quality control limits.
  - U Compound analyzed for but not detected above the reporting limit.
  - UJ- Non-detected compound associated with low bias in the CCV



N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VS-1

Lab ID#: 0610588A-01A

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloroform	22	510	110	2500
Carbon Tetrachloride	22	6700	140	42000
Tetrachloroethene	22	980	150	6700

Client Sample ID: VS-1 Duplicate

Lab ID#: 0610588A-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloroform	44	500	210	2400
Carbon Tetrachloride	44	6400	280	40000
Tetrachloroethene	44	1000	300	7000

Client Sample ID: VS-2

Lab ID#: 0610588A-02A

Compound	Rbt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloroform	4.3	150	21	740
Carbon Tetrachloride	4.3	1300	27	8400
Tetrachloroethene	4.3	850	29	5800

Client Sample ID: VS-3

Lab ID#: 0610588A-03A

Compound	Røt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
trans-1,2-Dichloroethene	6.0	18	24	70
cis-1,2-Dichloroethene	6.0	12	24	47
Chloroform	6.0	100	29	490
Carbon Tetrachloride	6.0	220	37	1400
Trichloroethene	6.0	18	32	98
Tetrachloroethene	6.0	1700	40	11000



#### Client Sample ID: VS-1 Lab ID#: 0610588A-01A

File Name: Bill, Factor:	f110926 44.0		Date of Gollection: Date of Analysis: 1	
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	22	Not Detected	110	Not Detected
Freon 114	22	Not Detected	150	Not Detected
Chloromethane	88	Not Detected	180	Not Detected
Vinyl Chloride	22	Not Detected	56	Not Detected
1,3-Butadiene	22	Not Detected	49	Not Detected
Bromomethane	22	Not Detected	85	Not Detected
Chloroethane	22	Not Detected	58	Not Detected
Freon 11	22	Not Detected	120	Not Detected
Ethanol	88	Not Detected	160	Not Detected
Freon 113	22	Not Detected	170	Not Detected
1,1-Dichloroethene	22	Not Detected	87	Not Detected
Acetone	88	Not Detected	210	Not Detected
2-Propanol	88	Not Detected	220	Not Detected
Carbon Disulfide	22	Not Detected	68	Not Detected
3-Chloropropene	88	Not Detected	280	Not Detected
Methylene Chloride	22	Not Detected	76	Not Detected
Methyl tert-butyl ether	22	Not Detected	79	Not Detected
rans-1,2-Dichloroethene	22	Not Detected	87	Not Detected
Hexane	22	Not Detected	78	Not Detected
1,1-Dichloroethane	22	Not Detected	89	Not Detected
2-Butanone (Methyl Ethyl Ketone)	22	Not Detected	65	Not Detected
cis-1,2-Dichloroethene	22	Not Detected	87	Not Detected
Tetrahydrofuran	22	Not Detected	65	Not Detected
Chloroform	22	510	110	2500
1,1,1-Trichloroethane	22	Not Detected	120	Not Detected
Cyclohexane	22	Not Detected	76	Not Detected
Carbon Tetrachloride	22	6700	140	42000
2,2,4-Trimethylpentane	22	Not Detected	100	Not Detected
Benzene	22	Not Detected	70	Not Detected
1,2-Dichloroethane	22	Not Detected	89	Not Detected
	22	Not Detected	90	Not Detected
Trichloroethene	22	Not Detected	120	Not Detected
,2-Dichloropropane	22	Not Detected	100	Not Detected
1,4-Dioxane	88	Not Detected	320	Not Detected
Bromodichloromethane	22	Not Detected	150	Not Detected
cis-1,3-Dichloropropene	22	Not Detected	100	Not Detected
4-Methyl-2-pentanone	22	Not Detected	90	Not Detected
Toluene	22	Not Detected	83	Not Detected
rans-1,3-Dichloropropene	22	Not Detected	100	Not Detected



#### Client Sample ID: VS-1 Lab ID#: 0610588A-01A

File Name:	f110926		Date of Collection:	10/25/06	
i))), Factor.	4:0		Date of Arralysis.	7/10/06 08:58 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
1,1,2-Trichloroethane	22	Not Detected	120	Not Detected	
Tetrachloroethene	22	980	150	6700	
2-Hexanone	88	Not Detected	360	Not Detected	
Dibromochloromethane	22	Not Detected	190	Not Detected	
1,2-Dibromoethane (EDB)	22	Not Detected	170	Not Detected	
Chlorobenzene	22	Not Detected	100	Not Detected	
Ethyl Benzene	22	Not Detected	96	Not Detected	
m,p-Xylene	22	Not Detected	96	Not Detected	
o-Xylene	22	Not Detected	96	Not Detected	
Styrene	22	Not Detected	94	Not Detected	
Bromoform	22	Not Detected	230	Not Detected	
Cumene	22	Not Detected	110	Not Detected	
1,1,2,2-Tetrachloroethane	22	Not Detected	150	Not Detected	
Propylbenzene	22	Not Detected	110	Not Detected	
4-Ethyltoluene	22	Not Detected	110	Not Detected	
1,3,5-Trimethylbenzene	22	Not Detected	110	Not Detected	
1,2,4-Trimethylbenzene	22	Not Detected	110	Not Detected	
1,3-Dichlorobenzene	22	Not Detected	130	Not Detected	
1,4-Dichlorobenzene	22	Not Detected	130	Not Detected	
alpha-Chlorotoluene	22	Not Detected	110	Not Detected	
1,2-Dichlorobenzene	22	Not Detected	130	Not Detected	
1,2,4-Trichlorobenzene	88	Not Detected	650	Not Detected	
Hexachlorobutadiene	88	Not Detected	940	Not Detected	
Container Type: 1 Liter Summa (	Canister				
_				Method	
Surrogates		%Recovery		Limits	
Toluene-d8	•	105		70-130	
1,2-Dichloroethane-d4		122		70-130	
4-Bromofluorobenzene		104		70-130	
4-Bromofluorobenzene		104		70-	



#### Client Sample ID: VS-1 Duplicate

#### Lab ID#: 0610588A-01AA

File Name; Dif. Factor:	f110925		Date of Collection:	
	0,88			HADAGO BELZIAN
Compound	Rpt. Limit	Amount	Rpt. Limit	Amount
	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	44	Not Detected	220	Not Detected
Freon 114	44	Not Detected	310	Not Detected
Chloromethane	180	Not Detected	360	Not Detected
Vinyl Chloride	44	Not Detected	110	Not Detected
1,3-Butadiene	44	Not Detected	97	Not Detected
Bromomethane	44	Not Detected	170	Not Detected
Chloroethane	44	Not Detected	120	Not Detected
Freon 11	44	Not Detected	250	Not Detected
Ethanol	180	Not Detected	330	Not Detected
Freon 113	44	Not Detected	340	Not Detected
1,1-Dichloroethene	44	Not Detected	170	Not Detected
Acetone	180	Not Detected	420	Not Detected
2-Propanol	180	Not Detected	430	Not Detected
Carbon Disulfide	44	Not Detected	140	Not Detected
3-Chloropropene	180	Not Detected	550	Not Detected
Methylene Chloride	44	Not Detected	150	Not Detected
Methyl tert-butyl ether	44	Not Detected	160	Not Detected
trans-1,2-Dichloroethene	44	Not Detected	170	Not Detected
Hexane	44	Not Detected	160	Not Detected
1,1-Dichloroethane	44	Not Detected	180	Not Detected
2-Butanone (Methyl Ethyl Ketone)	44	Not Detected	130	Not Detected
cis-1,2-Dichloroethene	44	Not Detected	170	Not Detected
Tetrahydrofuran	44	Not Detected	130	Not Detected
Chloroform	44	500	210	2400
1,1,1-Trichloroethane	44	Not Detected	240	Not Detected
Cyclohexane	44	Not Detected	150	Not Detected
Carbon Tetrachloride	44	6400	280	40000
2,2,4-Trimethylpentane	44	Not Detected	200	Not Detected
Benzene	44	Not Detected	140	Not Detected
1,2-Dichloroethane	<b>4</b> 4	Not Detected	180	Not Detected
Heptane	44	Not Detected	180	Not Detected
Trichloroethene	44	Not Detected	240	Not Detected
1,2-Dichloropropane	44	Not Detected	200	Not Detected
1,4-Dioxane	180	Not Detected	630	Not Detected
Bromodichloromethane	44	Not Detected	290	Not Detected
cis-1,3-Dichloropropene	44	Not Detected	200	Not Detected
4-Methyl-2-pentanone	44	Not Detected	180	Not Detected
Toluene	44	Not Detected	160	Not Detected
trans-1,3-Dichloropropene	44	Not Detected	200	Not Detected
,	• •		_00	THUC DUIGUIGU



#### Client Sample ID: VS-1 Duplicate Lab ID#: 0610588A-01AA

MODIFIED ETA METHOD TO-15 GC/MS FULL SCAN					
File Name:	1110025		Data of Collection:	10/25/06	
PIL Factors	88.0		Date of Analysis 1	1/10/06 03:12 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
1,1,2-Trichloroethane	44	Not Detected	240	Not Detected	
Tetrachloroethene	44	1000	300	7000	
2-Hexanone	180	Not Detected	720	Not Detected	
Dibromochloromethane	44	Not Detected	370	Not Detected	
1,2-Dibromoethane (EDB)	44	Not Detected	340	Not Detected	
Chlorobenzene	44	Not Detected	200	Not Detected	
Ethyl Benzene	44	Not Detected	190	Not Detected	
m,p-Xylene	44	Not Detected	190	Not Detected	
o-Xylene	44	Not Detected	190	Not Detected	
Styrene	44	Not Detected	190	Not Detected	
Bromoform	44	Not Detected	450	Not Detected	
Cumene	44	Not Detected	220	Not Detected	
1,1,2,2-Tetrachloroethane	44	Not Detected	300	Not Detected	
Propylbenzene	44	Not Detected	220	Not Detected	
4-Ethyltoluene	44	Not Detected	220	Not Detected	
1,3,5-Trimethylbenzene	44	Not Detected	220	Not Detected	
1,2,4-Trimethylbenzene	44	Not Detected	220	Not Detected	
1,3-Dichlorobenzene	44	Not Detected	260	Not Detected	
1,4-Dichlorobenzene	44	Not Detected	260	Not Detected	
alpha-Chlorotoluene	44	Not Detected	230	Not Detected	
1,2-Dichlorobenzene	44	Not Detected	260	Not Detected	
1,2,4-Trichlorobenzene	180	Not Detected	1300	Not Detected	
Hexachlorobutadiene	180	Not Detected	1900	Not Detected	
Container Type: 1 Liter Summa Canis	ter				
_				Method	
Surrogates		%Recovery		Limits	
Toluene-d8		106		70-130	
1,2-Dichloroethane-d4		116		70-130	
4-Bromofluorobenzene		106		70-130	



#### Client Sample ID: VS-2 Lab ID#: 0610588A-02A

File Name:	f110927		Date of Collection:	10/25/06
DII Factor	8,64		Date of Analysis: 1	1/10/05 02:50 AM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	4.3	Not Detected	21	Not Detected
Freon 114	4.3	Not Detected	30	Not Detected
Chloromethane	17	Not Detected	36	Not Detected
Vinyl Chloride	4.3	Not Detected	11	Not Detected
1,3-Butadiene	4.3	Not Detected	9.6	Not Detected
Bromomethane	4.3	Not Detected	17	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
Freon 11	4.3	Not Detected	24	Not Detected
Ethanol	17	Not Detected	32	Not Detected
Freon 113	4.3	Not Detected	33	Not Detected
1,1-Dichloroethene	4.3	Not Detected	17	Not Detected
Acetone	17	Not Detected	41	Not Detected
2-Propanol	17	Not Detected	42	Not Detected
Carbon Disulfide	4.3	Not Detected	13	Not Detected
3-Chloropropene	17	Not Detected	54	Not Detected
Methylene Chloride	4.3	Not Detected	15	Not Detected
Methyl tert-butyl ether	4.3	Not Detected	16	Not Detected
rans-1,2-Dichloroethene	4.3	Not Detected	17	Not Detected
-lexane	4.3	Not Detected	15	Not Detected
I,1-Dichloroethane	4.3	Not Detected	17	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.3	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	4.3	Not Detected	17	Not Detected
「etrahydrofuran	4.3	Not Detected	13	Not Detected
Chloroform	4.3	150	21	740
,1,1-Trichloroethane	4.3	Not Detected	24	Not Detected
Cyclohexane	4.3	Not Detected	15	Not Detected
Carbon Tetrachloride	4.3	1300	27	8400
2,2,4-Trimethylpentane	4.3	Not Detected	20	Not Detected
Benzene	4.3	Not Detected	14	Not Detected
,2-Dichloroethane	4.3	Not Detected	17	Not Detected
feptane	4.3	Not Detected	18	Not Detected
Frichloroethene	4.3	Not Detected	23	Not Detected
,2-Dichloropropane	4.3	Not Detected	20	Not Detected
,4-Dioxane	17	Not Detected	62	Not Detected
Bromodichloromethane	4.3	Not Detected	29	Not Detected
is-1,3-Dichloropropene	4.3	Not Detected	20	Not Detected
l-Methyl-2-pentanone	4.3	Not Detected	18	Not Detected
Toluene	4.3	Not Detected	16	Not Detected
rans-1,3-Dichloropropene	4.3	Not Detected	20	Not Detected



#### Client Sample ID: VS-2 Lab ID#: 0610588A-02A

File Name:	11/10927		Date of Collection	10/25/06	
DII. Factori	8.64		Date of Analysis:	11/10/06 04:50 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
1,1,2-Trichloroethane	4.3	Not Detected	24	Not Detected	
Tetrachloroethene	4.3	850	29	5800	
2-Hexanone	17	Not Detected	71	Not Detected	
Dibromochloromethane	4.3	Not Detected	37	Not Detected	
1,2-Dibromoethane (EDB)	4.3	Not Detected	33	Not Detected	
Chlorobenzene	4.3	Not Detected	20	Not Detected	
Ethyl Benzene	4.3	Not Detected	19	Not Detected	
m,p-Xylene	4.3	Not Detected	19	Not Detected	
o-Xylene	4.3	Not Detected	19	Not Detected	
Styrene	4.3	Not Detected	18	Not Detected	
Bromoform	4.3	Not Detected	45	Not Detected	
Cumene	4.3	Not Detected	21	Not Detected	
1,1,2,2-Tetrachloroethane	4.3	Not Detected	30	Not Detected	
Propylbenzene	4.3	Not Detected	21	Not Detected	
4-Ethyltoluene	4.3	Not Detected	21	Not Detected	
1,3,5-Trimethylbenzene	4.3	Not Detected	21	Not Detected	
1,2,4-Trimethylbenzene	4.3	Not Detected	21	Not Detected	
1,3-Dichlorobenzene	4.3	Not Detected	26	Not Detected	
1,4-Dichlorobenzene	4.3	Not Detected	26	Not Detected	
alpha-Chlorotoluene	4.3	Not Detected	22	Not Detected	
1,2-Dichlorobenzene	4.3	Not Detected	26	Not Detected	
1,2,4-Trichlorobenzene	17	Not Detected	130	Not Detected	
Hexachlorobutadiene	17	Not Detected	180	Not Detected	
Container Type: 1 Liter Summa C	anister				
				Method	
Surrogates		%Recovery		Limits	
Toluene-d8	,	99		70-130	
1,2-Dichloroethane-d4		129		70-130	
4-Bromofluorobenzene		110		70-130	



#### Client Sample ID: VS-3 Lab ID#: 0610588A-03A

File Name:	M111021		Date of Collection:	10/25/06
Dil Factor:	119			5/40/06 09:40 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	6.0	Not Detected	29	Not Detected
Freon 114	6.0	Not Detected	42	Not Detected
Chloromethane	24	Not Detected	49	Not Detected
Vinyl Chloride	6.0	Not Detected	15	Not Detected
1,3-Butadiene	6.0	Not Detected	13	Not Detected
Bromomethane	6.0	Not Detected	23	Not Detected
Chloroethane	6.0	Not Detected	16	Not Detected
Freon 11	6.0	Not Detected	33	Not Detected
Ethanol	24	Not Detected	45	Not Detected
Freon 113	6.0	Not Detected	46	Not Detected
1,1-Dichloroethene	6.0	Not Detected	24	Not Detected
Acetone	24	Not Detected	56	Not Detected
2-Propanol	24	Not Detected	58	Not Detected
Carbon Disulfide	6.0	Not Detected	18	Not Detected
3-Chloropropene	24	Not Detected	74	Not Detected
Methylene Chloride	6.0	Not Detected	21	Not Detected
Methyl tert-butyl ether	6.0	Not Detected	21	Not Detected
trans-1,2-Dichloroethene	6.0	18	24	70
Hexane	6.0	Not Detected	21	Not Detected
1,1-Dichloroethane	6.0	Not Detected	24	Not Detected
2-Butanone (Methyl Ethyl Ketone)	6.0	Not Detected	18	Not Detected
cis-1,2-Dichloroethene	6.0	12	24	47
Tetrahydrofuran	6.0	Not Detected	18	Not Detected
Chloroform	6.0	100	29	490
1,1,1-Trichloroethane	6.0	Not Detected	32	Not Detected
Cyclohexane	6.0	Not Detected	20	Not Detected
Carbon Tetrachloride	6.0	220	37	1400
2,2,4-Trimethylpentane	6.0	Not Detected	28	Not Detected
Benzene	6.0	Not Detected	19	Not Detected
1,2-Dichloroethane	6.0	Not Detected	24	Not Detected
Heptane	6.0	Not Detected	24	Not Detected
Trichloroethene	6.0	18	32	98
1,2-Dichloropropane	6.0	Not Detected	27	Not Detected
1,4-Dioxane	24	Not Detected	86	Not Detected
Bromodichloromethane	6.0	Not Detected	40	Not Detected
cis-1,3-Dichloropropene	6.0	Not Detected	27	Not Detected
4-Methyl-2-pentanone	6.0	Not Detected	24	Not Detected
Toluene	6.0	Not Detected	22	Not Detected
trans-1,3-Dichloropropene	6.0	Not Detected	27	Not Detected



#### Client Sample ID: VS-3 Lab ID#: 0610588A-03A

File Name:				
rite yanta: Dil. Factor:	fi(11)02() (11.9		Date of Gollection Date of Analysis	10/25/06 1/40/06 09:20 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
1,1,2-Trichloroethane	6.0	Not Detected	32	Not Detected
Tetrachloroethene	6.0	1700	40	11000
2-Hexanone	24	Not Detected	97	Not Detected
Dibromochloromethane	6.0	Not Detected	51	Not Detected
1,2-Dibromoethane (EDB)	6.0	Not Detected	46	Not Detected
Chlorobenzene	6.0	Not Detected	27	Not Detected
Ethyl Benzene	6.0	Not Detected	26	Not Detected
m,p-Xylene	6.0	Not Detected	26	Not Detected
o-Xylene	6.0	Not Detected	26	Not Detected
Styrene	6.0	Not Detected	25	Not Detected
Bromoform	6.0	Not Detected	62	Not Detected
Cumene	6.0	Not Detected	29	Not Detected
1,1,2,2-Tetrachloroethane	6.0	Not Detected	41	Not Detected
Propylbenzene	6.0	Not Detected	29	Not Detected
4-Ethyltoluene	6.0	Not Detected	29	Not Detected
1,3,5-Trimethylbenzene	6.0	Not Detected	29	Not Detected
1,2,4-Trimethylbenzene	6.0	Not Detected	2 <del>9</del>	Not Detected
1,3-Dichlorobenzene	6.0	Not Detected	36	Not Detected
1,4-Dichlorobenzene	6.0	Not Detected	36	Not Detected
alpha-Chlorotoluene	6.0	Not Detected	31	Not Detected
1,2-Dichlorobenzene	6.0	Not Detected	36	Not Detected
1,2,4-Trichlorobenzene	24	Not Detected	180	Not Detected
Hexachlorobutadiene	24	Not Detected	250	Not Detected
Container Type: 1 Liter Summa Ca	anister			
Surrogates		%Recovery		Method Limits
Toluene-d8		103		70-130
1,2-Dichloroethane-d4		87		70-130
4-Bromofluorobenzene		99		70-130



## Client Sample ID: Lab Blank

## Lab ID#: 0610588A-04A

File Name:	F110908		Date of Gollection:	
Dil Factor	19.0		Date of Analysis, i	1/9/06 01:15 PM
	Rot. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	9.5	Not Detected	47	Not Detected
Freon 114	9.5	Not Detected	66	Not Detected
Chloromethane	38	Not Detected	78	Not Detected
Vinyl Chloride	9.5	Not Detected	24	Not Detected
1,3-Butadiene	9.5	Not Detected	21	Not Detected
Bromomethane	9.5	Not Detected	37	Not Detected
Chloroethane	9.5	Not Detected	25	Not Detected
Freon 11	9.5	Not Detected	53	Not Detected
Ethanol	38	Not Detected	72	Not Detected
Freon 113	9.5	Not Detected	73	Not Detected
1,1-Dichloroethene	9.5	Not Detected	38	Not Detected
Acetone	38	Not Detected	90	Not Detected
2-Propanol	38	Not Detected	93	Not Detected
Carbon Disulfide	9.5	Not Detected	30	Not Detected
3-Chloropropene	38	Not Detected	120	Not Detected
Methylene Chloride	9.5	Not Detected	33	Not Detected
Methyl tert-butyl ether	9.5	Not Detected	34	Not Detected
trans-1,2-Dichloroethene	9.5	Not Detected	38	Not Detected
Hexane	9.5	Not Detected	33	Not Detected
1,1-Dichloroethane	9.5	Not Detected	38	Not Detected
2-Butanone (Methyl Ethyl Ketone)	9.5	Not Detected	28	Not Detected
cis-1,2-Dichloroethene	9.5	Not Detected	38	Not Detected
Tetrahydrofuran	9.5	Not Detected	28	Not Detected
Chloroform	9.5	Not Detected	46	Not Detected
1,1,1-Trichloroethane	9.5	Not Detected	52	Not Detected
Cyclohexane	9.5	Not Detected	33	Not Detected
Carbon Tetrachloride	9.5	Not Detected	60	Not Detected
2,2,4-Trimethylpentane	9.5	Not Detected	44	Not Detected
Benzene	9.5	Not Detected	30	Not Detected
1,2-Dichloroethane	9.5	Not Detected	38	Not Detected
Heptane	9.5	Not Detected	39	Not Detected
Trichloroethene	9.5	Not Detected	51	Not Detected
1,2-Dichloropropane	9.5	Not Detected	44	Not Detected
1,4-Dioxane	38	Not Detected	140	Not Detected
Bromodichloromethane	9.5	Not Detected	64	Not Detected
cis-1,3-Dichloropropene	9.5	Not Detected	43	Not Detected
4-Methyl-2-pentanone	9.5	Not Detected	39	Not Detected
Toluene	9.5	Not Detected	36	Not Detected
trans-1,3-Dichloropropene	9.5	Not Detected	43	Not Detected



## Client Sample ID: Lab Blank Lab ED#: 0610588A-04A

File Name:	f110908		Date of Collection:	
911.Factor:	19:0		Date of Analysis i	1/9/06 01:15 PM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	9.5	Not Detected	52	Not Detected
Tetrachloroethene	9.5	Not Detected	64	Not Detected
2-Hexanone	38	Not Detected	160	Not Detected
Dibromochloromethane	9.5	Not Detected	81	Not Detected
1,2-Dibromoethane (EDB)	9.5	Not Detected	73	Not Detected
Chlorobenzene	9.5	Not Detected	44	Not Detected
Ethyl Benzene	9.5	Not Detected	41	Not Detected
m,p-Xylene	9.5	Not Detected	41	Not Detected
o-Xylene	9.5	Not Detected	41	Not Detected
Styrene	9.5	Not Detected	40	Not Detected
3romoform	9.5	Not Detected	98	Not Detected
Cumene	9.5	Not Detected	47	Not Detected
1,1,2,2-Tetrachloroethane	9.5	Not Detected	65	Not Detected
Propylbenzene	9.5	Not Detected	47	Not Detected
4-Ethyltoluene	9.5	Not Detected	47	Not Detected
1,3,5-Trimethylbenzene	9.5	Not Detected	47	Not Detected
1,2,4-Trimethylbenzene	9.5	Not Detected	47	Not Detected
1,3-Dichlorobenzene	9.5	Not Detected	57	Not Detected
1,4-Dichlorobenzene	9.5	Not Detected	57	Not Detected
alpha-Chlorotoluene	9.5	Not Detected	49	Not Detected
1,2-Dichlorobenzene	9.5	Not Detected	57	Not Detected
1,2,4-Trichlorobenzene	38	Not Detected	280	Not Detected
Hexachlorobutadiene	38	Not Detected	400	Not Detected
Container Type: NA - Not Applicable				
				Method
Surrogates		%Recovery		Limits
Toluene-d8		104		70-130
1,2-Dichloroethane-d4		92		70-130
4-Bromofluorobenzene		108		70-130



## Client Sample ID: Lab Blank Lab ID#: 0610588A-04B

File Name,	:1171012		Date of Collection:	SA .
DIL Factor:	1.00			1/10/06 03:36 PM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Нехапе	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected



## Client Sample ID: Lab Blank

Lab ID#: 0610588A-04B

File Name; DII. Factor:	f111012 1.00		Date of Gollection: Date of Agalysis:	NA 11/40/06 03:38 PM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Container Type: NA - Not Applicable				
Surrogates		%Recovery		Method Limits
Toluene-d8		104		70-130
1,2-Dichloroethane-d4		99		70-130
4-Bromofluorobenzene		108		70_130

Surrogates	%Recovery	Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	108	70-130



## Client Sample ID: CCV Lab ID#: 0610588A-05A

Fig. 10902 Date of Collecti	
Olk ractor: 1.00 Date of Analysi	

Compound	%Recovery
Freon 12	106
Freon 114	103
Chloromethane	108
Vinyl Chloride	100
1,3-Butadiene	101
Bromomethane	114
Chloroethane	102
Freon 11	109
Ethanol	100
Freon 113	103
1,1-Dichloroethene	108
Acetone	96
2-Propanol	100
Carbon Disulfide	99
3-Chloropropene	94
Methylene Chloride	105
Methyl tert-butyl ether	81
trans-1,2-Dichloroethene	103
Hexane	100
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	103
cis-1,2-Dichloroethene	105
Tetrahydrofuran	100
Chloroform	103
1,1,1-Trichloroethane	104
Cyclohexane	101
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	104
Benzene	101
1,2-Dichloroethane	117
Heptane	112
Trichloroethene	112
1,2-Dichloropropane	110
1,4-Dioxane	104
Bromodichloromethane	111
cis-1,3-Dichloropropene	110
4-Methyl-2-pentanone	118
Toluene	107
rans-1,3-Dichloropropene	107



## Client Sample ID: CCV

## Lab ID#: 0610588A-05A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Compound	%Recovery
1,1,2-Trichloroethane	107
Tetrachloroethene	111
2-Hexanone	106
Dibromochloromethane	116
1,2-Dibromoethane (EDB)	111
Chlorobenzene	109
Ethyl Benzene	115
m,p-Xylene	118
o-Xylene	115
Styrene	120
Bromoform	127
Cumene	119
1,1,2,2-Tetrachloroethane	118
Propylbenzene	117
4-Ethyltoluene	118
1,3,5-Trimethylbenzene	115
1,2,4-Trimethylbenzene	114
1,3-Dichlorobenzene	116
1,4-Dichlorobenzene	118
alpha-Chlorotoluene	120
1,2-Dichlorobenzene	115
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	105

## Container Type: NA - Not Applicable

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	104	70-130	
1,2-Dichloroethane-d4	98	70-130	
4-Bromofluorobenzene	111	70-130	



## Client Sample ID: CCV

## Lab ID#: 0610588A-05B

Direction.		

Compound	%Recovery
Freon 12	111
Freon 114	108
Chloromethane	108
Vinyl Chloride	96
1,3-Butadiene	103
Bromomethane	116
Chloroethane	101
Freon 11	114
Ethanol	105
Freon 113	106
1,1-Dichloroethene	109
Acetone	95
2-Propanol	103
Carbon Disulfide	104
3-Chloropropene	76
Methylene Chloride	104
Methyl tert-butyl ether	82
rans-1,2-Dichloroethene	106
Hexane	103
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	104
l'etrahydrofuran	103
Chloroform	105
1,1,1-Trichloroethane	110
Cyclohexane	105
Carbon Tetrachloride	114
2,2,4-Trimethylpentane	91
Benzene	101
,2-Dichloroethane	127
leptane	119
richloroethene	115
,2-Dichloropropane	111
,4-Dioxane	112
Bromodichloromethane	120
is-1,3-Dichloropropene	112
-Methyl-2-pentanone	121
oluene	108
rans-1,3-Dichloropropene	108



## Client Sample ID: CCV Lab ID#: 0610588A-05B

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Flie Name: P11002 Date of Collection: NA
1.00 Date of Analysis: 11//10/06 09:31 AM

Compound	%Recovery
1,1,2-Trichloroethane	105
Tetrachloroethene	113
2-Hexanone	107
Dibromochloromethane	123
1,2-Dibromoethane (EDB)	110
Chlorobenzene	108
Ethyl Benzene	114
m,p-Xylene	117
p-Xylene	116
Styrene	121
3romoform	138 Q
Cumene	100
1,1,2,2-Tetrachloroethane	118
Propylbenzene	99
4-Ethyltoluene	101
1,3,5-Trimethylbenzene	118
1,2,4-Trimethylbenzene	119
1,3-Dichlorobenzene	120
1,4-Dichlorobenzene	123
alpha-Chlorotoluene	97
1,2-Dichlorobenzene	119
1,2,4-Trichlorobenzene	114
Hexachlorobutadiene	115

#### Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	111	70-130



## Client Sample ID: LCS

## Lab\_ID#: 0610588A-06A

	Caledan NA
	Analysis: 11/0/06/10:06 AM

Compound	%Recovery
Freon 12	97
Freon 114	95
Chloromethane	100
Vinyl Chloride	95
1,3-Butadiene	99
Bromomethane	114
Chloroethane	102
Freon 11	102
Ethanol	106
Freon 113	99
1,1-Dichloroethene	102
Acetone	98
2-Propanol	101
Carbon Disulfide	108
3-Chloropropene	89
Methylene Chloride	101
Methyl tert-butyl ether	83
trans-1,2-Dichloroethene	107
Hexane	104
1,1-Dichloroethane	100
2-Butanone (Methyl Ethyl Ketone)	104
cis-1,2-Dichloroethene	100
Tetrahydrofuran	99
Chloroform	95
1,1,1-Trichloroethane	94
Cyclohexane	100
Carbon Tetrachloride	94
2,2,4-Trimethylpentane	93
3enzene	100
1,2-Dichloroethane	107
Heptane	109
Frichloroethene	106
1,2-Dichloropropane	106
1,4-Dioxane	105
Bromodichloromethane	102
cis-1,3-Dichloropropene	72
1-Methyl-2-pentanone	110
Toluene	102
rans-1,3-Dichloropropene	104



## Client Sample ID: LCS

## Lab ID#: 0610588A-06A

#### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

		Bate of Golection	
		Date of Analysis	

Compound	%Recovery
1,1,2-Trichloroethane	103
Tetrachloroethene	107
2-Hexanone	97
Dibromochloromethane	103
1,2-Dibromoethane (EDB)	103
Chlorobenzene	105
Ethyl Benzene	115
m,p-Xylene	106
o-Xylene	94
Styrene	124
Bromoform	98
Cumene	95
1,1,2,2-Tetrachloroethane	110
Propylbenzene	96
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	88
1,2,4-Trimethylbenzene	71
1,3-Dichlorobenzene	105
1,4-Dichlorobenzene	108
alpha-Chlorotoluene	92
1,2-Dichlorobenzene	102
1,2,4-Trichlorobenzene	78
Hexachlorobutadiene	80

#### Container Type: NA - Not Applicable

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	105	70-130	
1,2-Dichloroethane-d4	92	70-130	
4-Bromofluorobenzene	109	70-130	



## Client Sample ID: LCS

## Lab ID#: 0610588A-06B

File Name: £111005 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 11/10/06 10:17 AM

Compound	%Recovery
Freon 12	99
Freon 114	98
Chloromethane	101
Vinyl Chloride	93
1,3-Butadiene	101
Bromomethane	112
Chloroethane	100
Freon 11	104
Ethanol	111
Freon 113	100
1,1-Dichloroethene	102
Acetone	100
2-Propanol	104
Carbon Disulfide	110
3-Chloropropene	86
Methylene Chloride	100
Methyl tert-butyl ether	84
rans-1,2-Dichloroethene	108
Hexane	107
1,1-Dichloroethane	100
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	102
letrahydrofuran	102
Chloroform	97
,1,1-Trichloroethane	97
Cyclohexane	103
Carbon Tetrachloride	98
2,2,4-Trimethylpentane	95
Benzene	97
,2-Dichloroethane	108
Heptane	112
richloroethene	105
,2-Dichloropropane	104
,4-Dioxane	107
Bromodichloromethane	104
is-1,3-Dichloropropene	70
-Methyl-2-pentanone	113
oluene	100
rans-1,3-Dichloropropene	108



## Client Sample ID: LCS

#### Lab ID#: 0610588A-06B

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

rie Name: tita 005 Date of Collection: NA
Dit. Factor: 1.00 Date of Analysis: 11/10/06 10:17 AM

Compound	%Recovery
1,1,2-Trichloroethane	100
Tetrachloroethene	103
2-Hexanone	100
Dibromochloromethane	107
1,2-Dibromoethane (EDB)	102
Chlorobenzene	103
Ethyl Benzene	113
m,p-Xylene	104
o-Xylene	94
Styrene	132 Q
Bromoform	104
Cumene	99
1,1,2,2-Tetrachloroethane	113
Propylbenzene	101
4-Ethyltoluene	105
1,3,5-Trimethylbenzene	89
1,2,4-Trimethylbenzene	72
1,3-Dichlorobenzene	111
1,4-Dichlorobenzene	111
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	107
1,2,4-Trichlorobenzene	93
Hexachlorobutadiene	94

## Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	106	70-130

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CHAIN-OF-CUSTODY RECORD

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## Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- · Laboratory Narrative;
- Results; and
- Chain of Custody (copy).



**WORK ORDER #:** 0705262

Work Order Summary

CLIENT:

Mr. Dan Birch

Trinity Source Group

910 Mesa Grande Rd.

Aptos, CA 95003

PHONE:

831-685-1217

FAX:

DATE RECEIVED:

05/10/2007

DATE COMPLETED: 05/23/2007 BILL TO: Mr. Dan Birch

Trinity Source Group 910 Mesa Grande Rd.

Aptos, CA 95003

P.O. # 103.004.004

PROJECT#

649 Pacific Ave, Alameda Searway

Property Kyle Vagadori CONTACT:

FRACTION#	NAME	TEST	RECEIPT VAC./PRES.
01A	VS-3	Modified TO-15	2.0 "Hg
02A	VS-4	Modified TO-15	2.0 "Hg
03A	VS-5	Modified TO-15	3.0 "Hg
04A	VS-6	Modified TO-15	2.0 "Hg
05A	VS-7	Modified TO-15	2.5 "Hg
06A	VS-8	Modified TO-15	3.0 "Hg
07A	VS-9	Modified TO-15	3.0 "Hg
08A	Lab Blank	Modified TO-15	NA
08B	Lab Blank	Modified TO-15	NA
09A	CCV	Modified TO-15	NA
09B	CCV	Modified TO-15	NA
10A	LCS	Modified TO-15	NA
10B	LCS	Modified TO-15	NA

CERTIFIED BY:

Sinda d. Frumas

05/23/07

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



#### LABORATORY NARRATIVE Modified TO-15 Trinity Source Group Workorder# 0705262

Seven 1 Liter Summa Canister samples were received on May 10, 2007. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples are summarized in the below table. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	+- 30% Difference	= 30% Difference with two allowed out up to </=40%.;<br flag and narrate outliers
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

#### **Receiving Notes**

There were no receiving discrepancies.

#### Analytical Notes

There were no analytical discrepancies.

#### **Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction no performed).
  - J Estimated value.
  - E Exceeds instrument calibration range.
  - S Saturated peak.
  - Q Exceeds quality control limits.
  - U Compound analyzed for but not detected above the reporting limit.
  - UJ- Non-detected compound associated with low bias in the CCV
  - N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:



a-File was requantified b-File was quantified by a second column and detector r1-File was requantified for the purpose of reissue



# Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VS-3 Lab ID#: 0705262-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Acetone	17	17	41	41
trans-1,2-Dichloroethene	4.3	13	17	51
cis-1,2-Dichloroethene	4.3	12	17	47
Chloroform	4.3	88	21	430
Carbon Tetrachloride	4.3	240	27	1500
Trichloroethene	4.3	16	23	88
Tetrachloroethene	4.3	1400	29	9500

Client Sample ID: VS-4

Lab ID#: 0705262-02A

	Røt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Chloroform	8.6	19	42	93
Carbon Tetrachloride	8.6	2400	54	15000
Tetrachloroethene	8.6	230	59	1600

Client Sample ID: VS-5

Lab ID#: 0705262-03A

Compound	Rpt. Limit	Amount	Rpt. Limit	Amount
	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Acetone	12	13	28	30
Chloroform	3.0	340	14	1600
Carbon Tetrachloride	3.0	840	19	5300
Tetrachloroethene	3.0	250	20	1700

Client Sample ID: VS-6

Lab ID#: 0705262-04A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Chloroform	4.3	85	21	420
Carbon Tetrachloride	4.3	1200	27	7500
Tetrachloroethene	4.3	360	29	2500



## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VS-7

Lab ID#: 0705262-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 11	1.1	3.5	6.2	20
Acetone	4.4	6.7	10	16
Carbon Disulfide	1.1	2.2	3.4	6.8
Chloroform	1.1	1.7	5.4	8.3
Carbon Tetrachloride	1.1	87	6.9	550
Tetrachloroethene	1.1	280	7.5	1900

Client Sample ID: VS-8

Lab ID#: 0705262-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Acetone	4.5	7.7	11	18
Chloroform	1.1	9.0	5.5	44
Carbon Tetrachloride	1.1	15	7.0	94
Tetrachloroethene	1.1	220	7.6	1500

Client Sample ID: VS-9

Lab ID#: 0705262-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloroethane	1.1	1.6	3.0	4.1
Acetone	4.5	65	11	160
Carbon Disulfide	1.1	23	3.5	73
2-Butanone (Methyl Ethyl Ketone)	1.1	4.1	3.3	12
Chloroform	1.1	120	5.5	590
Tetrachloroethene	1.1	6.2	7.6	42



## Client Sample ID: VS-3 Lab ID#: 0705262-01A

File Name; DIL Factor;	1082221 834		Date of Collection: Date of Analysis: 5	
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	4.3	Not Detected	21	Not Detected
Freon 114	4.3	Not Detected	30	Not Detected
Chloromethane	17	Not Detected	36	Not Detected
Vinyl Chloride	4.3	Not Detected	11	Not Detected
1,3-Butadiene	4.3	Not Detected	9.6	Not Detected
Bromomethane	4.3	Not Detected	17	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
Freon 11	4.3	Not Detected	24	Not Detected
Ethanol	17	Not Detected	32	Not Detected
Freon 113	4.3	Not Detected	33	Not Detected
1,1-Dichloroethene	4.3	Not Detected	17	Not Detected
Acetone	17	17	41	41
2-Propanol	17	Not Detected	42	Not Detected
Carbon Disulfide	4.3	Not Detected	13	Not Detected
3-Chloropropene	17	Not Detected	54	Not Detected
Methylene Chloride	4.3	Not Detected	15	Not Detected
Methyl tert-butyl ether	4.3	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	4.3	13	17	51
Hexane	4.3	Not Detected	15	Not Detected
1,1-Dichloroethane	4.3	Not Detected	17	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.3	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	4.3	12	17	47
Tetrahydrofuran	4.3	Not Detected	13	Not Detected
Chloroform	4.3	88	21	430
1,1,1-Trichloroethane	4.3	Not Detected	24	Not Detected
Cyclohexane	4.3	Not Detected	15	Not Detected
Carbon Tetrachloride	4.3	240	27	1500
2,2,4-Trimethylpentane	4.3	Not Detected	20	Not Detected
Benzene	4.3	Not Detected	14	Not Detected
1,2-Dichloroethane	4.3	Not Detected	17	Not Detected
Heptane	4.3	Not Detected	18	Not Detected
Trichloroethene	4.3	16	23	88
1,2-Dichloropropane	4.3	Not Detected	20	Not Detected
1,4-Dioxane	17	Not Detected	62	Not Detected
Bromodichloromethane	4.3	Not Detected	29	Not Detected
cis-1,3-Dichloropropene	4.3	Not Detected	20	Not Detected
4-Methyl-2-pentanone	4.3	Not Detected	18	Not Detected
Toluene	4.3	Not Detected	16	Not Detected
trans-1,3-Dichloropropene	4.3	Not Detected	20	Not Detected



Client Sample ID: VS-3 Lab ID#: 0705262-01A

File Name: DB. Factor:	1052224 8,64		Date of Collection: Date of Analysis: 5	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	4.3	Not Detected	24	Not Detected
Tetrachloroethene	4.3	1400	29	9500
2-Hexanone	17	Not Detected	71	Not Detected
Dibromochloromethane	4.3	Not Detected	37	Not Detected
1,2-Dibromoethane (EDB)	4.3	Not Detected	33	Not Detected
Chlorobenzene	4.3	Not Detected	20	Not Detected
Ethyl Benzene	4.3	Not Detected	19	Not Detected
m,p-Xylene	4.3	Not Detected	19	Not Detected
o-Xylene	4.3	Not Detected	19	Not Detected
Styrene	4.3	Not Detected	18	Not Detected
Bromoform	4.3	Not Detected	45	Not Detected
Cumene	4.3	Not Detected	21	Not Detected
1,1,2,2-Tetrachloroethane	4.3	Not Detected	30	Not Detected
Propylbenzene	4.3	Not Detected	21	Not Detected
4-Ethyltoluene	4.3	Not Detected	21	Not Detected
1,3,5-Trimethylbenzene	4.3	Not Detected	21	Not Detected
1,2,4-Trimethylbenzene	4.3	Not Detected	21	Not Detected
1,3-Dichlorobenzene	4.3	Not Detected	26	Not Detected
1,4-Dichlorobenzene	4.3	Not Detected	26	Not Detected
alpha-Chlorotoluene	4.3	Not Detected	22	Not Detected
1,2-Dichlorobenzene	4.3	Not Detected	26	Not Detected
1,2,4-Trichlorobenzene	17	Not Detected	130	Not Detected
	17	Not Detected	180	Not Detected

	wethou
%Recovery	Limits
96	70-130
94	70-130
91	70-130
	96 94



## Client Sample ID: VS-4 Lab ID#: 0705262-02A

Fils Name: DII. Factor:	1052223 17:3		Date of Collection: Date of Analysis:	
<del></del>	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	8.6	Not Detected	43	Not Detected
Freon 114	8.6	Not Detected	60	Not Detected
Chloromethane	35	Not Detected	71	Not Detected
Vinyl Chloride	8.6	Not Detected	22	Not Detected
1,3-Butadiene	8.6	Not Detected	19	Not Detected
Bromomethane	8.6	Not Detected	34	Not Detected
Chloroethane	8.6	Not Detected	23	Not Detected
Freon 11	8.6	Not Detected	49	Not Detected
Ethanol	35	Not Detected	65	Not Detected
Freon 113	8.6	Not Detected	66	Not Detected
1,1-Dichloroethene	8.6	Not Detected	34	Not Detected
Acetone	35	Not Detected	82	Not Detected
2-Propanol	35	Not Detected	85	Not Detected
Carbon Disulfide	8.6	Not Detected	27	Not Detected
3-Chloropropene	35	Not Detected	110	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
Methyl tert-butyl ether	8.6	Not Detected	31	Not Detected
trans-1,2-Dichloroethene	8.6	Not Detected	34	Not Detected
Hexane	8.6	Not Detected	30	Not Detected
1,1-Dichloroethane	8.6	Not Detected	35	Not Detected
2-Butanone (Methyl Ethyl Ketone)	8.6	Not Detected	26	Not Detected
cis-1,2-Dichloroethene	8.6	Not Detected	34	Not Detected
Tetrahydrofuran	8.6	Not Detected	26	Not Detected
Chloroform	8.6	19	42	93
1,1,1-Trichloroethane	8.6	Not Detected	47	Not Detected
Cyclohexane	8.6	Not Detected	30	Not Detected
Carbon Tetrachloride	8.6	2400	54	15000
2,2,4-Trimethylpentane	8.6	Not Detected	40	Not Detected
Benzene	8.6	Not Detected	28	Not Detected
1,2-Dichloroethane	8.6	Not Detected	35	Not Detected
Heptane	8.6	Not Detected	35	Not Detected
Trichloroethene	8.6	Not Detected	46	Not Detected
1,2-Dichloropropane	8.6	Not Detected	40	Not Detected
1,4-Dioxane	35	Not Detected	120	Not Detected
Bromodichloromethane	8.6	Not Detected	58	Not Detected
cis-1,3-Dichloropropene	8.6	Not Detected	39	Not Detected
4-Methyl-2-pentanone	8.6	Not Detected	35	Not Detected
Toluene	8.6	Not Detected	32	Not Detected
trans-1,3-Dichloropropene	8.6	Not Detected	39	Not Detected



Client Sample ID: VS-4 Lab ID#: 0705262-02A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	1052223 17.5		Date of Collection	6. 587/07/ - 5928/07/08 551:AW
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	8.6	Not Detected	47	Not Detected
Tetrachloroethene	8.6	230	59	1600
2-Hexanone	35	Not Detected	140	Not Detected
Dibromochloromethane	8.6	Not Detected	74	Not Detected
1,2-Dibromoethane (EDB)	8.6	Not Detected	66	Not Detected
Chlorobenzene	8.6	Not Detected	40	Not Detected
Ethyl Benzene	8.6	Not Detected	38	Not Detected
m,p-Xylene	8.6	Not Detected	38	Not Detected
o-Xylene	8.6	Not Detected	38	Not Detected
Styrene	8.6	Not Detected	37	Not Detected
Bromoform	8.6	Not Detected	89	Not Detected
Cumene	8.6	Not Detected	42	Not Detected
1,1,2,2-Tetrachloroethane	8.6	Not Detected	59	Not Detected
Propylbenzene	8.6	Not Detected	42	Not Detected
4-Ethyltoluene	8.6	Not Detected	42	Not Detected
1,3,5-Trimethylbenzene	8.6	Not Detected	42	Not Detected
1,2,4-Trimethylbenzene	8.6	Not Detected	42	Not Detected
1,3-Dichlorobenzene	8.6	Not Detected	52	Not Detected
1,4-Dichlorobenzene	8.6	Not Detected	52	Not Detected
alpha-Chlorotoluene	8.6	Not Detected	45	Not Detected
1,2-Dichlorobenzene	8.6	Not Detected	52	Not Detected
1,2,4-Trichlorobenzene	35	Not Detected	260	Not Detected
-lexachlorobutadiene	35	Not Detected	370	Not Detected

#### Container Type: 1 Liter Summa Canister

		Method
Surrogates	%Recovery	Limits
Toluene-d8	93	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	90	70-130



## Client Sample ID: VS-5 Lab ID#: 0705262-03A

File Name: DB: Factor:	1052225 5.97		Pare of Collection	
	Rpt. Limit	Amount	Date of Analysis: 5  Rpt. Limit	
Compound	(ppbv)	Amount (ppbv)	(uG/m3)	Amount (uG/m3)
Freon 12	3.0	Not Detected	15	Not Detected
Freon 114	3.0	Not Detected	21	Not Detected  Not Detected
Chloromethane	12	Not Detected	25	Not Detected
Vinyl Chloride	3.0	Not Detected	7.6	Not Detected
1,3-Butadiene	3.0	Not Detected	6.6	Not Detected
Bromomethane	3.0	Not Detected	12	Not Detected
Chloroethane	3.0	Not Detected	7.9	Not Detected
Freon 11	3.0	Not Detected	7. <del>9</del> 17	Not Detected  Not Detected
Ethanol	12	Not Detected	22	Not Detected
Freon 113	3.0	Not Detected	23	
1,1-Dichloroethene	3.0	Not Detected	23 12	Not Detected Not Detected
Acetone	12	13	28	30
2-Propanol	12	Not Detected	20 29	Not Detected
Carbon Disulfide	3.0	Not Detected	9.3	Not Detected
3-Chloropropene	3.0 12	Not Detected	9.3 37	Not Detected Not Detected
t	3.0			···········
Methylene Chloride		Not Detected Not Detected	10	Not Detected
Methyl tert-butyl ether	3.0 3.0		11	Not Detected
trans-1,2-Dichloroethene		Not Detected	12	Not Detected
Hexane	3.0	Not Detected	10	Not Detected
1,1-Dichloroethane	3.0	Not Detected	12	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.0	Not Detected	8.8	Not Detected
cis-1,2-Dichloroethene	3.0	Not Detected	12	Not Detected
Tetrahydrofuran	3.0	Not Detected	8.8	Not Detected
Chloroform	3.0	340	14	1600
1,1,1-Trichloroethane	3.0	Not Detected	16	Not Detected
Cyclohexane	3.0	Not Detected	10	Not Detected
Carbon Tetrachloride	3.0	840	19	5300
2,2,4-Trimethylpentane	3.0	Not Detected	14	Not Detected
Benzene	3.0	Not Detected	9.5	Not Detected
1,2-Dichloroethane	3.0	Not Detected	12	Not Detected
Heptane	3.0	Not Detected	12	Not Detected
Trichloroethene	3.0	Not Detected	16	Not Detected
1,2-Dichloropropane	3.0	Not Detected	14	Not Detected
1,4-Dioxane	12	Not Detected	43	Not Detected
Bromodichloromethane	3.0	Not Detected	20	Not Detected
cis-1,3-Dichloropropene	3.0	Not Detected	14	Not Detected
4-Methyl-2-pentanone	3.0	Not Detected	12	Not Detected
Toluene	3.0	Not Detected	11	Not Detected
trans-1,3-Dichloropropene	3.0	Not Detected	14	Not Detected



#### Client Sample ID: VS-5 Lab ID#: 0705262-03A

File Name: Dil. Factor:	10522225 597		Date of Gollection: Date of Analysis: 5	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	3.0	Not Detected	16	Not Detected
Tetrachloroethene	3.0	250	20	1700
2-Hexanone	12	Not Detected	49	Not Detected
Dibromochloromethane	3.0	Not Detected	25	Not Detected
1,2-Dibromoethane (EDB)	3.0	Not Detected	23	Not Detected
Chlorobenzene	3.0	Not Detected	14	Not Detected
Ethyl Benzene	3.0	Not Detected	13	Not Detected
m,p-Xylene	3.0	Not Detected	13	Not Detected
o-Xylene	3.0	Not Detected	13	Not Detected
Styrene	3.0	Not Detected	13	Not Detected
Bromoform	3.0	Not Detected	31	Not Detected
Cumene	3.0	Not Detected	15	Not Detected
1,1,2,2-Tetrachloroethane	3.0	Not Detected	20	Not Detected
Propylbenzene	3.0	Not Detected	15	Not Detected
4-Ethyltoluene	3.0	Not Detected	15	Not Detected
1,3,5-Trimethylbenzene	3.0	Not Detected	15	Not Detected
1,2,4-Trimethylbenzene	3.0	Not Detected	15	Not Detected
1,3-Dichlorobenzene	3.0	Not Detected	18	Not Detected
1,4-Dichlorobenzene	3.0	Not Detected	18	Not Detected
alpha-Chlorotoluene	3.0	Not Detected	15	Not Detected
1,2-Dichlorobenzene	3.0	Not Detected	18	Not Detected
1,2,4-Trichlorobenzene	12	Not Detected	89	Not Detected
Hexachlorobutadiene	. 12	Not Detected	130	Not Detected
Container Type: 1 Liter Summa (	Canister			
_				Method
Surrogates		%Recovery		Limits
Toluene-d8		93		70-130
1,2-Dichloroethane-d4		104		70-130
4-Bromofluorobenzene		89		70-130



## Client Sample ID: VS-6 Lab ID#: 0705262-04A

File Name: DN. Factor:	1052227 8,64		Date:oi_Collection: Date:of_Analysis:=5	
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	Amount (ppbv)	kpt. Limit (uG/m3)	Amount (uG/m3)
<u> </u>				· · · · · · · · · · · · · · · · · · ·
Freon 12	4.3	Not Detected	21	Not Detected
Freon 114	4.3	Not Detected	30	Not Detected
Chloromethane	17	Not Detected	36	Not Detected
Vinyl Chloride	4.3	Not Detected	11	Not Detected
1,3-Butadiene	4.3	Not Detected	9.6	Not Detected
Bromomethane	4.3	Not Detected	17	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
Freon 11	4.3	Not Detected	24	Not Detected
Ethanol	17	Not Detected	32	Not Detected
reon 113	4.3	Not Detected	33	Not Detected
1,1-Dichloroethene	4.3	Not Detected	17	Not Detected
Acetone	17	Not Detected	41	Not Detected
2-Propanol	17	Not Detected	42	Not Detected
Carbon Disulfide	4.3	Not Detected	13	Not Detected
3-Chloropropene	17	Not Detected	54	Not Detected
Methylene Chloride	4.3	Not Detected	15	Not Detected
Methyl tert-butyl ether	4.3	Not Detected	16	Not Detected
rans-1,2-Dichloroethene	4.3	Not Detected	17	Not Detected
Hexane	4.3	Not Detected	15	Not Detected
1,1-Dichloroethane	4.3	Not Detected	17	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.3	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	4.3	Not Detected	17	Not Detected
Tetrahydrofuran	4.3	Not Detected	13	Not Detected
Chloroform	4.3	85	21	420
1,1,1-Trichloroethane	4.3	Not Detected	24	Not Detected
Cyclohexane	4.3	Not Detected	15	Not Detected
Carbon Tetrachloride	4.3	1200	27	7500
2,2,4-Trimethylpentane	4.3	Not Detected	20	Not Detected
Benzene	4.3	Not Detected	14	Not Detected
1,2-Dichloroethane	4.3	Not Detected	17	Not Detected
-leptane	4.3	Not Detected	18	Not Detected
Frichloroethene	4.3	Not Detected	23	Not Detected
I,2-Dichloropropane	4.3	Not Detected	20	Not Detected
I,4-Dioxane	17	Not Detected	62	Not Detected
Bromodichloromethane	4.3	Not Detected	29	Not Detected
cis-1,3-Dichloropropene	4.3	Not Detected	20	Not Detected
I-Methyl-2-pentanone	4.3	Not Detected	18	Not Detected
Foluene	4.3	Not Detected	16	Not Detected
rans-1,3-Dichloropropene	4.3	Not Detected	20	Not Detected



## Client Sample ID: VS-6 Lab ID#: 0705262-04A

File Name: DR. Factor:	10/52/27 8.64		Date of Collection.  Date of Analysis 3	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	4.3	Not Detected	24	Not Detected
Tetrachloroethene	4.3	360	29	2500
2-Hexanone	17	Not Detected	71	Not Detected
Dibromochloromethane	4.3	Not Detected	37	Not Detected
1,2-Dibromoethane (EDB)	4.3	Not Detected	33	Not Detected
Chlorobenzene	4.3	Not Detected	20	Not Detected
Ethyl Benzene	4.3	Not Detected	19	Not Detected
m,p-Xylene	4.3	Not Detected	19	Not Detected
o-Xylene	4.3	Not Detected	19	Not Detected
Styrene	4.3	Not Detected	18	Not Detected
Bromoform	4.3	Not Detected	45	Not Detected
Cumene	4.3	Not Detected	21	Not Detected
1,1,2,2-Tetrachloroethane	4.3	Not Detected	30	Not Detected
Propylbenzene	4.3	Not Detected	21	Not Detected
4-Ethyltoluene	4.3	Not Detected	21	Not Detected
1,3,5-Trimethylbenzene	4.3	Not Detected	21	Not Detected
1,2,4-Trimethylbenzene	4.3	Not Detected	21	Not Detected
1,3-Dichlorobenzene	4.3	Not Detected	26	Not Detected
1,4-Dichlorobenzene	4.3	Not Detected	26	Not Detected
alpha-Chlorotoluene	4.3	Not Detected	22	Not Detected
1,2-Dichlorobenzene	4.3	Not Detected	26	Not Detected
1,2,4-Trichlorobenzene	17	Not Detected	130	Not Detected
Hexachlorobutadiene	17	Not Detected	180	Not Detected
Container Type: 1 Liter Summa (	Canister			
Surrogates	_	%Recovery		Method Limits
Toluene-d8		93		70-130
1,2-Dichloroethane-d4		99		70-130

		Method
Surrogates	%Recovery	Limits
Toluene-d8	93	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	89	70-130



Client Sample ID: VS-7 Lab ID#: 0705262-05A

File Name: Bil. Factor:	1052307 2:20		Date of Collection: Date of Analysis: 5	**********************************
MARKET SALES		A 4		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.1	Not Detected	5.4	Not Detected
Freon 114	1.1	Not Detected	7.7	Not Detected
Chloromethane	4.4	Not Detected	9.1	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	1,1	Not Detected	4.3	Not Detected
Chloroethane	1.1	Not Detected	2.9	Not Detected
Freon 11	1.1	3.5	6.2	20
Ethanol	4.4	Not Detected	8.3	Not Detected
Freon 113	1.1	Not Detected	8.4	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	4.4	6.7	10	16
2-Propanol	4.4	Not Detected	11	Not Detected
Carbon Disulfide	1.1	2.2	3.4	6.8
3-Chloropropene	4.4	Not Detected	14	Not Detected
Methylene Chloride	1.1	Not Detected	3.8	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1,1	Not Detected	3.2	Not Detected
Chloroform	1.1	1.7	5.4	8.3
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Cyclohexane	1,1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	87	6.9	550
2,2,4-Trimethylpentane	1.1	Not Detected	5.1	Not Detected
Benzene	1.1	Not Detected	3.5	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	5.9	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.1	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.4	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.5	Not Detected
Foluene	1.1	Not Detected	4.1	Not Detected
rans-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected



## Client Sample ID: VS-7 Lab ID#: 0705262-05A

File Name: DII. Factor:	1052307 2:20		Date of Collection: Date of Analysis: :	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Tetrachloroethene	1.1	280	7.5	1900
2-Hexanone	4.4	Not Detected	18	Not Detected
Dibromochloromethane	1.1	Not Detected	9.4	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.4	Not Detected
Chlorobenzene	1.1	Not Detected	5.1	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
m,p-Xylene	1.1	Not Detected	4.8	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
Styrene	1.1	Not Detected	4.7	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.4	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.6	Not Detected
Propylbenzene	1.1	Not Detected	5.4	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.7	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,2,4-Trichlorobenzene	4.4	Not Detected	33	Not Detected
Hexachlorobutadiene	4.4	Not Detected	47	Not Detected
Container Type: 1 Liter Summa (	Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8				
		96		70-130 70-430
1,2-Dichloroethane-d4		95		70-130
4-Bromofluorobenzene		90		70-130



Client Sample ID: VS-8 Lab ID#: 0705262-06A

File Name:	1052308		Date of Gollection:	
Dil Factor:	2:24		Date of Applysis:	JESUT OF BERN
_	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.8	Not Detected
Chloromethane	4.5	Not Detected	9.2	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	1.1	Not Detected	4.3	Not Detected
Chloroethane	1.1	Not Detected	3.0	Not Detected
Freon 11	1.1	Not Detected	6.3	Not Detected
Ethanol	4.5	Not Detected	8.4	Not Detected
Freon 113	1.1	Not Detected	8.6	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	4.5	7.7	· 11	18
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	1.1	Not Detected	3.5	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	1.1	Not Detected	3.9	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	9.0	5.5	44
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	15	7.0	94
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.5	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	1.1	Not Detected	4.2	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected



## Client Sample ID: VS-8 Lab ID#: 0705262-06A

File Name:	1052308		Date of Collection:	***************************************
Dil. Factor:	2.24		Date of Analysis; 5	123/07 OF 36 FM
Compound	Røt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	220	7.6	1500
2-Hexanone	4.5	Not Detected	18	Not Detected
Dibromochloromethane	1.1	Not Detected	9.5	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.6	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.5	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.7	Not Detected
Propylbenzene	1.1	Not Detected	5.5	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.5	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected
Container Type: 1 Liter Summa	Canister			
				Method
Surrogates		%Recovery		Limits
Toluene-d8		95		70-130
1,2-Dichloroethane-d4		95		70-130
4-Bromofluorobenzene		89		70-130



## Client Sample ID: VS-9 Lab ID#: 0705262-07A

File Name:	1052230		Date of Gollection:	
DIL Factor:	22		Date of Arraysis5	izsiot otest an
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.8	Not Detected
Chloromethane	4.5	Not Detected	9.2	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	1.1	Not Detected	4.3	Not Detected
Chloroethane	1.1	1.6	3.0	4.1
Freon 11	1.1	Not Detected	6.3	Not Detected
Ethanol	4.5	Not Detected	8.4	Not Detected
Freon 113	1.1	Not Detected	8.6	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	4.5	65	11	160
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	1.1	23	3.5	<b>7</b> 3
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	1.1	Not Detected	3.9	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	4.1	3.3	12
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	. 1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	120	5.5	590
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.5	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1,1	Not Detected	4.6	Not Detected
Toluene	1.1	Not Detected	4.2	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected



Client Sample ID: VS-9 Lab ID#: 0705262-07A

File Name: Dit. Factor:	1009525360 52524		■ Pate of Analysis:	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	6.2	7.6	42
2-Hexanone	4.5	Not Detected	18	Not Detected
Dibromochloromethane	1.1	Not Detected	9.5	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.6	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.5	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.7	Not Detected
Propylbenzene	1.1	Not Detected	5.5	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.5	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected
Container Type: 1 Liter Summa C	anister			
Surrogates		%Recovery		Method Limits
Toluene-d8		93		70-130
1,2-Dichloroethane-d4		94		70-130
4-Bromofluorobenzene		92		70-130



## Client Sample ID: Lab Blank Lab ID#: 0705262-08A

File Name: Dil. Factor:	105/2205 1.00		Date of Grallestia; H	
picragor.		Amount	Rpt. Limit	Amount
Compound	Røt. Limit (ppbv)	(ppbv)	(uG/m3)	(uG/m3)
· · · · · · · · · · · · · · · · · · ·	0.50		2.5	Not Detected
Freen 12	0.50	Not Detected Not Detected	2.5 3.5	Not Detected
Freon 114	2.0	Not Detected	3.5 4.1	Not Detected
Chloromethane				Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
наль- г,о-истогоргореле	0.50	MOI Defected	۷.۵	MOI DETECTED



#### Client Sample ID: Lab Blank Lab ID#: 0705262-08A

File Name: DN. Factor:	1052205 1:00		Date of Gollection: Date of Analysis: 5	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Container Type: NA - Not Applicable				
Surrogates		%Recovery		Method Limits
Toluene-d8		98		70-130
1,2-Dichloroethane-d4		95		70-130
4-Bromofluorobenzene		92		70-130



## Client Sample ID: Lab Blank Lab ID#: 0705262-08B

MODIFIED EPA WETHOD TO-15 GC/MS FULL SCAN					
File Name: 1052306 Date of Collection: NA Date of Analysis: 5/23/07.11:49.AM					
_	Rpt. Limit	Amount	Rpt. Limit	Amount	
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)	
Freon 12	0.50	Not Detected	2.5	Not Detected	
Freon 114	0.50	Not Detected	3.5	Not Detected	
Chloromethane	2.0	Not Detected	4,1	Not Detected	
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected	
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected	
Bromomethane	0.50	Not Detected	1.9	Not Detected	
Chloroethane	0.50	Not Detected	1.3	Not Detected	
Freon 11	0.50	Not Detected	2.8	Not Detected	
Ethanol	2.0	Not Detected	3.8	Not Detected	
Freon 113	0.50	Not Detected	3.8	Not Detected	
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected	
Acetone	2.0	Not Detected	4.8	Not Detected	
2-Propanol	2.0	Not Detected	4.9	Not Detected	
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected	
3-Chloropropene	2.0	Not Detected	6.3	Not Detected	
Methylene Chloride	0.50	Not Detected	1.7	Not Detected	
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected	
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected	
Hexane	0.50	Not Detected	1.8	Not Detected	
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected	
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected	
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected	
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected	
Chloroform	0.50	Not Detected	2.4	Not Detected	
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected	
Cyclohexane	0.50	Not Detected	1.7	Not Detected	
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected	
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected	
Benzene	0.50	Not Detected	1.6	Not Detected	
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected	
Heptane	0.50	Not Detected	2.0	Not Detected	
Trichloroethene	0.50	Not Detected	2.7	Not Detected	
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected	
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected	
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected	
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected	
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected	
Toluene	0.50	Not Detected	1.9	Not Detected	
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected	



#### Client Sample ID: Lab Blank Lab ID#: 0705262-08B

File Name: DIL Factor:	1615728(08 1.00		Date of Collection: Date of Analysis:	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Container Type: NA - Not Applicat	ble			Method
P		0/15		1

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	92	70-130



#### Client Sample ID: CCV Lab ID#: 0705262-09A

Compound	%Recovery
Freon 12	91
Freon 114	89
Chloromethane	96
Vinyl Chloride	96
1,3-Butadiene	100
Bromomethane	97
Chloroethane	92
Freon 11	98
Ethanol	95
Freon 113	95
1,1-Dichloroethene	98
Acetone	98
2-Propanol	102
Carbon Disulfide	86
3-Chloropropene	99
Methylene Chloride	93
Methyl tert-butyl ether	90
trans-1,2-Dichloroethene	100
Hexane	104
1,1-Dichloroethane	105
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	106
Tetrahydrofuran	102
Chloroform	109
1,1,1-Trichloroethane	113
Cyclohexane	112
Carbon Tetrachloride	117
2,2,4-Trimethylpentane	108
Benzene	106
1,2-Dichloroethane	108
Heptane	106
Trichloroethene	108
1,2-Dichloropropane	106
1,4-Dioxane	106
Bromodichloromethane	114
cis-1,3-Dichloropropene	110
4-Methyl-2-pentanone	114
Toluene	107
rans-1,3-Dichloropropene	113



#### Client Sample ID: CCV Lab ID#: 0705262-09A

#### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Compound	%Recovery
1,1,2-Trichloroethane	110
Tetrachloroethene	111
2-Hexanone	110
Dibromochloromethane	118
1,2-Dibromoethane (EDB)	116
Chlorobenzene	110
Ethyl Benzene	108
m,p-Xylene	109
o-Xylene	108
Styrene	118
Bromoform	122
Cumene	108
1,1,2,2-Tetrachloroethane	108
Propylbenzene	115
4-Ethyltoluene	118
1,3,5-Trimethylbenzene	108
1,2,4-Trimethylbenzene	107
1,3-Dichlorobenzene	107
1,4-Dichlorobenzene	110
alpha-Chlorotoluene	118
1,2-Dichlorobenzene	104
1,2,4-Trichlorobenzene	99
Hexachlorobutadiene	102

#### Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	104	70-130



#### Client Sample ID: CCV Lab ID#: 0705262-09B

Compound	%Recovery
Freon 12	100
Freon 114	97
Chloromethane	99
Vinyl Chloride	96
1,3-Butadiene	102
Bromomethane	93
Chloroethane	92
Freon 11	105
Ethanol	91
Freon 113	101
1,1-Dichloroethene	98
Acetone	99
2-Propanol	97
Carbon Disulfide	88
3-Chloropropene	96
Methylene Chloride	90
Methyl tert-butyl ether	78
trans-1,2-Dichloroethene	98
Hexane	99
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	104
Tetrahydrofuran	97
Chloroform	110
1,1,1-Trichloroethane	112
Cyclohexane	110
Carbon Tetrachloride	116
2,2,4-Trimethylpentane	103
Benzene	105
1,2-Dichloroethane	105
Heptane	102
Trichloroethene	106
1,2-Dichloropropane	105
1,4-Dioxane	102
Bromodichloromethane	114
cis-1,3-Dichloropropene	108
4-Methyl-2-pentanone	108
l'oluene l'alle	107
rans-1,3-Dichloropropene	112



#### Client Sample ID: CCV Lab ID#: 0705262-09B

#### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 1052302	
Dil. Factor:	

Compound	%Recovery
1,1,2-Trichloroethane	111
Tetrachloroethene	108
2-Hexanone	102
Dibromochloromethane	117
1,2-Dibromoethane (EDB)	116
Chlorobenzene	109
Ethyl Benzene	106
m,p-Xylene	108
o-Xylene	105
Styrene	114
Bromoform	118
Cumene	105
1,1,2,2-Tetrachloroethane	107
Propylbenzene	112
4-Ethyltoluene	114
1,3,5-Trimethylbenzene	102
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	101
1,4-Dichlorobenzene	105
alpha-Chlorotoluene	112
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	83
Hexachlorobutadiene	91

#### Container Type: NA - Not Applicable

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	100	70-130	
1,2-Dichloroethane-d4	97	70-130	
4-Bromofluorobenzene	100	70-130	



#### Client Sample ID: LCS Lab ID#: 0705262-10A

File Name: 1052304 Date of Collection: NA	
- Ur. 3CO	

Compound	%Recovery
Freon 12	96
Freon 114	97
Chloromethane	100
Vinyl Chloride	104
1,3-Butadiene	107
Bromomethane	99
Chloroethane	100
Freon 11	110
Ethanol	115
Freon 113	123
1,1-Dichloroethene	118
Acetone	109
2-Propanol	119
Carbon Disulfide	96
3-Chloropropene	109
Methylene Chloride	110
Methyl tert-butyl ether	96
trans-1,2-Dichloroethene	110
Hexane	114
1,1-Dichloroethane	121
2-Butanone (Methyl Ethyl Ketone)	121
cis-1,2-Dichloroethene	118
Tetrahydrofuran	111
Chloroform	124
1,1,1-Trichloroethane	127
Cyclohexane	125
Carbon Tetrachloride	131 Q
2,2,4-Trimethylpentane	116
Benzene	115
1,2-Dichloroethane	119
Heptane	113
Trichloroethene	116
1,2-Dichloropropane	114
1,4-Dioxane	117
Bromodichloromethane	124
cis-1,3-Dichloropropene	117
4-Methyl-2-pentanone	128
Toluene	121
trans-1,3-Dichloropropene	<b>1</b> 19



#### Client Sample ID: LCS Lab ID#: 0705262-10A

#### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Compound	%Recovery
1,1,2-Trichloroethane	119
Tetrachloroethene	119
2-Hexanone	133
Dibromochloromethane	127
1,2-Dibromoethane (EDB)	120
Chlorobenzene	116
Ethyl Benzene	114
m,p-Xylene	114
o-Xylene	112
Styrene	125
Bromoform	126
Cumene	116
1,1,2,2-Tetrachloroethane	112
Propylbenzene	123
4-Ethyltoluene	125
1,3,5-Trimethylbenzene	113
1,2,4-Trimethylbenzene	112
1,3-Dichlorobenzene	112
1,4-Dichlorobenzene	115
alpha-Chlorotoluene	128
1,2-Dichlorobenzene	107
1,2,4-Trichlorobenzene	92
Hexachlorobutadiene	92

#### Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	100	70-130	
1,2-Dichloroethane-d4	102	70-130	
4-Bromofluorobenzene	103	70-130	



#### Client Sample ID: LCS Lab ID#: 0705262-10B

Compound	%Recovery
Freon 12	104
Freon 114	100
Chloromethane	106
Vinyl Chloride	108
1,3-Butadiene	111
Bromomethane	105
Chloroethane	100
Freon 11	109
Ethanol	116
Freon 113	121
1,1-Dichloroethene	121
Acetone	110
2-Propanol	125
Carbon Disulfide	96
3-Chloropropene	110
Methylene Chloride	111
Methyl tert-butyl ether	105
rans-1,2-Dichloroethene	110
Hexane	115
1,1-Dichloroethane	122
2-Butanone (Methyl Ethyl Ketone)	120
cis-1,2-Dichloroethene	118
Гetrahydrofuran	114
Chloroform	124
1,1,1-Trichloroethane	126
Cyclohexane	123
Carbon Tetrachloride	130
2,2,4-Trimethylpentane	115
Benzene	116
,2-Dichloroethane	118
	114
Frichloroethene	115
,2-Dichloropropane	114
,4-Dioxane	118
Bromodichloromethane	124
cis-1,3-Dichloropropene	116
1-Methyl-2-pentanone	126
Toluene	120
rans-1,3-Dichloropropene	121



#### Client Sample ID: LCS Lab ID#: 0705262-10B

#### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Take with the state of the stat
DIL Factor: 1.00 Date of Analysis: 5/22/07-10-07 AM

Compound	%Recovery
1,1,2-Trichloroethane	119
Tetrachloroethene	120
2-Hexanone	136
Dibromochloromethane	127
1,2-Dibromoethane (EDB)	121
Chlorobenzene	118
Ethyl Benzene	115
m,p-Xylene	115
o-Xylene	112
Styrene	126
Bromoform	130
Cumene	116
1,1,2,2-Tetrachloroethane	111
Propylbenzene	122
4-Ethyltoluene	124
1,3,5-Trimethylbenzene	115
1,2,4-Trimethylbenzene	112
1,3-Dichlorobenzene	111
1,4-Dichlorobenzene	114
alpha-Chlorotoluene	128
1,2-Dichlorobenzene	107
1,2,4-Trichlorobenzene	97
Hexachlorobutadiene	98

#### Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	103	70-130



#### **CHAIN-OF-CUSTODY RECORD**

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Page <u></u> of <u>1</u>

Project Manager <u>Daw Kein Sina</u> Collected by: (Print and Sign) <u>Dam Birch</u> Company 7811/11/1504/3/6/6 GRUVY, IM Email day Address 110 Mag Grands Add City <u>APTOS</u> Phone <u>\$31-685-1217</u> Fax 685	_State 🗥_		Project# <u>6</u> 1	3. <del>903</del> 004 3.903 001	Time: Pressurization Gas:  Specify Name   Pressurization   Pressurization
Lab I.D. Field Sample I.D. (Location)	Can#	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum
VS-4 VS-5 VS-6 VS-7 3	23834 2708 2708 3292 14168 15657 2891	5/7/07	//37 /200 /230 /250 /325 /358 /040	TO-15 TO-15 TO-15 TO-15 TO-15 TO-15	-30 -1.0 -30 -3.0 -30 -4.5 -31 -4.0 -30 -4.0 -30 -4.0
Relinquished by: (signature) Date/Time  5/8/07 1000  Relinquished by: (signature) Date/Time  Relinquished by: (signature) Date/Time  Lab Shipper Name Air Bill #	Received by	/: (signature)	Date/Time  Date/Time  Date/Time  Ci) Ge	Notes: Placese ハウアドル	rt port max.Cto  cand UG/#43.  Intect? Work Order#
Use Only				Yes No	None



#### Air Toxics Ltd. Introduces the Electronic Report

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This electronic report includes the following:

- · Work order Summary;
- · Laboratory Narrative;
- · Results; and
- Chain of Custody (copy).



WORK ORDER #: 0705244

Work Order Summary

CLIENT:

Mr. Dan Birch

Trinity Source Group

910 Mesa Grande Rd.

Aptos, CA 95003

BILL TO: Mr. Dan Birch

Trinity Source Group 910 Mesa Grande Rd.

Aptos, CA 95003

PHONE:

831-685-1217

P.O. #

103.004.004

FAX:

DATE RECEIVED:

05/10/2007

DATE COMPLETED: 05/22/2007

05/10/2007

PROJECT#

649 Pacific ave Searway Property

ne cere

CONTACT:

Kyle Vagadori

			RECEIPT
FRACTION #	<u>NAME</u>	<u>TEST</u>	VAC./PRES.
01A	VS-7QC	Modified TO-15	Tedlar Bag
02A	VS-8QC	Modified TO-15	Tedlar Bag
03A	Lab Blank	Modified TO-15	NA
04A	CCV	Modified TO-15	NA
05A	LCS	Modified TO-15	NA

CERTIFIED BY:

Sinda d. Fruman

05/23/07

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07

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## LABORATORY NARRATIVE Modified TO-15 Trinity Source Group Workorder# 0705244

Two 1 Liter Tedlar Bag samples were received on May 10, 2007. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples are summarized in the below table. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	+- 30% Difference	= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers</p
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

#### **Receiving Notes**

There were no receiving discrepancies.

#### **Analytical Notes**

Samples VS-7QC and VS-8QC were transferred from Tedlar bags into a summa canisters to extend the hold time from 72 hours to 14 days. Canister pressurization resulted in a dilution factor which was applied to all analytical results.

#### **Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction no performed).
  - J Estimated value.
  - E Exceeds instrument calibration range.
  - S Saturated peak.
  - Q Exceeds quality control limits.
  - U Compound analyzed for but not detected above the reporting limit.
  - UJ- Non-detected compound associated with low bias in the CCV
  - N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates



as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



## Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VS-7QC

Lab ID#: 0705244-01A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
2-Propanol	1600	40000	4000	99000

Client Sample ID: VS-8QC

Lab ID#: 0705244-02A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
2-Propanol	1600	210000 E	4000	530000 E



#### Client Sample ID: VS-7QC Lab ID#: 0705244-01A

File Name: Dil Factor:	5051922 808		Date of Collection: : Date of Analysis: 5	**********************************
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	1600	40000	4000	99000
Container Type: 1 Liter Tedlar B	ag			
Surrogates		%Recovery		Method Limits
1,2-Dichloroethane-d4		114		70-130
Toluene-d8		94		70-130
4-Bromofluorobenzene		106		70-130



#### Client Sample ID: VS-8QC Lab ID#: 0705244-02A

#### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5051923 Date of Collection: 5/7/97		5/7/07	
Dil. Factor:	808 Date of Analysis: 5/20/07:01:		22/07 01:52 PM	
Compound	Rpt. Limit	Amount	Rpt. Limit	Amount
	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
2-Propanol	1600	210000 E	4000	530000 E

E = Exceeds instrument calibration range.

Container Type: 1 Liter Tedlar Bag

,,		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	112	70-130	
Toluene-d8	95	70-130	
4-Bromofluorobenzene	105	70-130	



#### Client Sample ID: Lab Blank Lab ID#: 0705244-03A

File Name: DIL Factor:	5051911 1.00		Bate of Collection: Date of Analysis: 5	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	2.0	Not Detected	4.9	Not Detected
Container Type: NA - Not Applicable	e			
Surrogates		%Recovery		Method Limits
1,2-Dichloroethane-d4		112		70-130
Toluene-d8		94		70-130
4-Bromofluorobenzene		100		70-130



#### Client Sample ID: CCV Lab ID#: 0705244-04A

File Name: 5051907	
Dil. Factor: 1.00	

Compound		%Recovery
2-Propanol		104
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	95	70-130



#### Client Sample ID: LCS Lab ID#: 0705244-05A

#### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

. F.Be Name: 5051908 Date of Collection: NA
Dil. Factor: 1,00 Date of Analysis: 5/19/07.06:16 PM

Compound	%Recovery
2-Propanol	114

#### Container Type: NA - Not Applicable

		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	109	70-130	
Toluene-d8	96	70-130	
4-Bromofluorobenzene	100	70-130	



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### Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- · Laboratory Narrative;
- · Results; and
- Chain of Custody (copy).



WORK ORDER #:

0706110B

Work Order Summary

CLIENT:

Mr. Dan Birch

BILL TO:

Mr. Dan Birch

Trinity Source Group 910 Mesa Grande Road Trinity Source Group 910 Mesa Grande Road

Aptos, CA 95003

Aptos, CA 95003

PHONE:

831-685-1217

P.O. #

103.004.004

FAX:

PROJECT#

103.004.004 Searway Property

DATE RECEIVED: DATE COMPLETED: 06/06/2007 06/18/2007

CONTACT:

Kyle Vagadori

			RECEIPT
FRACTION#	NAME	<u>TEST</u>	VAC./PRES.
01A	VS-3	Modified TO-3	3.0 "Hg
01AA	VS-3 Lab Duplicate	Modified TO-3	3.0 "Hg
02A	VS-4	Modified TO-3	2.0 "Hg
03A	VS-5	Modified TO-3	3.0 "Hg
04A	VS-6	Modified TO-3	3.0 "Hg
05A	VS-7	Modified TO-3	2.5 "Hg
06A	VS-8	Modified TO-3	3.0 "Hg
07A	VS-9	Modified TO-3	2.0 "Hg
08A	Lab Blank	Modified TO-3	NA
09A	CCV	Modified TO-3	NA

CERTIFIED BY:

Sinda d. Truman

TE. 06/18/07

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP - AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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# LABORATORY NARRATIVE Modified TO-3 Trinity Source Group Workorder# 0706110B

Seven 1 Liter Summa Canister samples were received on June 06, 2007. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. See the data sheets for the reporting limit.

Requirement	TO-3	ATL Modifications
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch = 20 samples.</td
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

#### Receiving Notes

There were no receiving discrepancies.

#### **Analytical Notes**

There were no analytical discrepancies.

#### **Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.



- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



## **Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID**

Client Sample ID: VS-3				
Lab ID#: 0706110B-01A				
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.056	3.7	320	21000
Client Sample ID: VS-3 Lab Duplicate				
Lab ID#: 0706110B-01AA				
_	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.056	3.6	320	21000
Client Sample ID: VS-4				
Lab ID#: 0706110B-02A				
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.054	0.17	310	980
Client Sample ID: VS-5				
Lab ID#: 0706110B-03A				
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.056	0.15	320	870
Client Sample ID: VS-6				
Lab ID#: 0706110B-04A				
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.056	0.16	320	920
Client Sample ID: VS-7				
Lab ID#: 0706110B-05A				
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.055	1.5	320	8800



### **Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID**

Client Sample ID: VS-8

Lab ID#: 0706110B-06A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
Stoddard Solvent	0.056	0.48	320	2800

Client Sample ID: VS-9

Lab ID#: 0706110B-07A

No Detections Were Found.



#### Client Sample ID: VS-3 Lab ID#: 0706110B-01A

	WODITED ETA WE			
File Name: Dil: Factor:	6061209 2:24		Date of Collection: 6	84/07 12/07 08:25 PM
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.056	3.7	320	21000
Container Type: 1 Liter Summ	a Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		94		75-150



#### Client Sample ID: VS-3 Lab Duplicate

#### Lab ID#: 0706110B-01AA

File Name: Dil. Factor:	6061216 2.24		Date of Collection: 6 Date of Analysis: 6/	8/4/07 12/07:07:09:PM
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.056	3.6	320	21000
Container Type: 1 Liter Summa	a Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		96		75-150



#### Client Sample ID: VS-4 Lab ID#: 0706110B-02A

	MODIFIED EPA ME			
File Name: Dil. Factor:	6061210 2.16		Date of Collection: 6	
Compound	Røt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.054	0.17	310	980
Container Type: 1 Liter Sumn	na Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		95		75-150



Client Sample ID: VS-5 Lab ID#: 0706110B-03A

	MODIFIED EFA WE			
File Name:	5061211 2.24		Date of Collection: 4	34/07
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.056	0.15	320	870
Container Type: 1 Liter Sumi	ma Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		96		75-150



#### Client Sample ID: VS-6 Lab ID#: 0706110B-04A

	MODIFIED EPA ME			
File Name: DN. Factor:	6061212 2.24		Date of Collection: ( Date of Analysis: 6)	
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.056	0.16	320	920
Container Type: 1 Liter Summ	a Canister			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		95		75-150



#### Client Sample ID: VS-7 Lab ID#: 0706110B-05A

Fils Name: DI. Factor:	6081213 2:20		Date of Collection: 6	9/4/07 12/07 05:47 PM
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.055	1.5	320	8800
Container Type: 1 Liter Summa	Canister			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		96		75-150



#### Client Sample ID: VS-8 Lab ID#: 0706110B-06A

File Name:	6061214		Date of Collection: 6	5/4/07
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.056	0.48	320	2800
Container Type: 1 Liter Sumr	na Canister			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		96		75-150



#### Client Sample ID: VS-9 Lab ID#: 0706110B-07A

		ZINOD IOS GOID			
File Name: DH. Factor:	6061215 2.16		Date of Collection: 6/4/07 Date of Analysis: 6/12/07:06:41 PM		
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Stoddard Solvent	0.054	Not Detected	310	Not Detected	
Container Type: 1 Liter Summ	a Canister				
Surrogates		%Recovery		Method Limits	
Fluorobenzene (FID)		96		75-150	



#### Client Sample ID: Lab Blank

#### Lab ID#: 0706110B-08A

	( <u>)</u>	211100 103 33110		
File Name; Dil. Factor:	6061208 1.00	Date of Collection: NA  Date of Analysis: 6/12/07 04:11 PM		
Compound	Rɒt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Stoddard Solvent	0.025	Not Detected	140	Not Detected
Container Type: NA - Not Appli	cable			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		96		75-150



## Client Sample ID: CCV Lab:ID#: 0706110B-09A

## MODIFIED EPA METHOD TO-3 GC/FID

Stoddard Solvent	87
Compound	%Recovery
File Name: 6061204a Dii. Factor: 1:00	Pate of Collection: NA

Container Type: NA - Not Applicable

		Method		
Surrogates	%Recovery	Limits		
Fluorobenzene (FID)	101	75-150		



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- Work order Summary;
- · Laboratory Narrative;
- Results; and
- · Chain of Custody (copy).

(916) 985-1000 .FAX (916) 985-1020 Hours 8:00 A.M to 6:00 P.M. Pacific



#### **WORK ORDER #:** 0706110A

#### Work Order Summary

CLIENT:

Mr. Dan Birch

BILL TO: Mr. Dan Birch

Trinity Source Group 910 Mesa Grande Road Trinity Source Group 910 Mesa Grande Road

Aptos, CA 95003

Aptos, CA 95003

PHONE: FAX:

831-685-1217

103.004.004 P.O. #

PROJECT# 103.004.004 Searway Property

RECEIPT

DATE RECEIVED:

06/06/2007

CONTACT: Kyle Vagadori

DATE COMPLETED: 06/18/2007

			RECEIPT
FRACTION #	<u>NAME</u>	<u>TEST</u>	VAC./PRES.
01A	VS-3	Mod. Method TO-15	3.0 "Hg
02A	VS-4	Mod. Method TO-15	2.0 "Hg
03A	VS-5	Mod. Method TO-15	3.0 "Hg
03AA	VS-5 Lab Duplicate	Mod. Method TO-15	3.0 "Hg
04A	VS-6	Mod. Method TO-15	3.0 "Hg
05A	VS-7	Mod. Method TO-15	2.5 "Hg
06A	VS-8	Mod. Method TO-15	3.0 "Hg
07A	VS-9	Mod. Method TO-15	2.0 "Hg
08A	VS-7-QC	Mod. Method TO-15	Tedlar Bag
09A	Lab Blank	Mod. Method TO-15	NA
10A	CCV	Mod. Method TO-15	NA
11A	LCS	Mod. Method TO-15	NA

CERTIFIED BY:

Sinda d. Fruman

06/18/07 DATE:

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07

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#### LABORATORY NARRATIVE Mod. Method TO-15 Trinity Source Group Workorder# 0706110A

Seven 1 Liter Summa Canister and one 1 Liter Tedlar Bag samples were received on June 06, 2007. The laboratory performed the analysis via Modified Method TO-15 using GC/MS in the full scan mode. The method involves direct injection of up to a 40 mL sample aliquot into a vapor management system. Following dehumidification the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the below table. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	+- 30% Difference	= 30% Difference with two allowed out up to </=40%.;<br flag and narrate outliers
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

#### **Receiving Notes**

There were no receiving discrepancies.

#### **Analytical Notes**

There were no analytical discrepancies.

### **Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction no performed).
  - J Estimated value.
  - E Exceeds instrument calibration range.
  - S Saturated peak.
  - Q Exceeds quality control limits.
  - U Compound analyzed for but not detected above the reporting limit.
  - UJ- Non-detected compound associated with low bias in the CCV



N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



# Summary of Detected Compounds MODIFIED TO-15 GC/MS

Client Sample ID: VS-3 Lab ID#: 0706110A-01A

	Rpt. Limit	Amount	Rpt. Limit	Amount	
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)	
2-Propanol	0.022	14	55	36000	_

Client Sample ID: VS-4

Lab ID#: 0706110A-02A

No Detections Were Found.

Client Sample ID: VS-5 Lab ID#: 0706110A-03A

	Rpt. Limit	Amount	Rpt. Limit	Amount	
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)	
2-Propanol	0.011	0.064	28	160	

Client Sample ID: VS-5 Lab Duplicate

Lab ID#: 0706110A-03AA

	Rot. Limit	Amount	Rpt. Limit	Amount
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
2-Propanol	0.011	0.057	28	140

Client Sample ID: VS-6

Lab ID#: 0706110A-04A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
2-Propanol	0.011	0.017	28	42

Client Sample ID: VS-7

Lab ID#: 0706110A-05A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
2-Propanol	0.011	6.3	27	15000

Client Sample ID: VS-8 Lab ID#: 0706110A-06A



# Summary of Detected Compounds MODIFIED TO-15 GC/MS

Client Sample	ID:	VS-8	
---------------	-----	------	--

Lab ID#: 0706110A-06A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
2-Propanol	0.011	1.9	28	4600	

## Client Sample ID: VS-9

Lab ID#: 0706110A-07A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
2-Propanol	0.011	0.083	26	200	

## Client Sample ID: VS-7-QC

Lab ID#: 0706110A-08A

Compound	Rpt. Limit	Amount	Rpt. Limit	Amount
	(ppmv)	(ppmv)	(uG/m3)	(uG/m3)
2-Propanol	0.086	62	210	150000



Client Sample ID: VS-3 Lab ID#: 0706110A-01A MODIFIED TO-15 GC/MS

	MODIFIED 1			
File Name: DIL Factor:	c061443 4.48		Date of Collection: ( Date of Analysis: 6)	5/4/07 14/07/10:18 PM
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.022	14	55	36000
Container Type: 1 Liter Su Surrogates	mma Canister	%Recovery		Method Limits
Toluene-d8		99		70-130



## Client Sample ID: VS-4 Lab ID#: 0706110A-02A MODIFIED TO-15 GC/MS

		10-13 GC/M3		
File Name: DIL Factor:	c061441 2.16		pale of collection. Date of Analysis - f	<b>6/4/07</b>  {_ <b>4/07</b>   09:33   <b>PM</b>
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.011	Not Detected	26	Not Detected
Container Type: 1 Liter Sum	ma Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		100		70-130



Client Sample ID: VS-5 Lab 1D#: 0706110A-03A MODIFIED TO-15 GC/MS

MODIFIED TO-15 GC/MS				
File Name:	e051439 2.24		Date of Collection 1	54.017
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.011	0.064	28	160
Container Type։ 1 Liter Տւ	ımma Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		98		70-130



## Client Sample ID: VS-5 Lab Duplicate

## Lab ID#: 0706110A-03AA

#### MODIFIED TO-15 GC/MS

File Name:	c081442		Date of Collection: 6	5/4/07
DIL Factor:	994		Date of Analysis: 6/	14/07 09:54 PM
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.011	0.057	28	140
Container Type: 1 Liter Summa	a Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		100		70-130



Client Sample ID: VS-6 Lab ID#: 0706110A-04A

## MODIFIED TO-15 GC/MS

	WORKED.	0-15 <b>GC</b> /WB		
File Name: DIL Factor:	c061440 2.24		Date of Gollection: : Date of Analysis: 6/	5/4/07 14/07:09:07:29
Compound	Rot. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.011	0.017	28	42
Container Type: 1 Liter Su	mma Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		99		70-130



Client Sample ID: VS-7 Lab ID#: 0706110A-05A MODIFIED TO-15 GC/MS

	NACE III	0-15 GC/MD		
File Name: DR Factor:	c061444 2.20		Date of Collection: 6 Date of Analysis: 6/	34/07 14/07:10:43:PM
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.011	6.3	27	15000
Container Type: 1 Liter Su	mma Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		98		70-130



Client Sample ID: VS-8 Lab ID#: 0706110A-06A MODIFIED TO-15 GC/MS

	AIODINIED	0-13 GC/M3		
File Name: Dil. Factor:	c061445 2.24		Date of Collection: 6 Date of Analysis: 6/	://074 1440:5515:285:1)
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.011	1.9	28	4600
Container Type: 1 Liter Su	ımma Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		98		70-130



Client Sample ID: VS-9 Lab ID#: 0706110A-07A MODIFIED TO-15 GC/MS

	MODITIED I	0 10 00/mg		
File Name: DN-Factor:	c061447 2.16		Date of Collection: 6 Date of Analysis: 6/	34/07 15/07 12:44 AM
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.011	0.083	26	200
Container Type: 1 Liter Su	mma Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		99		70-130



Client Sample ID: VS-7-QC Lab ID#: 0706110A-08A MODIFIED TO-15 GC/MS

	MODE IED 1	0 10 00,1110		
File Name: Dil. Factor	c061446 17.3		Date of Collection: 6	3/4/07 15/07/12:14 AM
Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.086	62	210	150000
Container Type: 1 Liter Tedlar I	Bag			
Surrogates		%Recovery		Method Limits
Toluene-d8		98		70-130



## Client Sample ID: Lab Blank Lab ID#: 0706110A-09A MODIFIED TO-15 GC/MS

File Name: Dil. Factor:	c061429 1.00		Date of Collection: Date of Analysis: f	NA 5/14/07 08:08 PM
Compound	Rɒt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	0.0050	Not Detected	12	Not Detected
Container Type: NA - Not App Surrogates	olicable	%Recovery		Method Limits
Toluene-d8		98		70-130



Toluene-d8

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## Client Sample ID: CCV Lab ID#: 0706110A-10A MODIFIED TO-15 GC/MS

Surrogates		%Recovery	Method Limits
Container Type: NA - No	t Applicable		
2-Propanol			89
Compound			%Recovery
II. Factor:	1.00	Date of A	nalysis: 6/(4/07:02:01 PM
Elle Name:	c061427 1,00	Date of G	ollection: NA

98

70-130



# Client Sample ID: LCS Lab ID#: 0706110A-11A

# MODIFIED TO-15 GC/MS 6065 (42) 1 00 Date of Collection: NA Date of Analysis: 6/14/07 02:30 Pt

File Name:	c061428	Date of C	ollection: NA
Dil. Factor:	c061428 1.00	Date of A	nalysis: 6/14/07-02:30 PM
Compound			%Recovery
2-Propanol			112
Container Type: NA - Not	Applicable		
Surrogates		%Recovery	Method Limits
Toluene-d8		98	70-130

# Air Toxics LTD.

## **CHAIN-OF-CUSTODY RECORD**

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA 95630-4719 (916) 985-1000 FAX (916) 985-1020

Page Keinsma Project Manager DAVID Project Info: Turn Around Lab Use Chair Collected by: (Part and Star) Time: Pressurized: No mal GROVP Email daretsacorp.act Date: Project # 103.000: 105 State CA-215 9500 3 Rush Pressurzation Gas: Fax 831 685 1214 Prone 831-685-1217 Froject Name Sect/way He. នជមល់វិប Date Time Canister Pressure/Vacuum Lab I.D. Field Sample LD. (Location) of Collection of Collection Can # **Analyses Requested** Initial Final Receipt: TO-3TVHSS, OZCO, MENERE TO-15 IPA pirect inject OLA 2120 107 35 BO. A. 33710 -35 03A. 34626 13 10 -33 041 34 N W 332 -33 ÒSΑ 14917 -35 06A 2123 3*5*7 ~35 37-A 31772 ᡧ 1217 -3.5OVA TO-15 por IPA Direct in ect جم ُ لا N/A Relinquished by: (signature) Cate/Time Received by: (signatura) Date/Time Notes: 1000 2-Propagad Rat. limit 0.012#6/2: Relinquished by: (signature) Date/Lime Received by: (signature) Date/Time Relinquished by: (signature) Cate/Time Received by: (signature) Date/Time Shipper Name. Air Bill# Lab Temp (₹C) Custody Seals Intact? Condition Work Order #. Use Yes No. None Only



# Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- · Results; and
- Chain of Custody (copy).



**WORK ORDER #:** 0706110C

Work Order Summary

CLIENT:

Mr. Dan Birch

BILL TO:

Mr. Dan Birch

Trinity Source Group 910 Mesa Grande Road Trinity Source Group 910 Mesa Grande Road

Aptos, CA 95003

Aptos, CA 95003

PHONE:

831-685-1217

P.O. #

103.004.004

FAX:

06/06/2007

PROJECT #

103.004.004 Searway Property

DATE RECEIVED: DATE COMPLETED:

06/18/2007

CONTACT:

Kyle Vagadori

			RECEIPT
FRACTION#	<u>NAME</u>	TEST	VAC./PRES.
01A	VS-3	Modified ASTM D-1946	3.0 "Hg
02A	VS-4	Modified ASTM D-1946	2.0 "Hg
03A	VS-5	Modified ASTM D-1946	3.0 "Hg
04A	VS-6	Modified ASTM D-1946	3.0 "Hg
05A	VS-7	Modified ASTM D-1946	2.5 "Hg
06A	VS-8	Modified ASTM D-1946	3.0 "Hg
07A	VS-9	Modified ASTM D-1946	2.0 "Hg
07AA	VS-9 Lab Duplicate	Modified ASTM D-1946	2.0 "Hg
08A	Lab Blank	Modified ASTM D-1946	NA
09A	LCS	Modified ASTM D-1946	NA

CERTIFIED BY:

Single d. Freman

DATE: 06/18/07

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004

NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



#### LABORATORY NARRATIVE Modified ASTM D-1946 Trinity Source Group Workorder# 0706110C

Seven 1 Liter Summa Canister samples were received on June 06, 2007. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Method modifications taken to run these samples include:

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either du to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

#### **Receiving Notes**

There were no receiving discrepancies.



#### **Analytical Notes**

There were no analytical discrepancies.

### **Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



# Summary of Detected Compounds MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Client Sample ID: VS-3
Lab ID#: 0706110C-01A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.22	19
Carbon Dioxide	0.022	2.5

## Client Sample ID: VS-4

Lab ID#: 0706110C-02A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.22	20	
Carbon Dioxide	0.022	1.5	

#### Client Sample ID: VS-5

Lab ID#: 0706110C-03A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.22	20
Carbon Dìoxide	0.022	0.72

#### Client Sample ID: VS-6

Lab ID#: 0706110C-04A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.22	19	
Carbon Dioxide	0.022	1.8	

#### Client Sample ID: VS-7

Lab ID#: 0706110C-05A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.22	19
Carbon Dioxide	0.022	1.7

Client Sample ID: VS-8 Lab ID#: 0706110C-06A



# Summary of Detected Compounds MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Client Sample ID: VS-8

Lab ID#: 0706110C-06A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.22	20	
Carbon Dioxide	0.022	1.3	

Client Sample ID: VS-9

Lab ID#: 0706110C-07A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.22	19
Carbon Dioxide	0.022	2.3

Client Sample ID: VS-9 Lab Duplicate

Lab ID#: 0706110C-07AA

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.22	19	
Carbon Dioxide	0.022	2.3	



## Client Sample ID: VS-3 Lab ID#: 0706110C-01A

## MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name; DIL Factor;	9061003 2-24	3 Date of Collection: 6/4/07 4 Date of Analysis: 6/10/07/09:59	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.22	19
Methane		0.00022	Not Detected
Carbon Dioxide		0.022	2.5



Client Sample ID: VS-4 Lab ID#: 0706110C-02A

## MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: DIL Factor:	9061004 2.16	4 Date of Collection: 6/4/07 6 Date of Analysis: 6/19/07 10:81 AM	
Compound	Rpt. Limit (%)	Amount (%)	
Oxygen	0.22	20	
Methane	0.00022	Not Detected	
Carbon Dioxide	0.022	1.5	



Client Sample ID: VS-5 Lab ID#: 0706110C-03A

## MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: Dil: Factor:	9061005 2.24	61005 Date of Collection: 6/4/07 2.24 Date of Analysis: 6/10/07 10:55 AM	
Compound		Rpt. Limit (%)	Amount
Oxygen		0.22	20
Methane		0.00022	Not Detected
Carbon Dioxide		0.022	0.72



Client Sample ID: VS-6 Lab ID#: 0706110C-04A

## MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: Bil. Factor:	9061006 Date of 2.24 Bate of	Collection: 6/4/07 Analysis: 6/10/07 11:23 AM
Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	19
Methane	0.00022	Not Detected
Carbon Dioxide	0.022	1.8



## Client Sample ID: VS-7 Lab ID#: 0706110C-05A

## MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: Dil. Factor:	9061007 Bate of Collection: 6/4/07 2.20 Date of Analysis: 6/10/07.11:44 AM		
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.22	19
Oxygen Methane		0.00022	Not Detected
Carbon Dioxide		0.022	1.7



## Client Sample ID: VS-8 Lab ID#: 0706110C-06A

# MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name; Dil. Factor:	9061008 2,24	Date of Gollection: 6/4/07 Date of Analysis: 6/10/07 12:1	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.22	20
Methane		0.00022	Not Detected
Carbon Dioxide		0.022	1.3



## Client Sample ID: VS-9 Lab ID#: 0706110C-07A

# MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: Dil. Factor:	9061009 2.16	9061009 Date of Collection: 6/4/07 2.16 Date of Analysis: 6/10/07 12	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.22	19
Methane		0.00022	Not Detected
Carbon Dioxide		0.022	2.3



## Client Sample ID: VS-9 Lab Duplicate Lab ID#: 0706110C-07AA

#### MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

The state of the s	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	19
Methane	0.00022	Not Detected
Carbon Dioxide	0.022	2.3



## Client Sample ID: Lab Blank

Lab ID#: 0706110C-08A

# MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: Dl. Factor:	9061002 1.00	Date of C	ollection: NA malysis: 6/10/07 09:36 AM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.10	Not Detected
Methane		0.00010	Not Detected
Carbon Dioxide		0.010	Not Detected

Container Type: NA - Not Applicable



## Client Sample ID: LCS

Lab ID#: 0706110C-09A

# MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Compound	%Recovery
Oxygen	99
Methane	99
Carbon Dioxide	100

Container Type: NA - Not Applicable

## David Reinsma

From:

Dan Birch [djb@tsgcorp.net]

Sent:

Wednesday, June 20, 2007 7:26 AM

To:

'David Reinsma'

Subject:

FW: Proj. Name: Searway Property, Project ID: 9615, Project #:103.004.004, Final Report:

WO# 0706110C.

Importance:

High

Attachments:

0706110C\_d.pdf; 0706110CCOC.pdf





0706110C\_d.pdf 0706110CCOC.pdf (196 KB) (35 KB)

----Original Message----

From: Air Toxics Ltd. Final Report [mailto:finalreport@airtoxics.com]

Sent: Monday, June 18, 2007 4:21 PM

To: djb@tsgcorp.net

Subject: Proj. Name: Searway Property, Project ID: 9615, Project #:103.004.004, Final

Report: WO# 0706110C,

Importance: High

\*\* High Priority \*\*

Project Name: Searway Property

Date Received: 06/06/07 Date Promised: 06/20/07

#### Sample Listing

Sample Collection Date	Pressure	Analysis	
VS-3 06/04/07	3.0 <b>"</b> Hg	Modified AS	STM D-1946
VS-4 06/04/07	2.0 "Hg	Modified AS	STM D-1946
VS-5 06/04/07	3.0 "Hg	Modified AS	TM D-1946
VS-6 06/04/07	3.0 "Hg	Modified AS	TM D-1946
VS-7 06/04/07	2.5 "Hg	Modified AS	TM D-1946
VS-8 06/04/07	3.0 "Hg	Modified AS	TM D-1946
VS-9 06/04/07	2.0 "Hg	Modified AS	
VS-9 Lab Duplicate 06/04/07	e 2.0 "Hg	Modified AS	TM D-1946

Thank you for choosing Air Toxics Ltd. To better serve our customers, we

providing your report by e-mail. The attached document, 0706110C\_d.PDF,

provided in Portable Document Format (PDF). To view the document, use Acrobat Reader by Adobe. If you do not have Acrobat Reader, you can download

a free copy from the Adobe website at http://www.adobe.com.

Air Toxics Ltd. appreciates your business. If you have any questions regarding

the electronic report, please contact Kyle Vagadori by phone at (916) 985-1000

or by e-mail at K.Vagadori@airtoxics.com. For more information about Air Toxics Ltd., you can visit us at http://www.airtoxics.com.

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Page of collection, handling, or shipping of samples D.O.T. Hotiline (800) 487-4922

Page\_ I of

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