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## SOIL GAS PROBE INSTALLATION & SAMPLING REPORT

245 8<sup>th</sup> Street Oakland, CA 94607

AEI Project No. 116907 ACEH Case No. RO0000202 / State ID 263

Prepared For:

Mr. Victor Lum Vic's Automotive 245 8<sup>th</sup> Street Oakland, CA 94607

Prepared By:

AEI Consultants 2500 Camino Diablo, Suite 200 Walnut Creek, CA 94597 (925) 283-6000



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### 1.0 INTRODUCTION

AEI Consultants (AEI) has prepared this report on behalf of Mr. Victor Lum of Vic's Automotive and documents the soil gas probe installation and sampling and ongoing soil gas investigation at the property located at 245 8<sup>th</sup> Street, Oakland, Alameda County, California (Figure 1). The investigation was initiated by the property owner in accordance with the requirements of Alameda County Environmental Health (ACEH) local oversight program. The purpose of this investigation is to monitor shallow soil gas concentrations associated with the release of fuel hydrocarbons from the former underground storage tank system. This report describes the installation of the soil gas probes and presents the findings of the first soil gas sampling episode conducted on August 4, 2006.

In a technical comment letter, dated March 20, 2006, ACEH requested the installation and sampling of permanent soil gas probes at the subject and adjacent properties to evaluate the potential for vapor intrusion into two residential buildings located at 712 and 718 Alice Street. At the request of ACEH, AEI submitted a *Soil Gas Investigation Workplan*, dated May 12, 2006, which outlined a scope of work for the installation and sampling of four (4) permanent soil gas probes.

A total of eight (8) temporary soil borings were advanced from which four (4) nested soil gas probes were constructed. A stainless steel soil gas implant was completed at 5 and 10 feet bgs at each of the four locations in order to assess the vertical attenuation of volatile organic compounds in the soil gas.

Soil gas probe installation and sampling was performed in accordance with the most recent *Advisory – Active Soil Gas Investigations* (ASGI), dated January 28, 2003, jointly issued by the Department of Toxic Substances Control (DTSC) and Los Angeles Regional Water Quality Control Board (LARWQCB). Furthermore, evaluation and interpretation of the sampling results were performed in conformance with the DTSC's *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*, dated December 15, 2004 (revised February 7, 2005).

There were no significant deviations from the approved scope of work.

## 2.0 SITE DESCRIPTION AND BACKGROUND

The subject property (hereafter referred to as the "site" or "property") is located in a mixed commercial and residential area of Oakland, Alameda County, California. The site is a single lot on the south corner of Alice Street and 8<sup>th</sup> Street, and is currently developed with a gasoline station and automotive repair facility (Figure 2). The property covers approximately 9,375 square feet and is improved with an approximately 1,200 square foot building located centrally on the property used for automotive repair, cashier, and office. The current UST hold and the dispenser island are located to the north of the building, along 8<sup>th</sup> Street. The remainder of the property is paved with asphalt.



Between June 1993 and August 1994, AEI removed a total of seven (7) underground storage tanks (USTs) from the property. The tanks consisted of four (4) 1,000-gallon and two (2) 6,000-gallon gasoline tanks and one (1) 250-gallon waste oil tank. The former locations of the tanks are shown on Figure 2. Impacted soil was removed from beneath the former tank area. Groundwater was encountered beneath the former 6,000-gallon tanks. Light non-aqueous phase liquid (LNAPL) was observed on the water table beneath the southern tank. The excavated soil was transported to an appropriate disposal facility and the excavation was backfilled with clean fill material. A new tank system was installed just west of the dispenser island.

Two groundwater monitoring wells (MW-1 and MW-2) were installed in July 1995. The first two episodes of monitoring revealed total petroleum hydrocarbons as gasoline (TPH-g) and Benzene up to  $210,000~\mu g/L$  and  $720~\mu g/L$ , respectively, in MW-2. LNAPL was discovered in MW-1, which ranged from 1.20 to 4.39 feet thick between December 1995 and March 1996.

Three soil borings (SB-1 through SB-3) were advanced in August 1996. Groundwater samples collected from each of the borings contained TPH-g and Benzene ranging from 120,000 to 140,000  $\mu$ g/L, and from 12,000 to 19,000  $\mu$ g/L, respectively. Methyl tertiary-butyl ether (MTBE) was also present in all three samples, up to 27,000  $\mu$ g/L. Although free phase product was not observed in the field, qualitative laboratory observations indicated an immiscible sheen in the samples. Manual bailing and pumping of LNAPL from MW-1, and monitoring of MW-2 occurred intermittently through 1997.

Two additional groundwater monitoring wells (MW-3 and MW-4) were installed in May 2001. Refer to Tables 1 and 2 for data collected from these wells. A free product recovery pump was installed in MW-1 in June 2001.

Fourteen (14) additional soil borings were performed on and offsite in 2003, from which soil, groundwater, and soil vapor samples were collected to further characterize the extent of the release.

On January 11, 19, and 20, 2005, AEI installed a total of six (6) additional wells; three (3) extraction/monitoring wells on the subject site (MW-5 to MW-7) and three (3) extraction/monitoring wells at 708 Alice Street (MW-10 to MW-12). The locations of the six (6) additional wells (labeled MW-5 through MW-7 and MW-10 through MW-12) are shown on Figure 2. Note that wells MW-8 and MW-9 were proposed for installation in the public right of way, north of and west of the site. However, due to insurance and permitting limitations imposed by the City of Oakland, these wells were not been installed, and likely cannot be installed in City of Oakland right-of-way.

A high vacuum dual phase extraction (HVDPE) pilot test was performed at the site from July 11 to July 27, 2005, using wells MW-1 through MW-3 and MW-10 through MW-12. Vapor flow rates ranged from approximately 170 to 190 standard cubic feet per minute (scfm) under a sustained vacuum of 16 to 17 inches of mercury. Significant drawdown and vacuum response was observed in many of the monitoring points. A total of 80,740 gallons of water was recovered and treated for an average flow rate of about 4.1 gallons per minute over the 15-day



pilot test. Approximately 5 pounds per day of dissolved phase and 697 lbs/day of vapor phase hydrocarbons were recovered. Based on the favorable results, and following review and approval by ACEH, implementation of a fixed base HVDPE system is currently underway.

Surveying of the six new wells was complete as of January 2006.

## 3.0 GEOLOGY AND HYDROGEOLOGY

The elevation of the site is approximately 27 to 29 feet above mean sea level (amsl). The site is flat; however, the topography of the area slopes gently to the southwest. The site is located between Lake Merritt and the Oakland Inner Harbor channel, approximately one-half mile from each. The near surface sediments are mapped as Holocene and Pleistocene Merritt Sand Deposits (Qms) (Helley, et al, 1997). Depth to the Franciscan Formation basement underlying the unconsolidated deposits is approximately 400 feet (Norfleet, 1998).

Based on the logs of soil borings advanced at the site, the native soils generally consist of fine to medium grained sands with silt and clay present to at least 28 feet bgs, the deepest explored at the site. Typically, silty and clayey fine grained sand have been encountered to depths of 15 to 18 feet bgs. This is underlain by poorly graded, clean to slightly clayey and silty fine to medium sand. Both sand bodies represent a single hydrologic system. Sediments have been relatively uniform throughout the investigation area.

Groundwater depths have typically ranged from 13 to 17 feet bgs, corresponding to elevation of approximately 10 to 14 feet above mean sea level (msl). Annual water levels fluctuate by approximately 3 to 4 feet. Groundwater has consistently flowed to the south-southeast with a hydraulic gradient of approximately  $10^{-3}$  ft/ft.

## 4.0 SOIL GAS PROBE INSTALLATION

## 4.1 Summary of Activities

On July 13, 2006, a total of eight (8) soil borings were advanced from which four (4) permanent nested soil gas probes (GP-1, GP-2, GP-3, and GP-4) were constructed. Borings were twined at each probe location and a soil gas implant was completed at 5 and 10 feet bgs in each borehole in order to assess the vertical attenuation of volatile organic compounds in the soil gas. Please refer to Figure 2 for the soil gas probe locations.

Borings were advanced with a truck-mounted Geoprobe® Model 5410 direct push drilling machine equipped with the GH42 soil probing hammer running 2-inch nominal diameter probe rods and the DT21 dual tube continuous soil core sampler.

The direct push drilling work was performed by Vironex of San Leandro, California, a C57-



licensed drilling contractor working under the direction of an AEI project engineer. Vironex was the selected contractor because they have extensive experience in installing soil gas probes and performing soil gas surveys.

Continuous soil core samples were collected into 1.75-inch diameter clear glycol-modified polyethylene terephthalate (PETG) liners. Soil samples were cut from the PETG liners at minimum of 5-foot intervals, at lithologic breaks, and at the discretion of AEI's project engineer for field screening via olfactory and other sensory perceptions. Soil samples were sealed using Teflon<sup>®</sup> tape and plastic caps, and stored over water-ice pending transportation to the laboratory.

Duplicate samples were also collected into 1-Liter zipper locking bags for headspace analysis. These samples were screened in the field with a Mini-RAE Plus Classic (PGM-76) photo-ionization detector (PID). The PID is calibrated regularly in the office with standard 100 ppm isobutylene calibration gas prior to use in the field.

The borings were logged by an AEI project engineer according to the unified soil classification system (USCS). Please refer to Appendix B for detailed logs of the borings, including depth of samples collected.

## **4.2** Permits and Boring Clearances

Prior to commencing drilling activities, a soil boring installation permit (Permit #W2006-0625) was submitted and approved on June 22, 2006 by Mr. James Yoo of the Alameda County Public Works Agency. Copies of the permit documentation are included in Appendix A.

At least three days prior to drilling, the boring locations were marked with white paint and Underground Service Alert (USA) was notified for their members to identify any public utility conflicts in the work zone. The members' markings were also used to identify underground utilities, utility corridors, and other potential preferential pathways near the adjacent buildings. No significant preferential pathways were identified in the immediate vicinity of the work area during the drilling activities.

#### 4.3 Soil Gas Probe Construction / Installation

Each soil gas probes was constructed of 1/4-inch outside diameter (O.D.), 1/8-inch inside diameter, Kynar<sup>®</sup> PolyVinylidine DiFluoride (PVDF) tubing with a 6-inch stainless steel screened implant attached to the end. The soil gas probes are nested constructions placed in twined boreholes (i.e., borings installed next to one another) advanced to final depths of 5 and 10 feet bgs, respectively.

The stainless steel implants attached to the ¼-inch O.D. Kynar<sup>®</sup> tubing were installed down the open borehole once the probe rods were retracted and sampling barrel retrieved. Glass beads were poured down the open borehole to form a sand pack from the bottom to 1-foot above the stainless steel implant. Approximately 2-feet of dry bentonite chips were placed above the sand pack and



hydrated with water. The remainder of the boring was filled to 1/2-foot below grade with a mixture of bentonite and cement grout.

A 12-inch diameter raised well box was installed over the casing and cemented in place. A gastight Swagelok<sup>®</sup> ball valve was secured to the end of the ¼-inch tubing with gripping ferrules and a compression nut. The tubing was marked at the surface with white and red vinyl electrical tape to identify the probe depths of 5 and 10-feet, respectively. Color coded valve handles will be installed during the next soil gas sampling episode. Refer to Appendix B for the boring logs and the soil gas probe construction details.

## 4.4 Analytical Methodology / Sample Analyses

A total of eight (8) soil samples were transported on water-ice under proper chain of custody protocol to McCampbell Analytical, Inc. of Bay Point, California (Department of Health Services Certification (DHS) #1644). Samples were analyzed for TPH-g by Method SW8015Cm and for BTEX and MTBE by Method SW8021B. Laboratory procedures included appropriate quality assurance / quality control analyses, including method blanks and use of surrogates during sample analyses.

## 4.5 Equipment Decontamination

Probe rods, drive points, and other subsurface probing tools used to install the soil gas probes were decontaminated between installations with a triple rinse system. The triple rinse system consisted of cleaning the sample tools with Liquinox® or similar detergent, followed by a rinsing with clean tap water, and a second rinsing with tap water.

## 4.6 Investigation Derived Waste Storage

Investigation derived wastes (IDWs) generated during the drilling activities, such as soil cuttings and rinsate, were containerized in sealed 55-gallon drums. The drums were labeled appropriately and secured onsite pending the results of the sample analyses. Upon receipt of the necessary analytical data, the waste will be profiled for proper disposal. IDWs will be handled and disposed of in accordance with all applicable federal, state, and local requirements.

## 5.0 SOIL GAS SAMPLING

#### 5.1 Summary of Activities

On August 4, 2006, soil gas samples were collected from soil gas probe GP-1 through GP-4, at two depths, 5 feet bgs and 10 feet bgs.



After the probes were adequately purged of three well volumes using a dedicated 6-L purge canister, soil gas samples were collected into laboratory-evacuated 1-L Summa<sup>TM</sup> canisters pending transportation to the laboratory. A flow control regulator affixed with a vacuum gauage was placed inline between the soil gas probe and Summa<sup>TM</sup> canister to ensure that it was filled at a constant rate of 100 to 200 milliliters per minute (mL/min) as recommend by the ASGI.

The soil gas sample analysis was performed by Air Toxics, Ltd. of Folsom, California, a DHS-certified laboratory. Air Toxics was the selected laboratory because they have extensive experience in soil gas sample methodology and analyses according to the ASGI guidelines.

## **5.2** Sampling Locations and Rationale

Soil gas probes were installed and soil gas samples were collected from the more permeable and most-impacted depth in the unsaturated zone, which may contain highest vapor phase contaminant concentrations. Exhibit 1 below summarizes the soil gas probe installation locations and the rationale behind selecting these locations, which were approved by ACEH in the workplan.

**EXHIBIT 1: SOIL GAS PROBE LOCATIONS** 

Boring ID	Location	Purpose
GP-1	Western corner of subject property E-SE of MW-6	Investigate soil gas concentrations closest to the former source areas and near the front of 718 Alice Street
GP-2	Southern portion of property E-SE of MW-2 near the rear corner of 718 Alice Street	Investigate soil gas concentrations furthest away from the former source areas and near the rear of 718 Alice Street
GP-3	Southern corner of 712 Alice Street E-SE of MW-12	Investigate soil gas concentrations offsite near the rear of 712 Alice Street
GP-4	Southeastern corner of 712 Alice Street N-NE of MW-11	Investigate soil gas concentrations offsite near the front of 712 Alice Street

## 5.3 Soil Gas Sampling Protocol

Soil gas probe installation and sampling was performed in accordance with the currently accepted protocols of the state and local regulatory oversight agencies and the standards and practices of the environmental engineering and geology fields that existed at the time and location of the subject work.

Specifically, soil gas sampling was performed in accordance with the most recent *Advisory – Active Soil Gas Investigations* (ASGI), dated January 28, 2003, jointly issued by the Department of Toxic Substances Control (DTSC) and Los Angeles Regional Water Quality Control Board



(LARWQCB). The sampling flow rate, purge volume, leak testing, sample handling, analytical methodology, and sample analyses are discussed in more detail below.

## 5.3.1 Sample Flow Rate

Critical orifice flow controllers designed and provided by Air Toxics were used to regulate the flow of air during sampling. The evacuated Summa canisters were filled at a constant rate of 167 milliliters per minute (mL/min), within the 100 to 200 mL/min flow range as recommended by the ASGI. A new or laboratory-certified clean flow controller was used at each sampling point. Low or no flow conditions were not encountered.

## 5.3.2 Purge Volume

Prior to sample collection, the soil gas probes were purged of three (3) dead volumes or air using a 6-L Summa<sup>™</sup> dedicated purge canister. A default value of three purge volumes was selected based on a phone conversation with Mr. Jerry Wickham of ACEH in late July 2006. This helped to ensure that a sufficient volume of ambient air was removed from the sampling point and that samples collected were representative of subsurface conditions. The purge volume was calculated by summing the volume of the sample tubing and annular space around the probe tip. One purge volume for the 5 and 10-foot probes are 16.1 and 27.6 mL, respectively. Three default purge volumes for the 5 and 10-foot probes are 48.3 and 82.8 mL, respectively. Therefore, to adequately purge the 5 and 10 foot probes (at 167 mL/min) it took approximately 18 and 30 seconds, respectively.

#### 5.3.3 Leak Test

A rag moistened with the leak check compound, isopropyl alcohol, was placed inside the well box where the soil gas tubing the grout seal meet. A leak test dome made of a 12-inch round plastic bowl was then placed upside-down over the top of the well box and secured using the well box lid. Cotton strips moistened with isopropyl alcohol were placed around the Swagelok® valves, fittings, connections, and other potential leak points. To avoid possible cross contamination, the isopropyl alcohol leak check compound was stored separately from the other sampling tools in a zipper locking bag.

## 5.3.4 Sample Handling

Soil gas samples collected in Summa<sup>™</sup> canisters were not chilled nor shipped by air in order to avoid drastic changes in ambient pressure and temperature. The soil gas samples were labeled with unique identifiers, recorded on the chain of custody record, and shipped via ground under proper chain of custody protocol to Air Toxics Ltd. of Folsom, California (DHS Certification #02110CA) for analysis.



## 5.4 Analytical Methodology / Sample Analyses

A total of nine (9) soil gas samples, including one field duplicate (GP-4-10D) were shipped via UPS ground under proper chain of custody protocol to Air Toxics, Ltd. of Folsom, California (Department of Health Services Certification #02110CA). Samples were analyzed for TPH-g by EPA Method Modified TO-3 and for volatile organic compounds (VOCs), including BTEX and MTBE by EPA Method Modified TO-15 along with the 2-Propanol leak check compound. Laboratory procedures included appropriate quality assurance and quality control analyses, including method blanks and use of surrogates during sample analyses. According to Air Toxics, the analytical equipment was calibrated in conformance with the most current ASGI and the modified analytical method(s).

#### 6.0 SOIL GAS AND SOIL SAMPLE ANALYTICAL RESULTS

## 6.1 Soil Sample Results

From each boring, a soil sample collected at 5 and 10 feet bgs was analyzed for TPH-g by Method SW8015Cm and BTEX and MTBE by Method SW8021B.

No concentrations of fuel hydrocarbons or MTBE were detected above the laboratory reporting limits in any of the samples, except GP-4-10. TPH-g was detected at a concentration of 1.6 milligrams per kilogram (mg/kg) of soil. Benzene, toluene, ethylbenzene, and total xylenes were detected at concentrations of 0.049, 0.060, 0.019, and 0.079 mg/kg, respectively. MTBE was not detected above the laboratory reporting limits of 0.05 mg/kg.

The soil sample analytical data is summarized in Table 4. Laboratory analytical reports and chain of custody documentation are included in Appendix D.

#### **6.2** Soil Gas Sample Results

From each soil gas probe, a soil gas sample collected from 5 and 10 feet bgs was analyzed for TPH-g by EPA Method Modified TO-3 and VOCs, including BTEX and MTBE, by EPA Method Modified TO-15.

The highest concentrations of fuel hydrocarbons (TPH-g) were detected in GP-4-5' and GP-4-10' at concentrations of 705  $\mu$ g/m3 and 564  $\mu$ g/m3, respectively.

TPH-g was detected in all other samples, excluding GP-3-5', at concentrations up to 564 µg/m3.

Benzene was detected in only two samples, GP-4-5' and GP-4-10' at concentrations of  $5.4 \mu g/m3$  and  $6.1 \mu g/m3$ , respectively. Toluene was detected in samples GP-2-5', GP-2-10', and GP-4-10' at concentrations up to  $18 \mu g/m3$ . Ethylbenzene was detected in only one sample, GP-4-10', at a



concentration of 5.7  $\mu$ g/m3. Xylenes was detected in GP-2-5' and GP-4-10' at concentrations of 10  $\mu$ g/m3 and 16  $\mu$ g/m3, respectively.

Carbon disulfide was detected in all the samples, excluding GP-3-5', at concentrations up to 270  $\mu$ g/m3. 2-Butanone (MEK) was detected six samples, at concentrations up to 11  $\mu$ g/m3.

In addition, tetrachloroethene (PCE) was detected in four samples, at concentrations up to 600  $\mu$ g/m3 (GP-2-5').

A summary of soil gas sample analytical data is presented in Table 4 and on Figure 4. Laboratory analytical reports and chain of custody documentation are included in Appendix B.

## **6.3** Leak Check Compound Results

The leak check compound isopropyl alcohol (i.e., 2-Propanol) was detected slightly above reporting limits in only one sample, GP-1-5'. 2-Propanol was detected in GP-1-5' at a concentration of 23 µg/m3. However, this does not necessarily indicate a leak occurred in the soil gas sampling train. Low levels, parts per billion (ppb) or sub-ppb, of leak check compound can be detected as the result of diffusion through the walls of the soil gas probe tubing (Air Toxics, 2006).

While detection of 23 ug/L is not considered to be significant, detection of leak check compound in excess of 100 ug/L may indicate a leak. If this were to occur, prompt review of the data and further evaluation of the sampling train integrity, and possibly re-sampling would be necessary (Missouri DNR, April 2005).

The soil gas sample analytical data is summarized in Table 5. Laboratory analytical reports and chain of custody documentation are included in Appendix D.

#### 7.0 SUMMARY AND RECOMMENDATIONS

This investigation was designed to evaluate the potential for vapor intrusion into two residential buildings located at 712 and 718 Alice Street, Oakland, Alameda County, California and presents the findings of the first soil gas sampling event conducted at the subject property.

TPH-g along with other gasoline constituents (BTEX) were detected all of the soil gas samples with the exception of GP-3-5'. However, the concentrations of fuel hydrocarbons detected in the soil gas samples were all well below the shallow soil gas Environmental Screening Levels (ESLs) and the California Human Health Screening Levels (CHHSLs) for residential land use.

While no elevated levels of fuel hydrocarbons (TPH-g or BTEX), MTBE, or other fuel oxygenates were detected in the soil gas samples collected from GP-1 to GP-4, PCE was detected for the first time on the site in four of the eight soil gas samples. PCE was detected in one of the soil gas samples, GP-2-5', at a concentration of 600 ug/m<sup>3</sup>. This exceeded the shallow soil gas ESL and



CHHSL of  $410 \,\mu\text{g/m}^3$  and  $180 \,\mu\text{g/m}^3$ , respectively for residential land use.

Possible sources of the elevated levels of PCE may be the former waste oil tanks onsite or possibly an up-gradient current or former dry cleaning facility.

Based on the results of this investigation AEI recommends the following:

- Sample and monitor the soil gas probes (GP-1 through GP-4) on a quarterly basis and report the results in conjunction with quarterly groundwater monitoring reports with the next soil gas sampling episode schedule for early November 2006.
- Continue quarterly soil gas sampling and monitoring activities in conjunction with groundwater monitoring and sampling activities and analyze soil gas samples for TPH-g by EPA Modified Method TO-3 and for BTEX, MTBE, PCE, trichloroethene (TCE), 1,2-dichloroethene (1,2-DCE), and vinyl chloride (VC) by EPA Method Modified TO-15 in order to establish soil gas concentration trends and to verify if PCE concentrations detected in the shallow soil pose a potential vapor intrusion risk.
- If elevated levels of PCE are confirmed in the shallow soil gas, further evaluation of potential vapor intrusion risk into the two residential buildings located at 712 and 718 Alice Street may be required.
- Since elevated concentrations of PCE were detected in the shallow soil gas, test a round of groundwater samples for Halogenated Volatile Organic Compounds (HVOCs), mainly PCE, by Method SW8260B (i.e., the 8010 basic target list) during the 4<sup>th</sup> Quarter, 2006 groundwater monitoring event.
- If up and running by the next event, shutdown the HVDPE system for a period of at least 24 hours prior to sampling to allow subsurface conditions to equilibrate and to ensure that negative pressure in the subsurface does not biased the soil gas sampling results.
- At the discretion of an AEI remediation engineer, the soil gas probes may also be used to
  monitor signs of aerobic biodegradation and remedial progress. In-situ respiration data,
  such as soil gas oxygen and carbon dioxide concentrations can be collected with minimal
  effort on a quarterly basis in conjunction with soil gas sampling. This information can be
  used in conjunction with concentrations of VOCs in the soil gas overtime to evaluate how
  much biological activity or aerobic biodegradation is occurring and its overall impact on
  remediation.



### 8.0 REFERENCES

- California Department of Toxic Substances Control and the Los Angeles Regional Water Quality Control Board (DTSC-L.A.RWQCB). "Advisory – Active Soil Gas Investigations." Glendale and Los Angeles, CA, January 28, 2003.
- 2. Air Toxics Ltd. "Evaluating Leaks in a Soil Gas Sample Train." Folsom, CA, 2006.
- 3. California Department of Toxic Substances Control and the California Environmental Protection Agency. "Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Interim-Final)." Glendale and Sacramento, CA, December 15, 2004, revised February 7, 2005.
- 4. Geoprobe Systems. "Soil Implants Operation." Salina, KA, 2005.
- 5. Alameda County Environmental Health. "Subject: Fuel Leak Case No. RO0000202, Vic's Automotive, 245 8<sup>th</sup> Street, Oakland, CA, Alameda, CA." March 20, 2006.
- 6. San Mateo County Environmental Health Services Agency. "Groundwater Protection Program Guidelines, Subsurface Vapor Sampling Using a Geoprobe and Summa Canisters (DRAFT)." Redwood City, CA, June 2004.
- 7. Missouri Department of Natural Resources. "Soil Gas Sampling Protocol." April 21, 2005.



## 9.0 REPORT LIMITATIONS AND SIGNATURES

This report presents a summary of work completed by AEI, including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, but it cannot be assumed that they are entirely representative of all areas not sampled. All conclusions and recommendations are based on these analyses, observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

These services were performed in accordance with generally accepted practices in the environmental engineering and geology fields that existed at the time and location of the subject scope of work.

Sincerely,

**AEI Consultants** 

Richard J. Bradford Senior Staff Engineer

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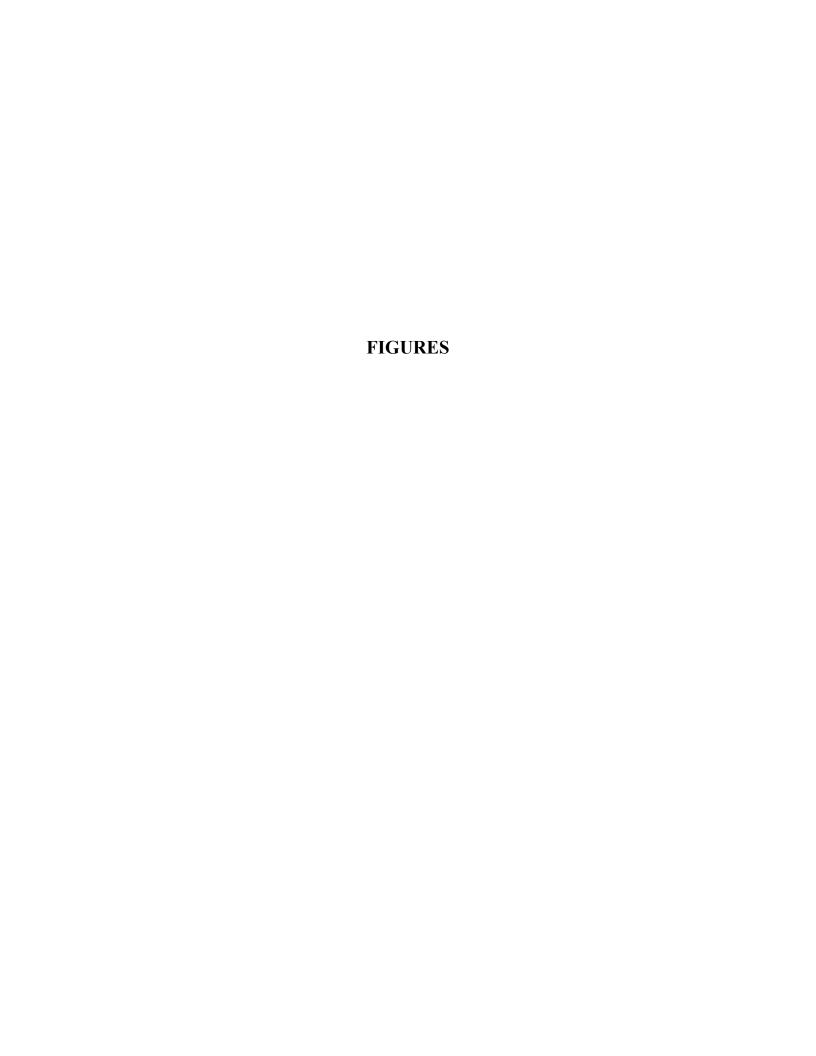
Peter J. McIntyre, PG/ Senior Project Manager

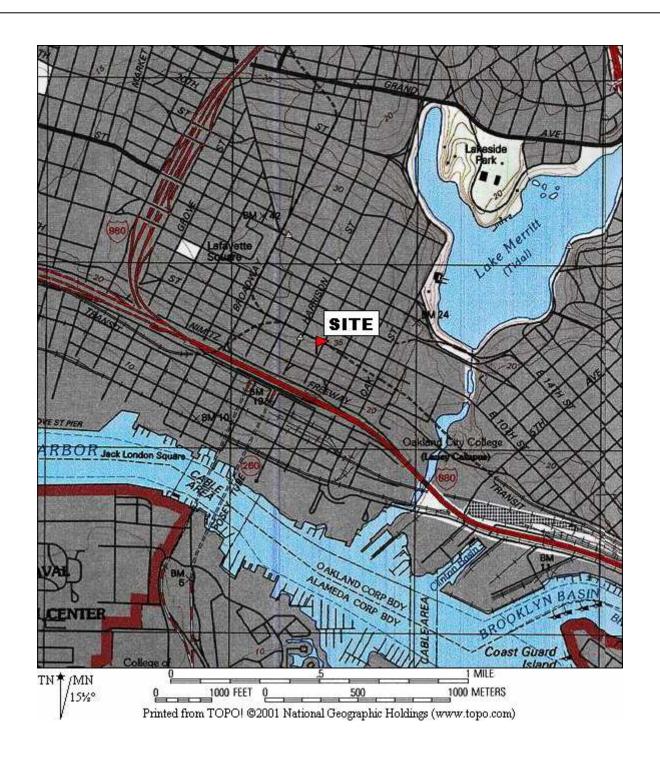
## **Report Distribution**

Mr. Victor Lum Vic's Automotive 245 8<sup>th</sup> Street Oakland, California 94607

Mr. Jerry Wickham (electronic copy) Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502



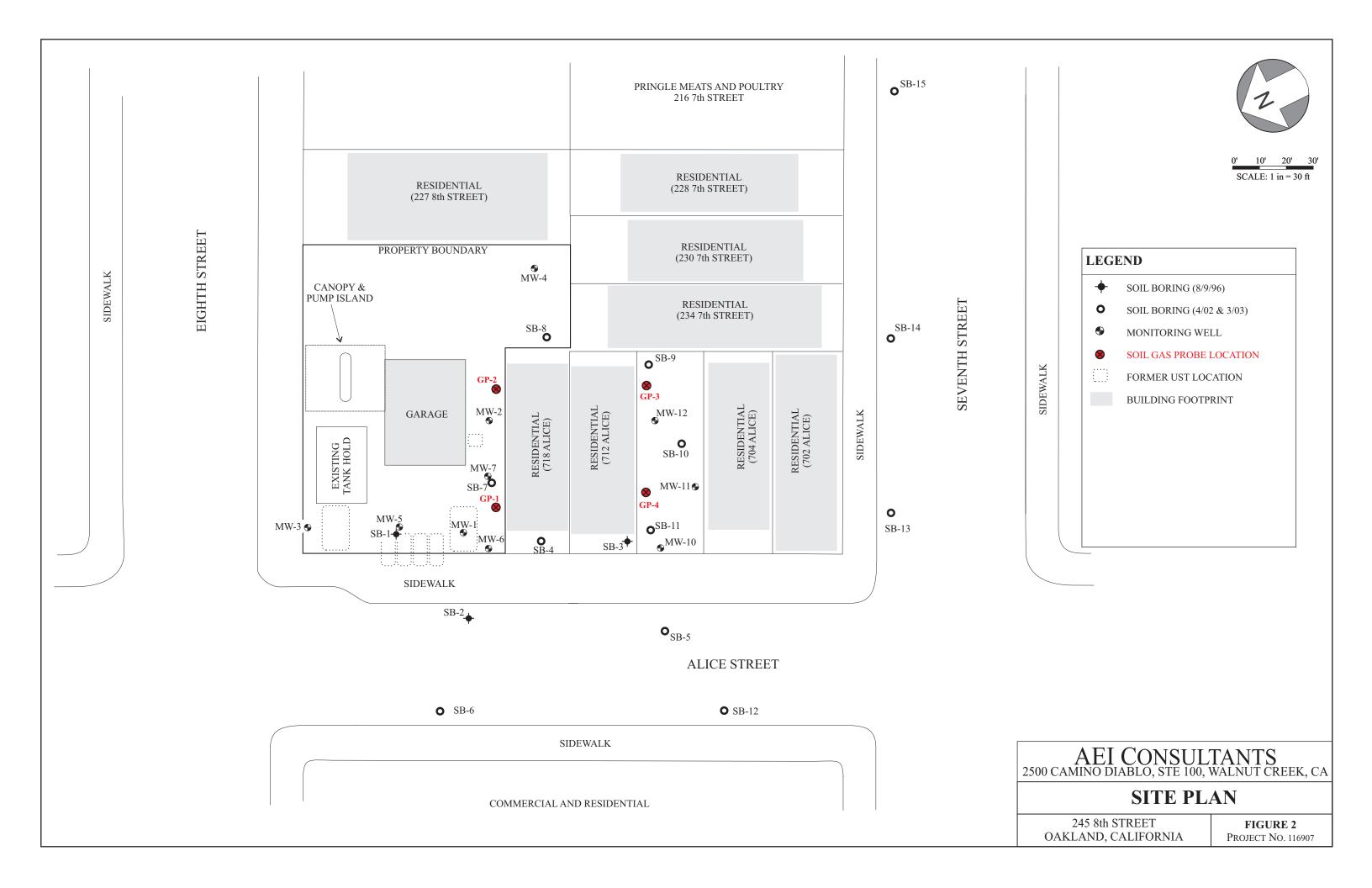


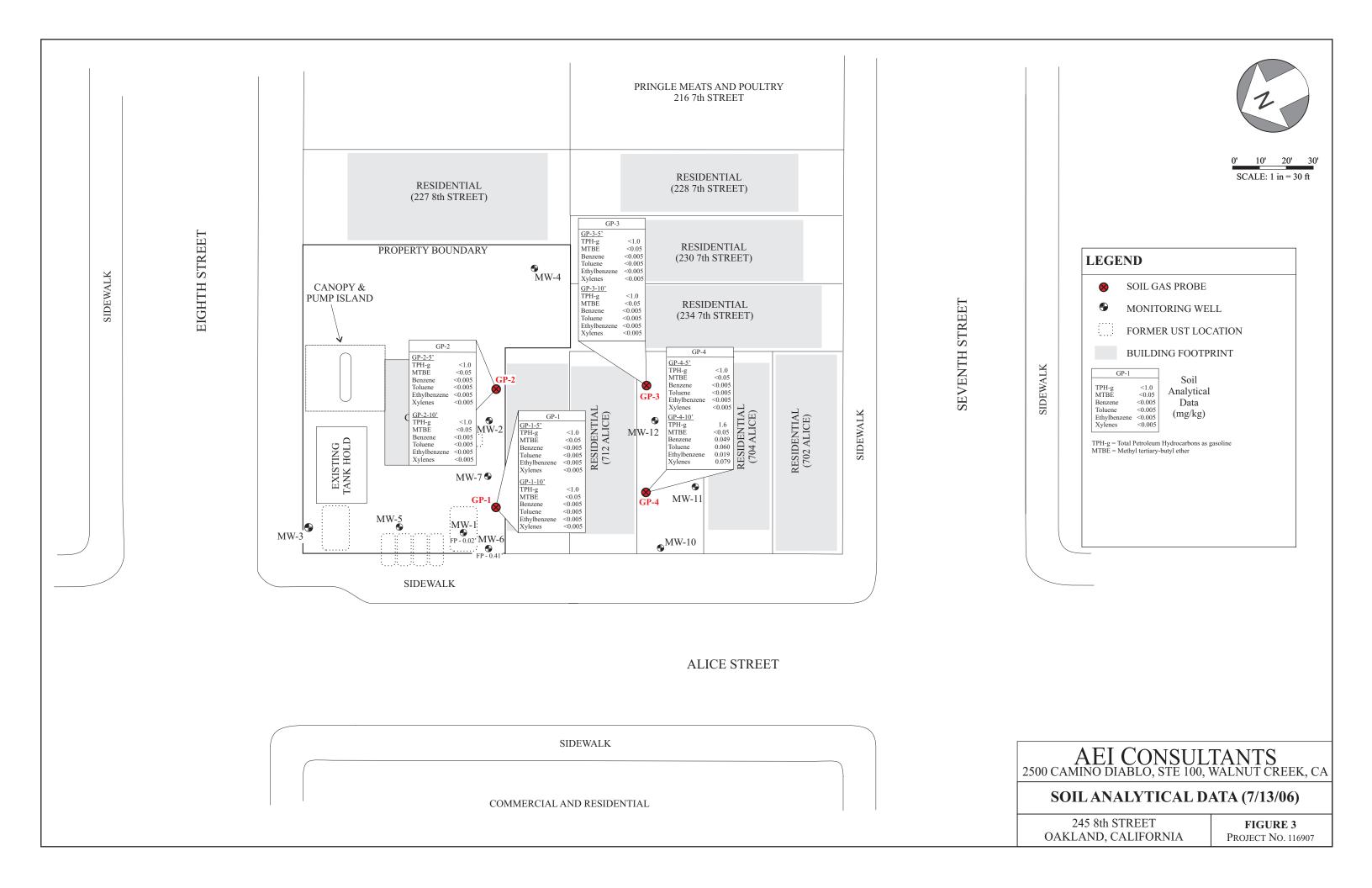


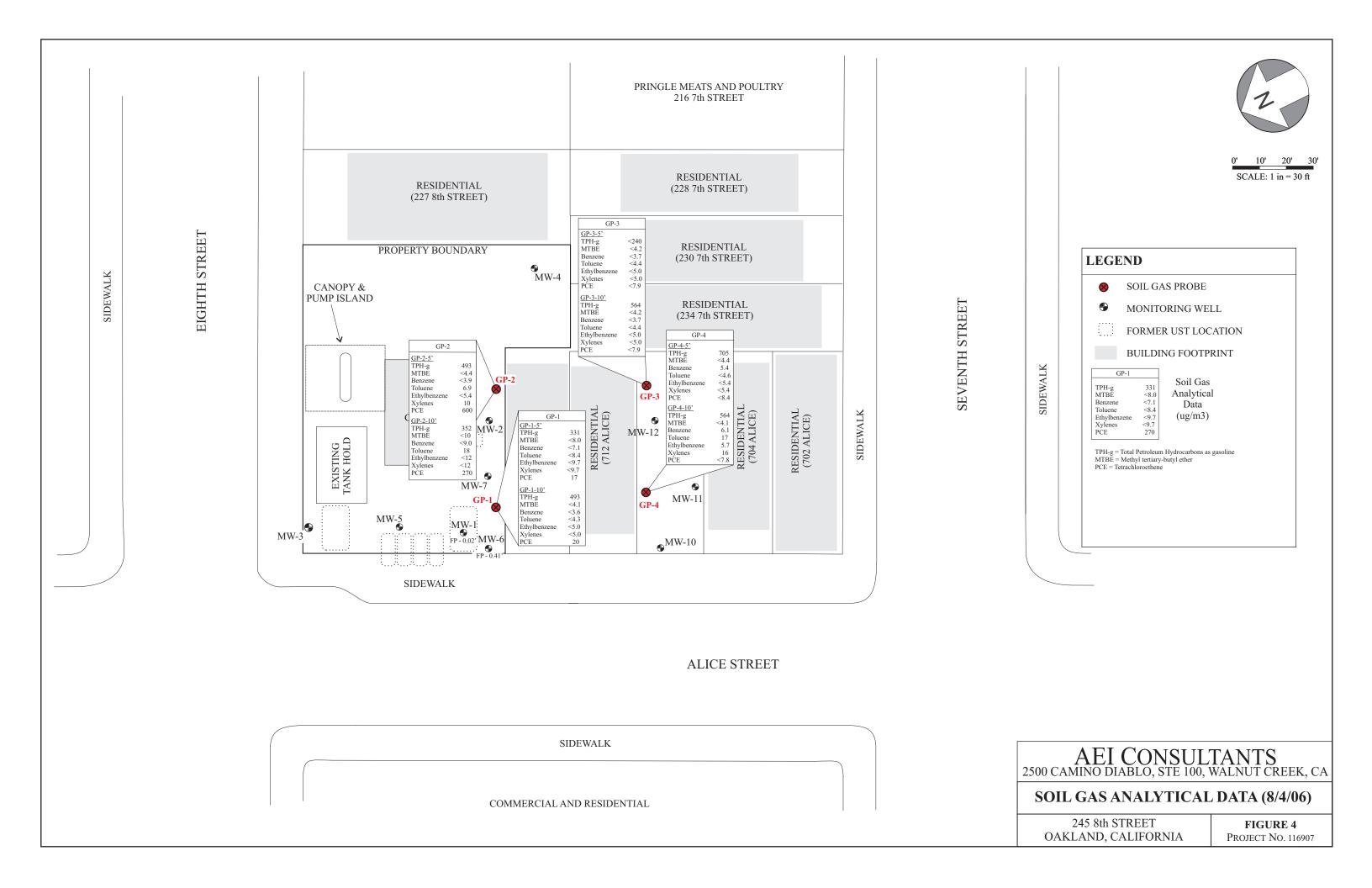
## AEI CONSULTANTS 2500 CAMINO DIABLO BLVD, STE 100, WALNUT CREEK

## **SITE LOCATION MAP**

245 8<sup>th</sup> STREET OAKLAND, CALIFORNIA FIGURE 1 PROJECT No. 116907









## TABLE 1: GROUNDWATER ELEVATION DATA Vic's Automotive

## 245 8th Street, Oakland, California

	Date	TOC Well <sup>1,2</sup>	Depth to	Groundwater <sup>3</sup>	Depth to	Apparent
Well/Sample ID (screen interval)	Collected	Elevation	Water	Elevation	LNAPL	LNAPL Thickness
(screen interval)		(ft amsl)	(ft)	(ft amsl)	(ft)	(ft)
MW-1	6/29/2001	27.73	16.52	11.21	14.89	1.63
(8-28)	10/10/2001	27.73	15.45	12.28	15.37	0.08
	1/9/2002	27.73	12.61	15.12	-	< 0.01
	4/24/2002	27.73	13.35	14.38	-	< 0.01
	7/24/2002	27.73	14.19	13.54	-	< 0.01
	11/5/2002	27.73	14.85	12.88	-	< 0.01
	2/4/2003	27.73	14.91	12.82	-	< 0.01
	5/2/2003	27.73	14.43	13.30	-	0.08
	8/4/2003	27.73	15.24	12.49	15.01	0.23
	11/3/2003	27.73	16.94	10.79	15.67	1.27
	2/9/2004	27.73	14.61	13.12	14.43	0.18
	5/10/2004	27.73	Inaccessible	-	-	-
	8/9/2004	27.73	15.24	12.49	15.03	0.21
	11/9/2004	27.73	15.95	11.78	15.71	0.24
	2/3/2005	32.55	13.75	18.80	13.58	0.17
	5/9/2005	32.55	13.93	18.62	13.81	0.12
	8/5/2005	32.55	15.40	17.15	15.39	0.01
	11/9/2005	32.55	15.76	16.79	15.75	0.01
	2/9/2006	32.55	13.52	19.03	13.50	0.02
	5/4/2006	32.55	12.47	20.08	12.46	0.01
	8/4/2006	32.55	15.11	17.44	15.09	0.02
MW-2	6/29/2001	28.16	16.14	12.02	-	-
(8-28)	10/10/2001	28.16	16.43	11.73	-	-
	1/9/2002	28.16	13.50	14.66	-	-
	4/24/2002	28.16	14.40	13.76	-	-
	7/24/2002	28.16	14.91	13.25	-	-
	11/5/2002	28.16	16.96	11.20	-	-
	2/4/2003	28.16	15.42	12.74	_	-
	5/2/2003	28.16	15.24	12.92	_	-
	8/4/2003	28.16	15.98	12.18	_	-
	11/3/2003	28.16	16.60	11.56	_	Sheen
	2/9/2004	28.16	15.22	12.94	_	Sheen
	5/10/2004	28.16	15.34	12.82	_	Sheen
	8/9/2004	28.16	15.92	12.24	_	Sheen
	11/9/2004	28.16	16.51	11.65	_	Sheen
	2/3/2005	33.24	14.44	18.80	_	Sheen
	5/9/2005	33.24	14.67	18.57	_	Sheen
	8/5/2005	33.24	16.27	16.97	_	Sheen
	11/9/2005	33.24	16.53	16.71	_	Sheen
	2/9/2006	33.24	14.36	18.88	_	Sheen
	5/4/2006	33.24	13.46	19.78	_	Sheen
	8/4/2006	33.24 33.24	15.46 15.95	19.78 17.29	-	Sheen
	0/7/2000	JJ.4 <del>4</del>	13.73	11.47	-	SHECH

## TABLE 1: GROUNDWATER ELEVATION DATA

## Vic's Automotive 245 8th Street, Oakland, California

	Date	TOC Well <sup>1,2</sup>	Depth to	Groundwater <sup>3</sup>	Depth to	Apparent
Well/Sample ID (screen interval)	Collected	Elevation	Water	Elevation	LNAPL	LNAPL Thickness
(screen interval)		(ft amsl)	(ft)	(ft amsl)	(ft)	(ft)
MW-3	6/29/2001	29.21	16.60	12.61	-	-
(10-25)	10/10/2001	29.21	16.92	12.29	-	-
	1/9/2002	29.21	14.20	15.01	-	-
	4/24/2002	29.21	15.07	14.14	-	-
	7/24/2002	29.21	16.40	12.81	-	-
	11/5/2002	29.21	16.47	12.74	-	-
	2/4/2003	29.21	16.92	12.29	-	-
	5/2/2003	29.21	15.45	13.76	-	-
	8/4/2003	29.21	16.46	12.75	-	-
	11/3/2003	29.21	17.15	12.06	-	-
	2/9/2004	29.21	15.78	13.43	-	-
	5/10/2004	29.21	15.77	13.44	-	-
	8/9/2004	29.21	16.45	12.76	-	-
	11/9/2004	29.21	17.26	11.95	-	-
	2/3/2005	34.25	15.92	18.33	-	-
	5/9/2005	34.25	15.03	19.22	-	-
	8/5/2005	34.25	16.59	17.66	-	=
	11/9/2005	34.25	16.82	17.43	-	-
	2/9/2006	34.25	14.65	19.60	-	-
	5/4/2006	34.25	13.61	20.64	-	-
	8/4/2006	34.25	16.28	17.97	-	-
MW-4	6/29/2001	29.38	17.71	11.67	_	_
(10-25)	10/10/2001	29.38	18.00	11.38	_	-
( /	1/9/2002	29.38	15.02	14.36	_	-
	4/24/2002	29.38	15.74	13.64	-	_
	7/24/2002	29.38	16.69	12.69	_	-
	11/5/2002	29.38	17.64	11.74	-	_
	2/4/2003	29.38	16.02	13.36	_	_
	5/2/2003	29.38	16.72	12.66	_	-
	8/4/2003	29.38	17.51	11.87	_	_
	11/3/2003	29.38	18.09	11.29	_	_
	2/9/2004	29.38	16.67	12.71	_	-
	5/10/2004	29.38	16.89	12.49	_	_
	8/9/2004	29.38	17.44	11.94	_	_
	11/9/2004	29.38	17.89	11.49	_	_
	2/3/2005	34.42	14.98	19.44	_	_
	5/9/2005	34.42	16.20	18.22	_	-
	8/5/2005	34.42	17.73	16.69	_	_
	11/9/2005	34.42	17.73	16.51	-	-
	2/9/2006	34.42 34.42	17.91	18.80	-	<del>-</del>
	5/4/2006	34.42	15.02	19.30	-	-
	8/4/2006 8/4/2006	34.42 34.42	13.12 17.39	19.30 17.03	-	<del>-</del>
	0/4/4000	34,42	17.39	17.03	-	-

## TABLE 1: GROUNDWATER ELEVATION DATA Vic's Automotive

## 245 8th Street, Oakland, California

W 11/G 1 TD	Date	TOC Well <sup>1,2</sup>	Depth to	Groundwater <sup>3</sup>	Depth to	Apparent
Well/Sample ID (screen interval)	Collected	Elevation	Water	Elevation	LNAPL	LNAPL Thickness
(screen interval)		(ft amsl)	(ft)	(ft amsl)	(ft)	(ft)
MW-5	2/3/2005	33.33	14.23	19.10	_	_
(12-22)	5/9/2005	33.33	14.33	19.00	-	_
()	8/5/2005	33.33	15.89	17.44	_	_
	11/9/2005	33.33	16.18	17.15	-	-
	2/9/2006	33.33	14.02	19.31	-	-
	5/4/2006	33.33	12.97	20.36	-	-
	8/4/2006	33.33	15.63	17.70	-	-
MW-6	2/3/2005	32.82	13.99	18.83	-	Sheen
(12-22)	5/9/2005	32.82	13.61	19.21	-	Sheen
	8/5/2005	32.82	15.50	17.32	15.13	0.37
	11/9/2005	32.82	15.87	16.95	15.50	0.37
	2/9/2006	32.82	13.93	18.89	13.22	0.71
	5/4/2006	32.82	12.88	19.94	12.13	0.75
	8/4/2006	32.82	15.22	17.60	14.81	0.41
MW-7	2/3/2005	33.07	14.17	18.90	-	Sheen
(12-22)	5/9/2005	33.07	14.47	18.60	14.44	0.03
	8/5/2005	33.07	16.07	17.00	16.02	0.05
	11/9/2005	33.07	16.47	16.60	16.35	0.12
	2/9/2006	33.07	14.18	18.89	14.11	0.07
	5/4/2006	33.07	13.12	19.95	13.11	0.01
	8/4/2006	33.07	15.74	17.33	-	Sheen
MW-10	2/3/2005	31.17	12.65	18.52	-	-
(12-22)	5/9/2005	31.17	13.09	18.08	-	=
	8/5/2005	31.17	14.68	16.49	-	-
	11/9/2005	31.17	14.94	16.23	-	-
	2/9/2006	31.17	12.82	18.35	-	-
	5/4/2006	31.17	12.11	19.06	-	-
	8/4/2006	31.17	14.38	16.79	-	-
MW-11	2/3/2005	31.78	13.39	18.39	-	Sheen
(12-22)	5/9/2005	31.78	13.89	17.89	-	Sheen
	8/5/2005	31.78	15.47	16.31	-	Sheen
	11/9/2005	31.78	15.73	16.05	-	Sheen
	2/9/2006	31.78	13.53	18.25	-	Sheen
	5/4/2006	31.78	12.73	19.05	-	Sheen
	8/4/2006	31.78	15.17	16.61	-	Sheen

## **TABLE 1: GROUNDWATER ELEVATION DATA**

## Vic's Automotive 245 8th Street, Oakland, California

Well/Sample ID (screen interval)	Date Collected	TOC Well <sup>1,2</sup> Elevation (ft amsl)	Depth to Water (ft)	Groundwater <sup>3</sup> Elevation (ft amsl)	Depth to LNAPL (ft)	Apparent LNAPL Thickness (ft)
			. ,	, ,	. ,	` '
MW-12	2/3/2005	32.05	13.70	18.35	-	Sheen
(12-22)	5/9/2005	32.05	14.17	17.88	-	Sheen
	8/5/2005	32.05	15.69	16.36	-	Sheen
	11/9/2005	32.05	15.93	16.12	-	Sheen
	2/9/2006	32.05	13.78	18.27	-	Sheen
	5/4/2006	32.05	12.98	19.07	-	Sheen
	8/4/2006	32.05	15.39	16.66	-	Sheen

<sup>1)</sup> Monitoring well top of casing (TOC) elevations were resurveyed by Morrow Surveying on January 10, 2006 and February 7, 2006

All well elevations are measured from the top of the casing (TOC)

- = not applicable

LNAPL = light non-aqueous phase liquid (floating free product)

ft amsl = feet above mean sea level

<sup>2)</sup> Groudwater elevations for the February 3, 2005 and subsequent monitoring episodes use the new well survey data

<sup>3)</sup> When LNAPL is present at >0.10 ft, the groundwater elevations are assumed to be affected by the LNAPL

## **TABLE 2: GROUNDWATER FLOW SUMMARY**

## Vic's Automotive 245 8th Street, Oakland, California

Episode #	Date	Average Groundwater Elevation <sup>1</sup> (ft amsl)	Change from Previous Episode (ft)	Flow direction (gradient)
1	6/29/2001	12.10	<u>-</u>	SSE (0.0074)
2	10/10/2001	11.80	-0.30	SSE (0.0071)
3	1/9/2002	14.68	2.88	SE (0.0054)
4	4/24/2002	13.85	-0.83	SSW (0.005)
5	7/24/2002	12.92	-0.93	NE (0.021)
6	11/5/2002	11.89	-1.02	SW (0.019)
7	2/4/2003	12.80	0.90	NNW (0.01)
8	5/2/2003	13.11	0.32	SSE (0.01)
9	8/4/2003	12.27	-0.85	SSE(0.007)
10	11/3/2003	11.64	-0.63	SSE (0.006)
11	2/9/2004	13.03	1.39	SSE (0.006)
12	5/10/2004	12.92	-0.11	SSE (0.008)
13	8/9/2004	12.31	-0.60	SSE (0.006)
14	11/9/2004	11.70	-0.62	SSE (0.004)
15	2/3/2005	18.75	-	W (0.007)
16	5/9/2005	18.53	-0.22	S (0.010)
17	8/5/2005	16.94	-1.59	S (0.010)
18	11/9/2005	16.65	-0.28	S (0.010)
19	2/9/2006	18.83	1.89	SSW (0.010)
20	5/4/2006	19.72	3.07	SSW (0.012)
21	8/4/2006	17.24	-1.59	SSW (0.010)

<sup>1)</sup> MW-2 to MW-4 only used for episodes 1 through 14; all wells used for episodes 15 and later

ft amsl = feet above mean sea level

<sup>-</sup> = not applicable

## TABLE 3: GROUNDWATER SAMPLE ANALYTICAL DATA

## Vic's Automotive 245 8th Street, Oakland, California

XX 11/C 3	D (	Apparent	TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
Well/Sample	Date Callagted	LNAPL Thickness	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
ID	Collected	(ft)	Method SW8015Cm		В			
MW-1	6/29/2001	1.63	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
1,1,, 1	10/10/2001	0.08	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	1/9/2002	< 0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	4/24/2002	< 0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	7/24/2002	~0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	11/5/2002	~0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	2/4/2003	~0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	5/2/2003	0.08	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	8/4/2003	0.23	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	11/3/2003	1.27	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	2/9/2004	0.18	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	5/10/2004	Inaccessible	- -	-	- -	- -	- -	- -
	8/9/2004	0.21	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	11/9/2004	0.24	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	2/3/2005	0.17	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	5/9/2005	0.12	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	8/5/2005	0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	11/9/2005	0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	2/9/2006	0.02	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	5/4/2006	0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	8/4/2006	0.02	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
MW-2	6/29/2001	0.0	69,000	4100/4400*	7,200	6,100	1,500	7,000
	10/10/2001	0.0	87,000	14,000	22,000	12,000	2,700	9,100
	1/9/2002	0.0	130,000	11,000	30,000	19,000	3,800	14,000
	4/24/2002	Sheen	210,000	32,000	38,000	23,000	4,600	19,000
	7/24/2002	Sheen	170,000	36,000	48,000	12,000	3,700	8,600
	11/5/2002	Sheen	190,000	36,000	45,000	25,000	4,600	16,000
	2/4/2003	Sheen	150,000	27,000	51,000	24,000	4,200	14,000
	5/2/2003	Sheen	150,000	35,000	39,000	11,000	3,800	9,900
	8/4/2003	Sheen	120,000	29,000	32,000	5,000	3,200	7,200
	11/3/2003	Sheen	120,000	24,000	33,000	4,300	3,200	5,400
	2/9/2004	Sheen	130,000	19,000	27,000	7,700	3,100	7,600
	5/10/2004	Sheen	67,000	13,000	20,000	3,000	2,300	4,100
	8/9/2004	Sheen	100,000	22,000	27,000	7,100	2,800	6,600
	11/9/2004	Sheen	100,000	23,000	27,000	6,100	3,000	5,600
	2/3/2005	Sheen	84,000	11,000	23,000	5,000	3,000	5,500
	5/9/2005	Sheen	74,000	14,000	21,000	4,200	2,300	3,300
	7/27/2005	Sheen	9,500	910	1,400	1,000	180	960
	8/5/2005	Sheen	74,000	4,000	8,800	11,000	1,300	7,600
	11/9/2005	Sheen	120,000	16,000	21,000	14,000	2,300	13,000
	2/9/2006	Sheen	120,000	10,000	18,000	16,000	2,200	13,000
	5/4/2006	Sheen	71,000	8,300	14,000	11,000	1,500	7,600
	8/4/2006	Sheen	160,000	14,000	22,000	14,000	2,400	11,000

## TABLE 3: GROUNDWATER SAMPLE ANALYTICAL DATA

## Vic's Automotive 245 8th Street, Oakland, California

Well/Sample	Date	Apparent LNAPL	TPH-g μg/L	MTBE μg/L	Benzene µg/L	Toluene μg/L	Ethylbenzene µg/L	Xylenes μg/L
ID	Collected	Thickness (ft)	Method SW8015Cm			Method SW8021	В	
MW-3	6/29/2001	0.00	550	<5.0	< 0.5	3.1	3.2	1.2
	10/10/2001	0.00	470	< 5.0	0.77	5.3	3.3	5.9
	1/9/2002	0.00	1,000	< 5.0	0.90	7.6	7.8	25
	4/24/2002	0.00	1,500	< 5.0	0.64	7.2	12	14
	7/24/2002	0.00	1,200	< 5.0	10	17.0	11	25
	11/5/2002	0.00	1,800	<25	33	43.0	18	31
	2/4/2003	0.00	450	< 5.0	< 0.5	5.0	< 0.5	0.77
	5/2/2003	0.00	340	< 5.0	7.3	10.0	2.5	7.3
	8/4/2003	0.00	170	< 5.0	5.8	5.9	1.5	4.9
	11/3/2003	0.00	54	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	2/9/2004	0.00	190	< 5.0	< 0.5	3.6	< 0.5	< 0.5
	5/10/2004	0.00	280	< 5.0	< 0.5	3.4	< 0.5	< 0.5
	8/9/2004	0.00	290	< 5.0	< 0.5	3.8	< 0.5	< 0.5
	11/9/2004	0.00	220	< 5.0	< 0.5	4.0	< 0.5	< 0.5
	2/3/2005	0.00	160	< 5.0	13	30	3.0	21
	5/9/2005	0.00	200	< 5.0	< 0.5	3.9	< 0.5	< 0.5
	8/5/2005	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	11/9/2005	0.00	130	< 5.0	< 0.5	2.3	< 0.5	< 0.5
	2/9/2006	0.00	270	< 5.0	< 0.5	5.6	< 0.5	< 0.5
	5/4/2006	0.00	220	< 5.0	< 0.5	4.3	< 0.5	< 0.5
	8/4/2006	0.00	93	<5.0	<0.5	1.5	<0.5	<0.5
MW-4	6/29/2001	0.00	< 50	<5.0	< 0.5	< 0.5	< 0.5	< 0.5
	10/10/2001	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	1/9/2002	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	4/24/2002	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	7/24/2002	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	11/5/2002	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	2/4/2003	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	5/2/2003	0.00	500	10	68	71	18	65
	8/4/2003	0.00	270	< 5.0	30	29	9.2	32
	11/3/2003	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	2/9/2004	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	5/10/2004	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	8/9/2004	0.00	130	< 5.0	14	13	5.3	17
	11/9/2004	0.00	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	2/3/2005	0.00	370	< 5.0	< 0.5	4.1	< 0.5	0.64
	5/9/2005	0.00	840	< 5.0	50	180	21	110
	7/27/2005	0.00	<50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5
	8/5/2005	0.00	310	<5.0	7.5	57	10	53
	11/9/2005	0.00	290	< 5.0	12	61	8.8	49
	2/9/2006	0.00	250	< 5.0	9.9	42	7.5	45
	5/4/2006	0.00	300	< 5.0	37	76	7.8	42
	8/4/2006	0.00	270	<5.0	7.3	33	5.6	32
MW-5	2/3/2005	0.0	78,000	<1,000	7,600	13,000	2,200	9,600
	5/9/2005	0.0	60,000	<900	6,100	9,900	1,600	6,600
	7/27/2005	nm	120,000	1,100	10,000	19,000	2,100	13,000
	8/5/2005	0.0	59,000	< 500	4,100	10,000	1,200	6,600
	11/9/2005	0.0	44,000	< 500	3,300	7,400	1,100	4,900
	2/9/2006	0.0	110,000	< 500	10,000	22,000	2,400	13,000
	5/4/2006	0.0	110,000	<250	11,000	22,000	2,900	15,000
	8/4/2006	0.0	73,000	< 500	4,700	8,600	1,700	7,600

## TABLE 3: GROUNDWATER SAMPLE ANALYTICAL DATA

## Vic's Automotive 245 8th Street, Oakland, California

Well/Sample	Date	Apparent LNAPL	TPH-g μg/L	MTBE μg/L	Benzene μg/L	Toluene μg/L	Ethylbenzene µg/L	Xylenes μg/L
ID T	Collected	Thickness (ft)	Method SW8015Cm	1.6	1.0	Method SW8021		1.0
MW-6	2/3/2005	Sheen	130,000	<1,000	2,400	33,000	2,400	15,000
	5/9/2005	Sheen	170,000	<4,000	11,000	43,000	3,100	16,000
	8/5/2005	0.37	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	11/9/2005	0.37	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	2/9/2006	0.71	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	5/4/2006	0.75	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	8/4/2006	0.41	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
MW-7	2/3/2005	Sheen	220,000	18,000	45,000	44,000	3,500	18,000
	5/9/2005	0.03	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	8/5/2005	0.05	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	11/9/2005	0.12	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	2/9/2006	0.07	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	5/4/2006	0.01	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp	ns/fp
	8/4/2006	Sheen	230,000	19,000	37,000	37,000	3,100	14,000
MW-10	2/3/2005	0.00	36,000	< 500	4,700	7,200	660	3,400
	5/9/2005	0.00	88,000	<1,500	6,900	20,000	2,300	9,900
	8/5/2005	0.00	88,000	<1,100	10,000	21,000	1,900	9,800
	11/9/2005	0.00	63,000	<1,100	5,400	13,000	1,900	7,900
	2/9/2006	0.00	100,000	< 500	6,600	19,000	2,900	13,000
	5/4/2006	0.00	100,000	< 500	8,500	25,000	3,000	13,000
	8/4/2006	0.00	190,000	<2,200	17,000	35,000	2,800	13,000
MW-11	2/3/2005	Sheen	170,000	<3,000	23,000	35,000	3,100	16,000
	5/9/2005	Sheen	210,000	3,500	29,000	40,000	3,400	16,000
	7/27/2005	Sheen	220,000	2,500	26,000	37,000	3,200	18,000
	8/5/2005	Sheen	210,000	<2,500	35,000	42,000	3,300	16,000
	11/9/2005	Sheen	180,000	9,100	32,000	47,000	3,600	18,000
	2/9/2006	Sheen	210,000	10,000	33,000	39,000	3,800	20,000
	5/4/2006	Sheen	190,000	12,000	34,000	41,000	3,500	17,000
	8/4/2006	Sheen	290,000	11,000	33,000	43,000	3,300	15,000
MW-12	2/3/2005	Sheen	250,000	100,000	52,000	41,000	3,400	15,000
	5/9/2005	Sheen	210,000	91,000	44,000	28,000	3,300	13,000
	8/5/2005	Sheen	170,000	52,000	38,000	28,000	3,000	12,000
	11/9/2005	Sheen	180,000	52,000	39,000	25,000	2,900	12,000
	2/9/2006	Sheen	170,000	34,000	40,000	23,000	3,500	15,000
	5/4/2006	Sheen	160,000	47,000	33,000	28,000	2,800	10,000
	8/4/2006	Sheen	240,000	55,000	40,000	24,000	3,200	12,000

 $\mu g/L = micrograms \ per \ liter \ (ppb)$ 

 $ns/fp = not \ sampled \ / \ free \ product$ 

 $TPH\text{-}g = total\ petroleum\ hydrocarbons\ as\ gasoline$ 

 $MTBE = methyl\ tertiary-butyl\ ether$ 

Non-detectable concentrations are noted by a less than sign (<) followed by the laboratory reporting limit

Please refer to Appendix B: Lab Analytical and Chain of Custody Documentation for detailed analytical reports including dilution factors

<sup>\*</sup> samples re-analyzed by Method SW8260B (expressed as SW8021B / SW8260B)

## TABLE 4: SOIL SAMPLE ANALYTICAL DATA

## Vic's Automotive

## 245 8th Street, Oakland, California

Probe/Sample ID	Date Collected	Sample Depth (ft bgs)	PID Reading (ppmv)	TPH-g mg/kg Method SW8015Cm	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg Method SW8021B	Ethylbenzene mg/kg	Xylenes mg/kg
GP-1-5	7/13/2006	5	3	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
GP-1-10	7/13/2006	10	11	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
GP-2-5	7/13/2006	5	2	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
GP-2-10	7/13/2006	10	5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
GP-3-5	7/13/2006	5	1	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
GP-3-10	7/13/2006	10	10	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
GP-4-5	7/13/2006	5	2	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
GP-4-10	7/13/2006	10	11	1.6	<0.05	0.049	0.060	0.019	0.079

mg/kg = milligrams per kilograms

TPH-g = total petroleum hydrocarbons as gasoline

Background PID readings <1 ppmv

Non-detectable concentrations are noted by a less than sign (<) followed by the laboratory reporting limit

Please refer to Appendix B: Lab Analytical Reports w/ Chain of Custody Documentation for detailed analytical data, including dilution factors and reporting limits

#### TABLE 5: SOIL GAS SAMPLE ANALYTICAL DATA

#### Vic's Automotive

#### 245 8th Street, Oakland, California

Probe/Sample ID	Date Collected	Sample Depth (ft bgs)	TPH-g μg/m3	MTBE μg/m3	Benzene µg/m3	Toluene μg/m3	Ethylbenzene µg/m3	Xylenes μg/m3	Ethanol μg/m3	PCE μg/m3	CD μg/m3	MEK μg/m3	Acetone μg/m3	2-Propanol <sup>1</sup> μg/m3
ID	Conected	(It bgs)	EPA Method Modified TO-3					EPA I	Method Modified To	O-15				
GP-1-5	8/4/2006	5	331	<8.0	<7.1	<8.4	<9.7	<9.7	<17	17	72	<6.6	82	23
GP-1-5D <sub>1</sub>	8/4/2006	5	-	<8.0	<7.1	<8.4	<9.7	<9.7	<17	18	71	<6.6	78	23
GP-1-10	8/4/2006	10	493	<4.1	<3.6	<4.3	<5.0	<5.0	<8.6	20	71	11	120	<11
GP-2-5	8/4/2006	5	493	<4.4	<3.9	6.9	<5.4	10	<9.3	600	120	4.1	110	<12
GP-2-10	8/4/2006	10	352	<10	<9.0	18	<12	<12	<21	270	18	<8.4	62	<28
GP-3-5	8/4/2006	5	<240	<4.2	<3.7	<4.4	<5.0	<5.0	<8.8	<7.9	<3.6	4.8	110	<11
GP-3-10	8/4/2006	10	564	<4.2	<3.7	<4.4	<5.0	<5.0	<8.8	<7.9	9.0	5.6	240	<11
GP-4-5	8/4/2006	5	705	<4.4	5.4	<4.6	<5.4	<5.4	<9.3	<8.4	270	4.3	100	<12
GP-4-5 <sub>1</sub>	8/4/2006	5	599	-	-	-	-	-	-	-	-	-	-	-
GP-4-10	8/4/2006	10	564	<4.1	6.1	17	5.7	16	12	<7.8	250	9.4	130	<11
$GP-4-10D_f$	8/5/2006	10	529	<3.8	4.2	18	<4.6	17	18	<7.2	130	9.4	130	<10
ESLs			26,000	9,400	85	63,000	420,000	150,000	19,000,000	410	-	210,000	660,000	-
CHHSLs			-	4,000	36.2	135,000	postponed	315,000	-	180	-	-	-	-

1) 2-Propanol (i.e., isopropyl alcohol) is the tracer/leak check compound

ft bgs = feet below ground surface

 $\mu g/m3 = micrograms \; per \; cubic \; meter$ 

TPH-g = total petroleum hydrocarbons as gasoline

MTBE = methyl tertiary-butyl ether

PCE = tetrachloroethene

CD = carbon disulfide

 $MEK = methyl \ ethyl \ ketone \ (i.e., 2\text{-Butanone})$ 

D<sub>f</sub> = after the probe/sample ID indicates a duplicate sample collected in the field

 $D_1$  = after the probe/sample ID indicates a duplicate sample prepared and analyzed by the lab

Non-detectable concentrations are noted by a less than sign (<) followed by the laboratory reporting limit

Please refer to Appendix B: Lab Analytical Reports w/ Chain of Custody Documentation for detailed analytical data, including dilution factors and reporting limits

 $ESLs = Environmental \ Screening \ Levels - for \ residential \ land \ use$ 

CHHSLs = California Human Health Screening Levels

## TABLE 6: HISTORICAL SOIL SAMPLE ANALYTICAL DATA

## Vic's Automotive

## 245 8th Street, Oakland, California

		ТРН-g	TOG	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	
Sample ID	Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Sumpro 12	Collected	Method SW8015Cm		Method SW8021B					
MW-1 (6')	7/14/95	390	-	-	0.280	0.290	0.290	0.620	
MW-1 (11')	7/14/95	370	-	-	0.240	0.240	0.230	0.610	
MW-2 (6')	7/14/95	ND	24	-	ND	ND	ND	ND	
MW-2 (11')	7/14/95	300	38	-	0.300	0.230	0.240	0.630	
SB-1 (18')	8/18/96	9,100	-	47.0	57	580	190	1,000	
SB-1 (24')	8/18/96	30	-	0.20	0.37	1.4	0.52	2.5	
SB-2 (24')	8/18/96	1.1	-	0.032	0.11	0.17	0.018	0.099	
SB-3 (24')	8/18/96	16	-	4.7	1.6	2.5	0.21	0.95	
MW-3 15'	5/25/01	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
MW-3 20'	5/25/01	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
MW-4 15'	5/25/01	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
MW-4 20'	5/25/01	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB-4 12'	4/2/03	25	-	ND<0.5	0.41	1.0	0.2	1.3	
SB-4 15'	4/2/03	260	-	ND<1.7	3.5	15	4.5	23	
SB-5 11'	4/3/03	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB-6 16'	4/2/03	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB-7 12'	4/2/03	700	-	ND<10	6.0	25	9.3	50	
SB-7 18'	4/2/03	4,900	-	ND<25	65	260	77	400	
SB-8 17'	4/2/03	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB-9 16'	4/3/03	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB-10 12'	4/3/03	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB-11 12'	4/3/03	1.4	-	ND<0.05	0.12	0.10	0.026	0.066	
SB-11 16'	4/3/03	2,700	-	ND<30	29	170	49.0	250	
SB-12 15'	4/2/03	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB-13 14'	4/3/03	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB-14 14'	4/3/03	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB-15 14'	4/3/03	ND<1.0	-	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
MW-5 16'	1/11/2005	100	-	ND<5.0	2.6	6.0	1.5	8.4	
MW-5 20'	1/11/2005	37	-	ND<0.50	2.6	5.6	0.91	4.6	
MW-7 16'	1/11/2005	19	-	2.9	3.3	3.5	0.4	1.9	
MW-7 20.5'	1/11/2005	340	-	ND<5.0	9.6	25	7.0	35	
MW-6 20'	1/19/2005	14	-	ND<0.25	0.099	4.1	0.33	1.7	
MW-10 15.5'	1/20/2005	840	-	ND<2.0	11	58	16	83	
MW-11 15.5'	1/19/2005	3,200	-	ND<10	35	320	85	430	
MW-12 15.5'	1/19/2005	13	-	8.5	2.5	2.8	0.22	1.1	

ND = not detected

 $mg/kg = milligrams\ per\ kilogram\ of\ soil$ 

TPH-g = total petroleum hydrocarbons as gasoline

TOG = Total Oil and Grease

 $MTBE = methy\ tertiary\text{-}butyl\ ether$ 

## TABLE 7: HISTORICAL SOIL VAPOR SAMPLE ANALYTICAL DATA

## Vic's Automotive

## 245 8th Street, Oakland, California

Sample ID	Date Collected	TPH-g μg/L	MTBE μg/L	Benzene µg/L	Toluene μg/L	Ethylbenzene µg/L	Xylenes μg/L
SB-4 4' V	4/2/03	ND<25	ND<2.5	ND<0.25	ND<0.25	ND<0.25	ND<0.25
SB-7 4' V	4/2/03	ND<25	ND<2.5	ND<0.25	ND<0.25	ND<0.25	ND<0.25
SB-8 4' V	4/2/03	ND<25	ND<2.5	ND<0.25	ND<0.25	ND<0.25	ND<0.25
SB-16 4' V	4/2/03	ND<25	ND<2.5	ND<0.25	ND<0.25	ND<0.25	ND<0.25
SB-17 4' V	4/2/03	ND<25	ND<2.5	ND<0.25	ND<0.25	ND<0.25	ND<0.25

ND = not detected

 $\mu g/L = micrograms \ per \ liter$ 

TPH-g = total petroleum hydrocarbons as gasoline

 $MTBE = methyl\ tertiary\text{-}butyl\ ether$ 

TABLE 8: SOIL BORING GROUNDWATER SAMPLE ANALYTICAL DATA Vic's Automotive 245 8th Street, Oakland, California

Boring/Sample ID	Date Collected	TPH-g μg/L SW8015Cm	MTBE μg/L	Benzene μg/L	Toluene μg/L lethod SW802	Ethylbenzene μg/L 1Β	Xylenes μg/L
SB-1 W SB-2 W SB-3 W	8/18/96 8/18/96 8/18/96	140,000 130,000 120,000	480 2,300 27,000	12,000 15,000 19,000	30,000 20,000 29,000	3,900 2,800 1,900	19,000 15,000 9,500
SB-4 W SB-5 W SB-6 W SB-7 W SB-8 W SB-9 W SB-10 W SB-11 W SB-12 W SB-13 W SB-14 W SB-15 W	4/2/03 4/3/03 4/2/03 4/2/03 4/2/03 4/3/03 4/3/03 4/3/03 4/3/03 4/3/03 4/3/03	310,000 420 210 240,000 51 7,300 210,000 200,000 ND<50 190 ND<50 ND<50	17,000 ND<5.0 ND<5.0 69,000 360 ND<100 ND<5000 ND<2000 ND<2.0 ND<20 140 ND<5.0	45,000 11 0.57 42,000 ND<0.5 2,100 22,000 18,000 ND<0.5 ND<0.5 ND<0.5 ND<0.5	65,000 3.7 4.2 45,000 ND<0.5 280 38,000 39,000 0.85 1.1 0.95 ND<0.5	4,500 18 1.1 3,100 ND<0.5 300 3,400 3,600 ND<0.5 1.9 ND<0.5 ND<0.5	23,000 1.1 1.4 16,000 ND<0.5 140 18,000 0.53 1.8 1.3 ND<0.5

ND = not detected

 $\mu g/L = micrograms \ per \ liter$ 

 $TPH\text{-}g = total\ petroleum\ hydrocarbons\ as\ gasoline$ 

 $MTBE = methyl\ tertiary\text{-}butyl\ ether$ 

TABLE 9: GROUNDWATER SAMPLE ANALYTICAL DATA: FUEL OXYGENATES
Vic's Automotive
245 8th Street, Oakland, California

Well/Sample ID	Date Collected	DIPE µg/L	ETBE μg/L	MTBE μg/L	TAME µg/L	TBA μg/L	EDB μg/L	1,2-DCA µg/L
MW-2	7/24/02	ND<1,000	ND<1,000	43,000	ND<1,000	ND<10,000	ND<1,000	ND<1,000
MW-3	7/24/02	ND<0.5	ND<0.5	1.3	ND<0.5	ND<5.0	ND<0.5	ND<0.5
MW-4	7/24/02	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	ND<0.5
SB-4 W	4/2/03	ND<500	ND<500	14,000	ND<500	ND<5000	ND<500	ND<500
<b>SB-5</b> W	4/3/03	ND<5.0	ND<5.0	6.5	ND<5.0	790	ND<5.0	ND<5.0
<b>SB-6 W</b>	4/2/03	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	ND<0.5
<b>SB-7 W</b>	4/2/03	ND<1,200	ND>1,200	52,000	ND<1,200	ND<12,000	ND<1,200	ND<1,200
SB-8 W	4/2/03	ND<10	ND<10	480	14	ND<100	ND<10	ND<10
SB-9 W	4/3/03	ND<5.0	ND<5.0	41	ND<5.0	68	ND<5.0	ND<5.0
SB-10 W	4/3/03	ND<50	ND<50	2,800	110	ND<500	ND<50	ND<50
SB-11 W	4/3/03	ND<50	ND<50	74	ND<50	ND<500	ND<50	ND<50
SB-12 W	4/2/03	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	ND<0.5
SB-13 W	4/3/03	ND<0.5	ND<0.5	3.7	ND<0.5	ND<5.0	ND<0.5	ND<0.5
SB-14 W	4/3/03	ND<2.5	ND<2.5	180	ND<2.5	ND<25	ND<2.5	ND<2.5
SB-15 W	4/3/03	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	ND<0.5

Analysis for fuel additives by EPA Method 8260

µg/L - micrograms per liter
ns/fp - not sampled / free product
DIPE - Diisopropyl ether
ETBE - Ethyl tert-butyl ether
MTBE - Methyl tert-butyl ether

TAME - tert-Amyl methyl ether TBA - t-Butyl Alcohol EDB - 1,2-Dibromomethane 1,2-DCA - 1,2-Dichloroethane All by EPA method 8260

# APPENDIX A PERMIT DOCUMENTATION

## Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 06/22/2006 By jamesy

Permits Issued: W2006-0625

**Application Id:** 1150908243081

Site Location: 245 8th St, Oakland, CA 94607

Project Start Date: 07/03/2006

**Applicant:** AEI - Richard Bradford

2500 Camino Diablo #200, Walnut Creek, CA 94597

**Property Owner:** Vic Lum's Vic's Auto

245 8th St., Oakland, CA 94607

Client: \*\* same as Property Owner \*\*

**Total Due:** \$200.00

Phone: 925-283-6000

Phone: 510-832-9014

Permits Valid from 07/03/2006 to 07/03/2006

Receipt Number: WR2006-0308

City of Project Site: Oakland

Completion Date: 07/03/2006

Total Amount Paid: \$200.00

Payer Name : All Environmental Paid By: CHECK PAID IN FULL

#### **Works Requesting Permits:**

Borehole(s) for Investigation-Geotechnical Study/CPT's - 4 Boreholes

Driller: Vironex - Lic #: 705927 - Method: DP Work Total: \$200.00

#### **Specifications**

 Permit
 Issued Dt
 Expire Dt
 #
 Hole Diam
 Max Depth

 Number
 Boreholes

 W2006 06/22/2006
 10/01/2006
 4
 2.00 in.
 10.00 ft

0625

#### **Specific Work Permit Conditions**

- 1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.
- 2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
- 3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 4. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
- 5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
- 6. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this

## Alameda County Public Works Agency - Water Resources Well Permit

permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

7. No Inspector Assigned to this site.

Applicant shall contact this office by email at wells@acpwa.org and certify in writing that work was completed and according to County Standards within 5 working days after the completion of work.

## APPENDIX B BORING LOGS

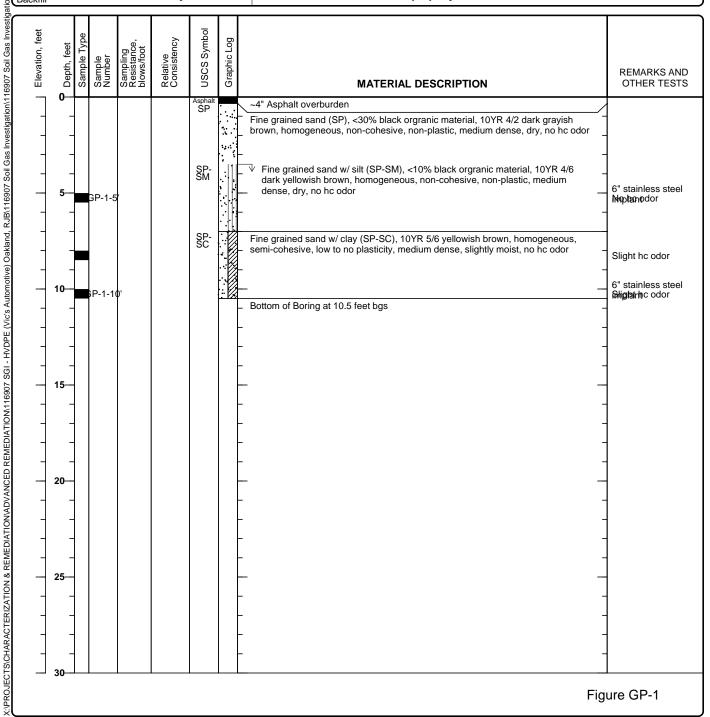
Boring Log.tpl]

Project Location: 245 8th Street, Oakland, California

**Project Number: 116907** 

## Log of Boring GP-1

<del>-</del>		
Date(s) Drilled July 13, 2006	Logged By Richard J. Bradford	Checked By Peter McIntyre
Drilling Method Direct Push Technology	Drill Bit 2 inch Probe Rods w/ DT21 Size/Type Dual Tube Sampler	Total Depth of Borehole 10.5 feet bgs
Drill Rig Type GeoProbe Model 5410	D 300	Approximate Surface Elevation ~33 feet MSL
Drilled Survey Technology  Drilling Direct Push Technology  Method Drill Rig Type  GeoProbe Model 5410  Groundwater Level and Date Measured ATD  Borehole Backfill  Bentonite/Cement Slurry	Sampling Method(s) None Hammer Data	
Borehole Bentonite/Cement Slurry	Location Western corner of the property E-SE of MW-6	



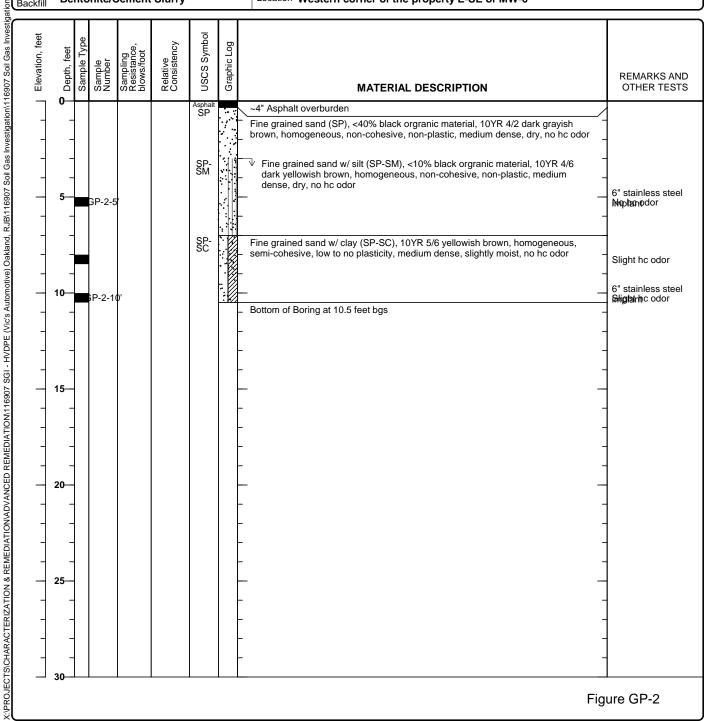
Boring Log.tpl]

Project Location: 245 8th Street, Oakland, California

**Project Number: 116907** 

## **Log of Boring GP-2**

Date(s) Drilled July 13, 2006	Logged By Richard J. Bradford	Checked By Peter McIntyre
Drilling Method Direct Push Technology	Drill Bit 2 inch Probe Rods w/ DT21 Size/Type Dual Tube Sampler	Total Depth of Borehole 10.5 feet bgs
Drill Rig Type GeoProbe Model 5410	D. SHE	Approximate Surface Elevation ~33 feet MSL
Date(s) Drilled Drille	Sampling Method(s) None	Hammer Data
Borehole Backfill Bentonite/Cement Slurry	Location Western corner of the property E-SE of MW-6	

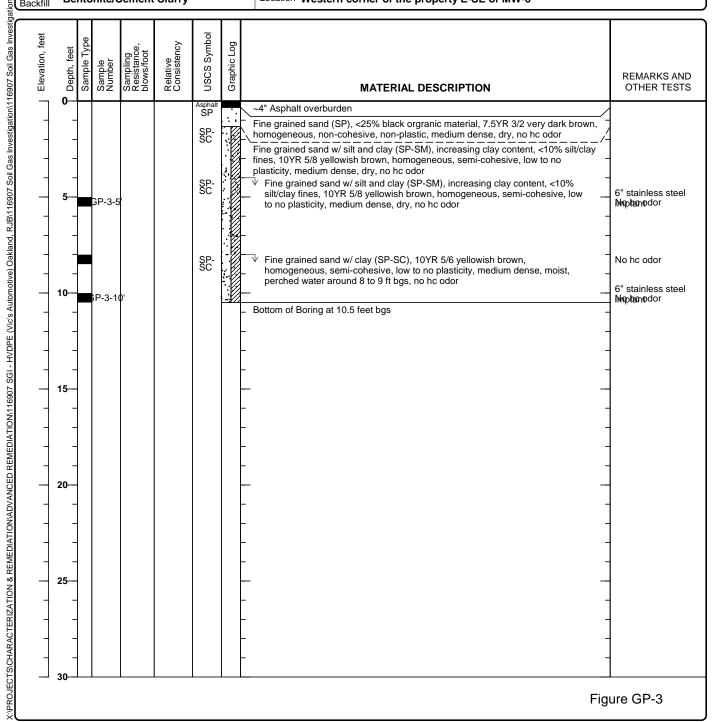


Project Location: 245 8th Street, Oakland, California

**Project Number: 116907** 

## **Log of Boring GP-3**

Date(s) Dyllod July 13, 2006	Logged By Richard J. Bradford	Checked By Peter McIntyre
Date(s) Drilled Drilled Drilled Drilling Method Drill Rig Type Groundwater Level and Date Measured Borehole Backfill Bentonite/Cement Slurry	Drill Bit 2 inch Probe Rods w/ DT21 Size/Type Dual Tube Sampler	Total Depth of Borehole 10.5 feet bgs
Drill Rig Type GeoProbe Model 5410	D 200	Approximate Surface Elevation ~33 feet MSL
Groundwater Level and Date Measured Not Encountered ATD	Sampling Method(s) None	Hammer Data
Borehole Bentonite/Cement Slurry	Location Western corner of the property E-SE of MW-6	

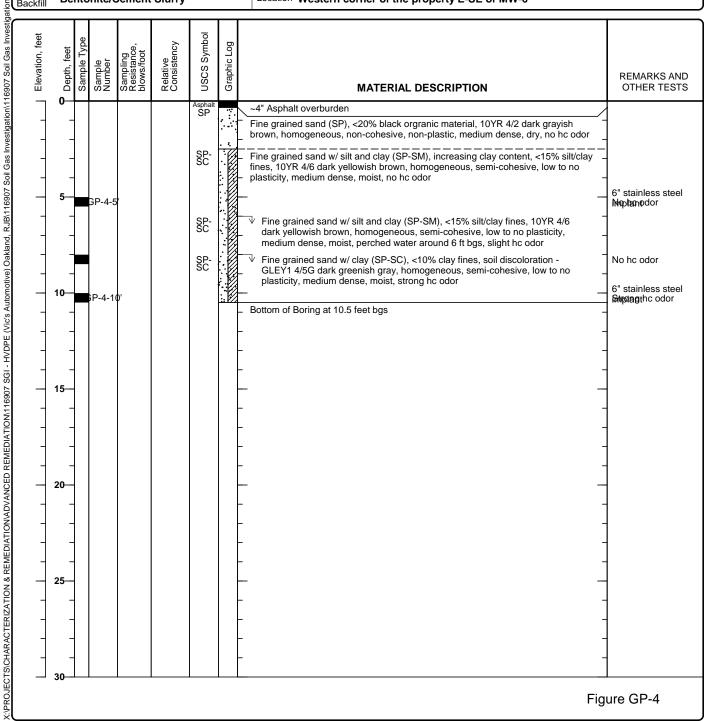


Project Location: 245 8th Street, Oakland, California

Project Number: 116907

## **Log of Boring GP-4**

Date(s) Drilled July 13, 2006	Logged By Richard J. Bradford	Checked By Peter McIntyre
Drilling Method Direct Push Technology	Drill Bit 2 inch Probe Rods w/ DT21 Size/Type Dual Tube Sampler	Total Depth of Borehole 10.5 feet bgs
Drill Rig Type GeoProbe Model 5410	D. SHE	Approximate Surface Elevation ~33 feet MSL
Date(s) Drilled Drille	Sampling Method(s) None	Hammer Data
Borehole Backfill Bentonite/Cement Slurry	Location Western corner of the property E-SE of MW-6	



## APPENDIX C SOIL GAS PROBE FIELD SAMPLING FORMS

Soil Gas Probe Number:

**GP-1-5** 

Project Name:	Vic's Automotive	Date of Sampling:	8/4/2006
Job Number:	116907	Start Time:	900
Project Address:	245 8th Street, Oakland	End Time:	1015
Floject Address. 245 our Street, Oakland	Name of Sampler:	R. Bradford	

SOIL GAS PROBE DATA		
Starting Vacuum (in. Hg)	29	
Ending Vacuum (in. Hg)	4	
Flow Controller / Sampling Flow Rate (ml/min)	167	
Tubing Inside Diameter (1/8" or 1/4")	1/8"	
Tubing Type	Kynar - PVDF	
Wellbox Condition	OK ▼	
Depth of Probe (ft bgs)	5.0	
Number of Purge Volumes (default = 3 purge volumes)	3	
Total Volume Purged (cc): formula valid only for tubing sizes of 1/8" I.D. (2.30 cc/ft) and 1/4" I.D. (9.20 cc/ft)	48.3	
Appreciable Amount of Rain (>1/2") in Last Five Days?	No	
Moisture Present in Tubing?	No	

SOIL GAS SAMPLES		
Number of Samples / Container Size and Type One (1) 1-Liter Summa Canister		
Canister Number 31775		
Leak Check Compound Isopropyl Alcohol (i.e., Rubbing Alcohol)		

## NOTES & COMMENTS

cc = cubic centimeter

mL = milliliter

L = liter

in. Hg = inches of mercury

1 L = 1000 mL 1 mL = 1 cc

Project Name:	Vic's Automotive	Date of Sampling:	8/4/2006
Job Number:	116907	Start Time:	940
raiget Address	ect Address: 245 8th Street, Oakland	End Time:	945
oject Address: 245 8th Street, Oakland	245 our Sueet, Oakland	Name of Sampler:	R. Bradford

Soil Gas Probe Number:

GP-1-10

SOIL GAS PROBE DATA		
Starting Vacuum (in. Hg)	29	
Ending Vacuum (in. Hg)	3.5	
Flow Controller / Sampling Flow Rate (ml/min)	167	
Tubing Inside Diameter (1/8" or 1/4")	1/8"	
Tubing Type	Kynar - PVDF	
Wellbox Condition	OK 🔻	
Depth of Probe (ft bgs)	10.0	
Number of Purge Volumes (default = 3 purge volumes)	3	
Total Volume Purged (cc): formula valid only for tubing sizes of 1/8" I.D. (2.30 cc/ft) and 1/4" I.D. (9.20 cc/ft)	82.8	
Appreciable Amount of Rain (>1/2") in Last Five Days?	No	
Moisture Present in Tubing?	No	

SOIL GAS SAMPLES		
Number of Samples / Container Size and Type One (1) 1-Liter Summa Canister		
Canister Number 12374		
Leak Check Compound Isopropyl Alcohol (i.e., Rubbing Alcohol)		

# NOTES & COMMENTS

cc = cubic centimeter

mL = milliliter

L = liter

in. Hg = inches of mercury

1 L = 1000 mL 1 mL = 1 cc

Soil Gas Probe Number:

**GP-2-5** 

Project Name:	Vic's Automotive	Date of Sampling:	8/4/2006
Job Number:	116907	Start Time:	1050
Project Address:	245 8th Street, Oakland	End Time:	1100
Project Address. 245 our Street, Oakland	245 our Street, Carland	Name of Sampler:	R. Bradford

SOIL GAS PROBE DATA		
Starting Vacuum (in. Hg)	28.5	
Ending Vacuum (in. Hg)	5	
Flow Controller / Sampling Flow Rate (ml/min)	167	
Tubing Inside Diameter (1/8" or 1/4")	1/8"	
Tubing Type	Kynar - PVDF	
Wellbox Condition	ОК	
Depth of Probe (ft bgs)	5.0	
Number of Purge Volumes (default = 3 purge volumes)	3	
Total Volume Purged (cc): formula valid only for tubing sizes of 1/8" I.D. (2.30 cc/ft) and 1/4" I.D. (9.20 cc/ft)	48.2	
Appreciable Amount of Rain (>1/2") in Last Five Days?	No	
Moisture Present in Tubing?	No	

SOIL GAS SAMPLES			
Number of Samples / Container Size and Type One (1) 1-Liter Summa Canister			
Canister Number	25289		
Leak Check Compound	Isopropyl Alcohol (i.e., Rubbing Alcohol)		

## **NOTES & COMMENTS**

cc = cubic centimeter

mL = milliliter

L = liter

in. Hg = inches of mercury

1 L = 1000 mL 1 mL = 1 cc

	Soil Gas Probe Number:	GP-2-10	
			=

Project Name:	Vic's Automotive	Date of Sampling:	8/4/2006
Job Number:	116907	Start Time:	1033
Project Address:	245 8th Street, Oakland	End Time:	1040
	245 our Street, Oakland	Name of Sampler:	R. Bradford

SOIL GAS	PROBE DATA
Starting Vacuum (in. Hg)	29
Ending Vacuum (in. Hg)	3.5
Flow Controller / Sampling Flow Rate (ml/min)	167
Tubing Inside Diameter (1/8" or 1/4")	1/8"
Tubing Type	Kynar - PVDF
Wellbox Condition	OK ▼
Depth of Probe (ft bgs)	10.0
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (cc): formula valid only for tubing sizes of 1/8" I.D. (2.30 cc/ft) and 1/4" I.D. (9.20 cc/ft)	82.8
Appreciable Amount of Rain (>1/2") in Last Five Days?	No
Moisture Present in Tubing?	No

SOIL GAS SAMPLES		
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister	
Canister Number	2074	
Leak Check Compound	Isopropyl Alcohol (i.e., Rubbing Alcohol)	

## **NOTES & COMMENTS**

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cc = cubic centimeter

mL = milliliter

L = liter

in. Hg = inches of mercury

1 L = 1000 mL 1 mL = 1 cc

Soil Gas Probe Number:

**GP-3-5** 

Project Name:	Vic's Automotive	Date of Sampling:	8/4/2006
Job Number:	116907	Start Time:	1209
Project Address: 245 8th Street, Oakland	End Time:	1220	
	240 our oureet, Oakland	Name of Sampler:	R. Bradford

SOIL GAS	PROBE DATA
Starting Vacuum (in. Hg)	28.5
Ending Vacuum (in. Hg)	3
Flow Controller / Sampling Flow Rate (ml/min)	167
Tubing Inside Diameter (1/8" or 1/4")	1/8"
Tubing Type	Kynar - PVDF
Wellbox Condition	OK ▼
Depth of Probe (ft bgs)	5.0
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (cc): formula valid only for tubing sizes of 1/8" I.D. (2.30 cc/ft) and 1/4" I.D. (9.20 cc/ft)	48.3
Appreciable Amount of Rain (>1/2") in Last Five Days?	No
Moisture Present in Tubing?	No

SOIL GAS SAMPLES			
Number of Samples / Container Size and Type One (1) 1-Liter Summa Canister			
Canister Number	34623		
Leak Check Compound	Isopropyl Alcohol (i.e., Rubbing Alcohol)		

# NOTES & COMMENTS

cc = cubic centimeter

mL = milliliter

L = liter

in. Hg = inches of mercury

1 L = 1000 mL 1 mL = 1 cc

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	Gas Pro	ho Ni	mhori	GP-3-10
JUIL	205 FIU	DE MU	muer.	(712-3-11)

Project Name:	Vic's Automotive	Date of Sampling:	8/4/2006
Job Number:	116907	Start Time:	1156
Project Address: 245 8th Street, Oakland	End Time:	1206	
	245 oth Street, Oakland	Name of Sampler:	R. Bradford

SOIL GAS PROBE DATA			
Starting Vacuum (in. Hg)	29		
Ending Vacuum (in. Hg)	3.5		
Flow Controller / Sampling Flow Rate (ml/min)	167		
Tubing Inside Diameter (1/8" or 1/4")	1/8"		
Tubing Type	Kynar - PVDF		
Wellbox Condition	ОК		
Depth of Probe (ft bgs)	10.0		
Number of Purge Volumes (default = 3 purge volumes)	3		
Total Volume Purged (cc): formula valid only for tubing sizes of 1/8" I.D. (2.30 cc/ft) and 1/4" I.D. (9.20 cc/ft)	82.8		
Appreciable Amount of Rain (>1/2") in Last Five Days?	No		
Moisture Present in Tubing?	No		

SOIL GAS SAMPLES				
Number of Samples / Container Size and Type One (1) 1-Liter Summa Canister				
Canister Number	2176			
Leak Check Compound	Isopropyl Alcohol (i.e., Rubbing Alcohol)			

### **NOTES & COMMENTS**

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cc = cubic centimeter

mL = milliliter

L = liter

in. Hg = inches of mercury

1 L = 1000 mL 1 mL = 1 cc

Soil Gas Probe Number:

**GP-4-5** 

Project Name:	Vic's Automotive	Date of Sampling:	8/4/2006
Job Number:	116907	Start Time:	1140
Project Address: 245 8th Street, Oakla	245 8th Street Oakland	End Time:	1146
	243 our oueet, Oakland	Name of Sampler:	R. Bradford

SOIL GAS PROBE DATA				
Starting Vacuum (in. Hg)	29			
Ending Vacuum (in. Hg)	5			
Flow Controller / Sampling Flow Rate (ml/min)	167			
Tubing Inside Diameter (1/8" or 1/4")	1/8"			
Tubing Type	Kynar - PVDF			
Wellbox Condition	OK ▼			
Depth of Probe (ft bgs)	5.0			
Number of Purge Volumes (default = 3 purge volumes)	3			
Total Volume Purged (cc): formula valid only for tubing sizes of 1/8" I.D. (2.30 cc/ft) and 1/4" I.D. (9.20 cc/ft)	48.3			
Appreciable Amount of Rain (>1/2") in Last Five Days?	No			
Moisture Present in Tubing?	No			

SOIL GAS SAMPLES				
Number of Samples / Container Size and Type One (1) 1-Liter Summa Canister				
Canister Number	11434			
Leak Check Compound	Isopropyl Alcohol (i.e., Rubbing Alcohol)			

### **NOTES & COMMENTS**

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cc = cubic centimeter

mL = milliliter

L = liter

in. Hg = inches of mercury

1 L = 1000 mL 1 mL = 1 cc

Soil G	as Pro	he Ni	ımber:	GP-4-10
3011 6	as FIU	DE N	illibel.	GP-4-10

Project Name:	Vic's Automotive	Date of Sampling:	8/4/2006
Job Number:	116907	Start Time:	1121
Project Address: 245 8th Street, Oakland	End Time:	1129	
	245 8th Street, Oakland	Name of Sampler:	R. Bradford

SOIL GAS PROBE DATA				
Starting Vacuum (in. Hg)	29			
Ending Vacuum (in. Hg)	2			
Flow Controller / Sampling Flow Rate (ml/min)	167			
Tubing Inside Diameter (1/8" or 1/4")	1/8"			
Tubing Type	Kynar - PVDF			
Wellbox Condition	ОК			
Depth of Probe (ft bgs)	10.0			
Number of Purge Volumes (default = 3 purge volumes)	3			
Total Volume Purged (cc): formula valid only for tubing sizes of 1/8" I.D. (2.30 cc/ft) and 1/4" I.D. (9.20 cc/ft)	82.8			
Appreciable Amount of Rain (>1/2") in Last Five Days?	No			
Moisture Present in Tubing?	No			

SOIL GAS SAMPLES			
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister		
Canister Number	11384 and 11893 (duplicate sample)		
Leak Check Compound	Isopropyl Alcohol (i.e., Rubbing Alcohol)		

## **NOTES & COMMENTS**


cc = cubic centimeter

mL = milliliter

L = liter

in. Hg = inches of mercury

1 L = 1000 mL 1 mL = 1 cc

## **APPENDIX D**

## LABORATORY ANALYTICAL REPORTS WITH CHAIN OF CUSTODY DOCUMENTATION

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #116907; Vic's	Date Sampled: 07/13/06
2500 Camino Diablo, Ste. #200	Automotive	Date Received: 07/20/06
Walnut Creek, CA 94597	Client Contact: Ricky Bradford	Date Reported: 07/27/06
wamat creek, cri 54377	Client P.O.:	Date Completed: 07/27/06

WorkOrder: 0607358

July 27, 2006

Dear Ricky:

Enclosed are:

- 1). the results of 8 analyzed samples from your #116907; Vic's Automotive project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

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McCAMPBELL ANALYTICAL INC.  110 2 <sup>nd</sup> AVENUE SOUTH, #D7												(	CF	A	IN	O	F	CL	IS'	ro	D	YI	VE.	CO	R	D		14						
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Report To: Ricky			, D	Bill To	: san	ie		PU	#				-						Alla	lys	18 IV	equ	est	-		-			-	Otl	ier	-+	Con	nments
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				SLS	ine				T	I	ESE	N E	4	s Ga	8	m 0	H H	8260	(EP	30	30 P	99	70	's by	als	s	121/2							
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(Field Point Name)		Date	Time	ont	Ü	ier		lge	er			6	5	8 1	as D	Pet	Pet	CS	(O X	809	809	624	625	8 / I	1-17	T 5 1	(72,							
	1	3		Ü#	Type Containers	Water	Soil	Air	Other	Ice	HCI	HNO3		BTEX &	TPH as Diesel (8015)	Total Petroleum Oil	Fota	HVOCs EPA	BTEX ONLY (EPA	EPA 608 / 8080	EPA	EPA 624 / 8260	EPA 625 / 8270	PAH's / PNA's by	CAM-17 Metals	LUFT 5 Metals	ead	RCI						
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GP-3-41			9:400	ml			X			X				X																				
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GP-2-5' GP-2-10' GP-4-10'			11:1500				X			X			1	X															1					
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## McCampbell Analytical, Inc.

(925) 252-9262

## 1534 Willow Pass Rd Pittsburg, CA 94565-1701

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

Page 1 of 1

WorkOrder: 0607358 ClientID: AEL EDF: YES

Report to: Bill to: Requested TAT: 5 days

Ricky Bradford TEL: (925) 283-6000 Denise Mockel
AEI Consultants FAX: (925) 283-6121 AEI Consultants

2500 Camino Diablo, Ste. #200 ProjectNo: #116907; Vic's Automotive 2500 Camino Diablo, Ste. #200 Date Received: 07/20/2006

Walnut Creek, CA 94597 Po: Walnut Creek, CA 94597 Date Printed: 07/21/2006

				Ī	Requested Tests (See legend below)													
Sample ID	ClientSampID	Matrix	<b>Collection Date</b>	Hold	1	2		3		4	5	6	7	8	9	10	11	12
0607358-001	GP-1-5'	Soil	7/13/06 1:45:00 PM		Α	Α												
0607358-002	GP-1-10'	Soil	7/13/06 2:00:00 PM		Α													
0607358-003	BP-3-10'	Soil	7/13/06 10:00:00		Α													
0607358-004	GP-3-4'	Soil	7/13/06 9:40:00 AM		Α													
0607358-005	GP-2-5'	Soil	7/13/06 12:40:00		Α													
0607358-006	GP-2-10'	Soil	7/13/06 1:00:00 PM		Α													
0607358-007	GP-4-10'	Soil	7/13/06 11:15:00		Α													
0607358-008	GP-4-5'	Soil	7/13/06 10:59:00		Α													

#### Test Legend:

1	G-MBTEX_S	2 PREDF REPORT	Т 3	4	5	
6		7	8	9	10	
11		12				

Prepared by: Melissa Valles

#### **Comments:**

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

1534 Willow Pass Road, Pittsburg, CA 94565-1701 

"When Ouality Counts' Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #116907; Vic's Automotive	Date Sampled: 07/13/06
2500 Camino Diablo, Ste. #200		Date Received: 07/20/06
Walnut Creek, CA 94597	Client Contact: Ricky Bradford	Date Extracted: 07/20/06
Wallian Crossis, Cray 1007	Client P.O.:	Date Analyzed 07/21/06-07/24/06

#### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction	Work Ord	er: 06	07358							
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	GP-1-5'	S	ND	ND	ND	ND	ND	ND	1	89
002A	GP-1-10'	S	ND	ND	ND	ND	ND	ND	1	101
003A	BP-3-10'	S	ND	ND	ND	ND	ND	ND	1	88
004A	GP-3-4'	S	ND	ND	ND	ND	ND	ND	1	93
005A	GP-2-5'	S	ND	ND	ND	ND	ND	ND	1	101
006A	GP-2-10'	S	ND	ND	ND	ND	ND	ND	1	100
007A	GP-4-10'	S	1.6,a	ND	0.049	0.060	0.019	0.079	1	116
008A	GP-4-5'	S	ND	ND	ND	ND	ND	ND	1	95
_	orting Limit for DF =1;	W	NA	NA	NA	NA	NA	NA	1	ug/L
	neans not detected at or ove the reporting limit	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

<sup>\*</sup> water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

<sup>+</sup>The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis.



<sup>#</sup> cluttered chromatogram; sample peak coelutes with surrogate peak.

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0607358

EPA Method: SW8021B/8015	Batch	nID: 22784		Spiked Sample ID: 0607355-025A						
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	Criteria (%)
, u.a., 10	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	0.60	104	105	0.430	107	99	7.27	70 - 130	70 - 130
MTBE	ND	0.10	106	111	4.63	110	107	2.68	70 - 130	70 - 130
Benzene	ND	0.10	94.1	95.7	1.70	101	95.6	5.85	70 - 130	70 - 130
Toluene	ND	0.10	78.9	80.5	1.94	85.2	79.4	7.01	70 - 130	70 - 130
Ethylbenzene	ND	0.10	95.7	96.9	1.18	101	95.7	5.69	70 - 130	70 - 130
Xylenes	ND	0.30	90.3	90.7	0.368	94.7	90	5.05	70 - 130	70 - 130
%SS:	92	0.10	100	101	0.995	104	99	4.23	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

#### BATCH 22784 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0607358-001A	7/13/06 1:45 PM	7/20/06	7/22/06 5:40 AM	0607358-002A	7/13/06 2:00 PM	7/20/06	7/24/06 6:17 PM
0607358-003A	7/13/06 10:00 AM	7/20/06	7/22/06 6:16 AM	0607358-004A	7/13/06 9:40 AM	7/20/06	7/21/06 8:20 PM
0607358-005A	7/13/06 12:40 PM	7/20/06	7/24/06 6:49 PM	0607358-006A	7/13/06 1:00 PM	7/20/06	7/22/06 11:45 PM
0607358-007A	7/13/06 11:15 AM	7/20/06	7/24/06 7:21 PM	0607358-008A	7/13/06 10:59 AM	7/20/06	7/22/06 1:55 PM

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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



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

<sup>£</sup> TPH(btex) = sum of BTEX areas from the FID.

<sup>#</sup> cluttered chromatogram; sample peak coelutes with surrogate peak.

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



## Sample Transportation Notice

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FOLSOM, CA 95630-4719

CHAIN	-OF-CUSTODY R	ECORD 0	ler <b>en</b> o, i	and incemnity A	ur Toxics Limitac	ng signature also indicates agreement to hold harml Lagainst any claim, demand, or action, of any kind, rel of <u>samples. D.O.T. Hotlins (</u> 800) 467-4922.	ess, (510) soon		age <u>i</u> of <u>I</u>	
Contact Pe	erson Ricky Bra	News)	·. 🚅	. •		Designat Info.	Turn Around	4 3 ( 4 <b>6 3</b> 9 c)	AND PUBLICATION OF STREET	ĺ
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Lab LD.	Field Sample I.D. (	Location)	Can#	Date	Time	Analyses Requested	Cani	<del></del>	esure/Vacuum	
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	GP-1-5	3i	775	8/4/36	9:58	TPH-9 (TO-3) VOCS (TO-15	5) 29	4	4.00 Ha 150	057
021	GP-1-10	[2]	<u>374</u>		9:45		29.5	3.5	3.5/4	
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12.7F	GP-3-5	34	623		12:09		28.5	3	4 000	
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## Air Toxics Ltd. Introduces the Electronic Sample Receipt Confirmation

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

This sample receipt confirmation includes the following:

- Cover Page noting any sample receiving discrepancies;
- Sample Receipt Summary;
- Chain of custody (copy);
- Compound Listing; and
- Unreturned Equipment.



## Air Toxics Ltd. Sample Receipt Confirmation Cover Page

Thank you for choosing Air Toxics Ltd. We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Nicole Danbacher at 916-985-1000** 

ATL will proceed with the analysis as specified on the Chain of Custody and Sample Receipt Summary page.

**Please note**: The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). If additional discrepancies are found you will be contacted via telephone or revised Sample Receipt Confirmation.

## SAMPLE RECEIPT SUMMARY

#### WORKORDER 0608172A

Client Date Promised: 08/22/06

Phone Date Completed:
Mr. Ricky Bradford

AEI Consultants, Inc.

2500 Camino Diablo

925-283-6000

Pate Received: 8/5/06

PO#: 100685

Suite 200 Project#: 116907 Vic's Auto

Walnut Creek, CA 94597 925-283-612

**Sales Rep:** R9 **Total \$:** \$ 2,323.00

Logged By: SP

\$18.00

Analysis Code: TO-14A

<b>Fraction</b>	Sample #	<u>Analysis</u>	<b>Collected</b>	Amount\$
01A	GP-1-5	Modified TO-15	08/04/06	\$185.00
02A	GP-1-10	Modified TO-15	08/04/06	\$185.00
03A	GP-2-5	Modified TO-15	08/04/06	\$185.00
04A	GP-2-10	Modified TO-15	08/04/06	\$185.00
05A	GP-3-5	Modified TO-15	08/04/06	\$185.00
06A	GP-3-10	Modified TO-15	08/04/06	\$185.00
07A	GP-4-5	Modified TO-15	08/04/06	\$185.00
08A	GP-4-10	Modified TO-15	08/04/06	\$185.00
09A	GP-4-10 Duplicate	Modified TO-15	08/04/06	\$185.00
Misc. Charg	es Client Specific Disk Format (9) @ \$5.00 each.			\$45.00
	1 Liter Summa Canister (9) @ \$30.00 each.			\$270.00
	6 Liter Summa Canister (1) @ \$50.00 each.			\$50.00
	Blue Body Flow Controller (9) @ \$30.00 each.			\$270.00
	Duplicate Sampling T (1) @ \$5.00 each.			\$5.00

**Note:** Samples received after 3 P.M. PST are considered to be received on the following work day.

Atlas Project Name/Profile#: Vick's Automotive/9309

Fuel Surcharge (9) @ \$2.00 each.

**BILL TO:** Mr. Ricky Bradford

AEI Consultants, Inc. 2500 Camino Diablo

Suite 200

Walnut Creek, CA 94597

Reporting Method: Modified TO-15

## SAMPLE RECEIPT SUMMARY

#### WORKORDER 0608172B

**Date Promised:** 08/22/06 Client

**Phone Date Completed:** 

Mr. Ricky Bradford 925-283-6000 **Date Received:** 8/5/06 AEI Consultants, Inc. **PO#:** 100685 2500 Camino Diablo Fax

Suite 200 Project#: 116907 Vic's Auto 925-283-6121

Walnut Creek, CA 94597

**Total \$:** \$ 675.00 Sales Rep: R9

Logged By: SP

<b>Fraction</b>	Sample #	<u>Analysis</u>	<b>Collected</b>	Amount\$
01A	GP-1-5	Modified TO-3	08/04/06	\$75.00
02A	GP-1-10	Modified TO-3	08/04/06	\$75.00
03A	GP-2-5	Modified TO-3	08/04/06	\$75.00
04A	GP-2-10	Modified TO-3	08/04/06	\$75.00
05A	GP-3-5	Modified TO-3	08/04/06	\$75.00
06A	GP-3-10	Modified TO-3	08/04/06	\$75.00
07A	GP-4-5	Modified TO-3	08/04/06	\$75.00
08A	GP-4-10	Modified TO-3	08/04/06	\$75.00
09A	GP-4-10 Duplicate	Modified TO-3	08/04/06	\$75.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.

Atlas Project Name/Profile#: Vick's Automotive/9309

BILL TO: Mr. Ricky Bradford

> AEI Consultants, Inc. 2500 Camino Diablo

Suite 200

Walnut Creek, CA 94597

Reporting Method: Modified TO-3 (Sh)-TPHg only

Analysis Code: TO-3/12

AIR	TOXICS	LTD.
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CHAIN-OF-CUSTODY RECORD

## Sample Transportation Notice

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FOLSOM, CA 95630-4719

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Lab LD. Field Sample I.D. (Location) Cen# Date Time Analyses Requested Canister Press	Sure/Vacuum Receipt Fina
31775 8/4/66 9:58 TPH-9 (70-3) VOCS (TO-15) 29 4	ipă.
02A GP-1-10 12374 9:40 Z8.5 3.5	-
03K GP-2-5 25280 10:50 24.5 5	
0"A GP-2-10 GZO74 10:33 Z9 3.5	
057 68-3-5 34623 12:09	7.5 A 1
DUA GP-3-10 62:76 11:56	
D2A 6P-4-5 1149 11:40	13.7
D8A GP-4-10 13384 11:21	
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## **Compound Listing**

## **Modified TO-15**

CAS Number	Compound	<b>Detection Limit</b>	
		ppbv	Туре
75-71-8	Freon 12	0.50	
76-14-2	Freon 114	0.50	
56-23-5	Carbon Tetrachloride	0.50	
540-84-1	2,2,4-Trimethylpentane	0.50	
71-43-2	Benzene	0.50	
107-06-2	1,2-Dichloroethane	0.50	
142-82-5	Heptane	0.50	
79-01-6	Trichloroethene	0.50	
78-87-5	1,2-Dichloropropane	0.50	
123-91-1	1,4-Dioxane	2.0	
75-27-4	Bromodichloromethane	0.50	
10061-01-5	cis-1,3-Dichloropropene	0.50	
108-10-1	4-Methyl-2-pentanone	0.50	
108-88-3	Toluene	0.50	
10061-02-6	trans-1,3-Dichloropropene	0.50	
79-00-5	1,1,2-Trichloroethane	0.50	
127-18-4	Tetrachloroethene	0.50	
591-78-6	2-Hexanone	2.0	
124-48-1	Dibromochloromethane	0.50	
106-93-4	1,2-Dibromoethane (EDB)	0.50	
108-90-7	Chlorobenzene	0.50	
100-41-4	Ethyl Benzene	0.50	
108-38-3	m,p-Xylene	0.50	
95-47-6	o-Xylene	0.50	
100-42-5	Styrene	0.50	
75-25-2	Bromoform	0.50	
98-82-8	Cumene	0.50	
79-34-5	1,1,2,2-Tetrachloroethane	0.50	
103-65-1	Propylbenzene	0.50	
622-96-8	4-Ethyltoluene	0.50	
108-67-8	1,3,5-Trimethylbenzene	0.50	
95-63-6	1,2,4-Trimethylbenzene	0.50	
541-73-1	1,3-Dichlorobenzene	0.50	
106-46-7	1,4-Dichlorobenzene	0.50	
100-44-7	alpha-Chlorotoluene	0.50	
95-50-1	1,2-Dichlorobenzene	0.50	
120-82-1	1,2,4-Trichlorobenzene	2.0	
87-68-3	Hexachlorobutadiene	2.0	
2037-26-5	Toluene-d8	2.0	
17060-07-0	1,2-Dichloroethane-d4		
460-00-4	4-Bromofluorobenzene		
74-87-3	Chloromethane	2.0	
75-01-4	Vinyl Chloride	0.50	
75-01-4 106-99-0	1,3-Butadiene	0.50	
	Bromomethane	0.50	
74-83-9	Chloroethane	0.50	
75-00-3	Chiloroethane	0.50	

1

## **Compound Listing**

## **Modified TO-15**

CAS Number	Compound	<b>Detection Limit</b>	
		ppbv	Туре
75-69-4	Freon 11	0.50	
64-17-5	Ethanol	2.0	
76-13-1	Freon 113	0.50	
75-35-4	1,1-Dichloroethene	0.50	
67-64-1	Acetone	2.0	
67-63-0	2-Propanol	2.0	
75-15-0	Carbon Disulfide	0.50	
107-05-1	3-Chloropropene	2.0	
75-09-2	Methylene Chloride	0.50	
1634-04-4	Methyl tert-butyl ether	0.50	
156-60-5	trans-1,2-Dichloroethene	0.50	
110-54-3	Hexane	0.50	
75-34-3	1,1-Dichloroethane	0.50	
78-93-3	2-Butanone (Methyl Ethyl Ketone)	0.50	
156-59-2	cis-1,2-Dichloroethene	0.50	
109-99-9	Tetrahydrofuran	0.50	
67-66-3	Chloroform	0.50	
71-55-6	1,1,1-Trichloroethane	0.50	
110-82-7	Cyclohexane	0.50	

## **Compound Listing**

## Modified TO-3 (Sh)-TPHg only

CAS Number	Compound	Detection Limit	
		ppmv	Туре
9999-9999-208 462-06-602	TPH (Gasoline Range) Fluorobenzene (FID)	0.025	



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 #: 0608172B**

#### Work Order Summary

CLIENT: Mr. Ricky Bradford BILL TO: Mr. Ricky Bradford

AEI Consultants, Inc.
AEI Consultants, Inc.
2500 Camino Diablo
2500 Camino Diablo

Suite 200 Suite 200

Walnut Creek, CA 94597 Walnut Creek, CA 94597

**PHONE:** 925-283-6000 **P.O.** # 100685

 FAX:
 925-283-6121
 PROJECT # 116907 Vic's Auto

 DATE RECEIVED:
 08/05/2006
 CONTACT:
 Nicole Danbacher

 DATE COMPLETED:
 08/21/2006

			RECEIPT
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.
01A	GP-1-5	Modified TO-3	4.0 "Hg
02A	GP-1-10	Modified TO-3	3.5 "Hg
03A	GP-2-5	Modified TO-3	5.5 "Hg
04A	GP-2-10	Modified TO-3	3.0 "Hg
05A	GP-3-5	Modified TO-3	4.0 "Hg
06A	GP-3-10	Modified TO-3	4.0 "Hg
07A	GP-4-5	Modified TO-3	5.5 "Hg
07AA	GP-4-5 Duplicate	Modified TO-3	5.5 "Hg
08A	GP-4-10	Modified TO-3	3.5 "Hg
09A	GP-4-10 Duplicate	Modified TO-3	1.5 "Hg
10A	Lab Blank	Modified TO-3	NA
11A	LCS	Modified TO-3	NA

CERTIFIED BY:

Linda d. Fruman

08/21/06

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-3 (Gas range) AEI Consultants, Inc. Workorder# 0608172B

Nine 1 Liter Summa Canister samples were received on August 05, 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. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline and correspond to the range of hydrocarbons from C5 to C10. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

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: GP-1-5** 

Lab ID#: 0608172B-01A

Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.058	0.24	0.094	0.38

Client Sample ID: GP-1-10

Lab ID#: 0608172B-02A

Compound	Rpt. Limit	Rpt. Limit	Amount	Amount
	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.057	0.23	0.14	0.57

Client Sample ID: GP-2-5

Lab ID#: 0608172B-03A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Compound	(ррпіч)	(uG/L)	(рріпу)	(uG/L)
TPH (Gasoline Range)	0.062	0.25	0.14	0.56

Client Sample ID: GP-2-10

Lab ID#: 0608172B-04A

	RDT. LIMIT	Kpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.056	0.23	0.10	0.42

Client Sample ID: GP-3-5

Lab ID#: 0608172B-05A

No Detections Were Found.

Client Sample ID: GP-3-10

Lab ID#: 0608172B-06A

	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.058	0.24	0.16	0.65

**Client Sample ID: GP-4-5** Lab ID#: 0608172B-07A



**Summary of Detected Compounds** 

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

Client Sample ID: GP-4-5

Lab ID#: 0608172B-07A

Compound	Rot. Limit	Rpt. Limit (uG/L)	Amount	Amount (uG/L)
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.062	0.25	0.20	0.80

Client Sample ID: GP-4-5 Duplicate

Lab ID#: 0608172B-07AA

Compound	Rpt. Limit	Rpt. Limit	Amount	Amount
	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.062	0.25	0.17	0.69

Client Sample ID: GP-4-10

Lab ID#: 0608172B-08A

Compound	Rɒt. Limit	Rpt. Limit	Amount	Amount
	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.057	0.23	0.16	0.65

Client Sample ID: GP-4-10 Duplicate

Lab ID#: 0608172B-09A

	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.053	0.22	0.15	0.63

# Client Sample ID: GP-1-5 Lab ID#: 0608172B-01A

File Name: Dil. Factor:	d081411 2.33		Date of Collection: 8/4/06 Date of Analysis: 8/14/06 01:45 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.058	0.24	0.094	0.38	
Container Type: 1 Liter Summa	Canister	0/5		Method	
Surrogates		%Recovery		Limits	
Fluorobenzene (FID)		96		75-150	

# Client Sample ID: GP-1-10 Lab ID#: 0608172B-02A

File Name: Dil. Factor:	d081412 2.29	Date of Collection: 8/4/06 Date of Analysis: 8/14/06 02:18 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount Amount (ppmv) (u0	
TPH (Gasoline Range)	0.057	0.23	0.14	0.57
Container Type: 1 Liter Summa Surrogates	Canister	%Recovery		Method Limits
Fluorobenzene (FID)		98		75-150

# Client Sample ID: GP-2-5 Lab ID#: 0608172B-03A

File Name: Dil. Factor:	d081413 2.47		Date of Collection: 8/4/06 Date of Analysis: 8/14/06 02:52 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.062	0.25	0.14	0.56	
Container Type: 1 Liter Summa	Canister				
Surrogates		%Recovery		Method Limits	
Fluorobenzene (FID)		88		75-150	

# Client Sample ID: GP-2-10 Lab ID#: 0608172B-04A

File Name: Dil. Factor:	d081421 2.24		Date of Collection: 8	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.056	0.23	0.10	0.42
Container Type: 1 Liter Summa	Canister			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		100		75-150

# Client Sample ID: GP-3-5 Lab ID#: 0608172B-05A

File Name:	d081416		Date of Collection: 8/4/06		
Dil. Factor:	2.33		Date of Analysis: 8/14/06 05:28		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.058	0.24	Not Detected	Not Detected	
Container Type: 1 Liter Summa	Canister				
				Method	
Surrogates		%Recovery		Limits	
Fluorobenzene (FID)		96		75-150	

# Client Sample ID: GP-3-10 Lab ID#: 0608172B-06A

File Name:	d081417		Date of Collection: 8/4/06		
Dil. Factor:  Compound	2.33 Rpt. Limit	Rpt. Limit	Date of Analysis: 8/	714/06 06:05 PM Amount	
	(ppmv)	(uG/L)	(ppmv)	(uG/L)	
TPH (Gasoline Range)	0.058	0.24	0.16	0.65	
Container Type: 1 Liter Summa	Canister				
				Method	
Surrogates		%Recovery		Limits	
Fluorobenzene (FID)		95		75-150	

# Client Sample ID: GP-4-5 Lab ID#: 0608172B-07A

File Name: Dil. Factor:	d081418 2.47	Date of Collection: 8/4/06 Date of Analysis: 8/14/06 06:45 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.062	0.25	0.20	0.80
Container Type: 1 Liter Summa	Canister			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		94		75-150



# Client Sample ID: GP-4-5 Duplicate Lab ID#: 0608172B-07AA

File Name: Dil. Factor:	d081422 2.47		Date of Collection: 8/4/06 Date of Analysis: 8/14/06 09:30 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.062	0.25	0.17	0.69	
Container Type: 1 Liter Summa	Canister			Method	
Surrogates		%Recovery		Limits	
Fluorobenzene (FID)		92		75-150	

# Client Sample ID: GP-4-10 Lab ID#: 0608172B-08A

File Name:	d081419		Date of Collection: 8/4/06		
Dil. Factor:	2.29		Date of Analysis: 8/14/06 07:22 PM		
Compound	Rɒt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.057	0.23	0.16	0.65	
Container Type: 1 Liter Summa	Canister				
Surrogates		%Recovery		Method Limits	
Fluorobenzene (FID)		92		75-150	



# Client Sample ID: GP-4-10 Duplicate

#### Lab ID#: 0608172B-09A

File Name: Dil. Factor:	d081420 2.13		Date of Collection: 8/4/06 Date of Analysis: 8/14/06 08:04 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.053	0.22	0.15	0.63	
Container Type: 1 Liter Summa	Canister				
Surrogates		%Recovery		Method Limits	
Fluorobenzene (FID)		92		75-150	



# Client Sample ID: Lab Blank Lab ID#: 0608172B-10A

File Name: Dil. Factor:	d081403 1.00		Date of Collection: NA Date of Analysis: 8/14/06 08:45 AM			
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)		
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected		
Container Type: NA - Not Applic	able					
Surrogates		%Recovery		Method Limits		
Fluorobenzene (FID)		92	_	75-150		



# Client Sample ID: LCS Lab ID#: 0608172B-11A

#### MODIFIED EPA METHOD TO-3 GC/FID

File Name: d081423 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/14/06 10:04 PM

Compound %Recovery

TPH (Gasoline Range)

Container Type: NA - Not Applicable

Surrogates%RecoveryLimitsFluorobenzene (FID)10575-150

	AIR	TOXICS	LTD.
6	AN ENYIRO	NMENTAL ANALYTICAL	LABORATORY

# Sample Transportation Notice

Retinquishing signature on this document indicates that sample is being shipped in compliance

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Contact Per Company Address <b>Z.</b> Phone <u>(9</u> 1	OF-CUSTODY RECORD  1801 Richy Bredford  AEI Consultants E  1500 Cambo Diable City Walnuts  15)293-6000 0xt. 148 Fax  19: (Signature) R. Bredford	defend, to the or mail re	and indemnify A pollection, handling the control of	Ir Taxics Limited on shipping of the computation of the Zip 94517	p signature also indicates agreement to hold harmle against any claim, demand, or action, of any kind, relationstand to the control of the co	Turn Ti Ž(No		Pressi Date:	urized by: VTK	
	y (algument)	<u> </u>			Project Name 2363 20TO	. aj	Canis	ter Pre	ssure/Vacuum	
Lab I.D.	Field Sample I.D. (Location)	Сал#	Date	Time	Analyses Requested		Initial	Final	Receipt Final	
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05/4	GP-3 <u>-5</u> 3	4623		12:09		-	28.5	3	4000	
6.4	GP-3-10 6	2174		11:56			Z લ્	3.5	4000	
02A		<u>434</u>		11:40			29	5	5.57/	
08A	6P-4-18 13	384	<u> </u>	11:21			29	٦,	3-5-4	
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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 #: 0608172A**

#### Work Order Summary

CLIENT: Mr. Ricky Bradford BILL TO: Mr. Ricky Bradford

AEI Consultants, Inc.
AEI Consultants, Inc.
2500 Camino Diablo
2500 Camino Diablo

Suite 200 Suite 200

Walnut Creek, CA 94597 Walnut Creek, CA 94597

**PHONE:** 925-283-6000 **P.O.** # 100685

**FAX:** 925-283-6121 **PROJECT** # 116907 Vic's Auto **DATE RECEIVED:** 08/05/2006 **CONTACT:** Nicole Danbacher

DATE COMPLETED: 08/20/2006 CONTACT: N

			RECEIPT
FRACTION#	<u>NAME</u>	<u>TEST</u>	VAC./PRES.
01A	GP-1-5	Modified TO-15	4.0 "Hg
01AA	GP-1-5 Duplicate	Modified TO-15	4.0 "Hg
02A	GP-1-10	Modified TO-15	3.5 "Hg
03A	GP-2-5	Modified TO-15	5.5 "Hg
04A	GP-2-10	Modified TO-15	3.0 "Hg
05A	GP-3-5	Modified TO-15	4.0 "Hg
06A	GP-3-10	Modified TO-15	4.0 "Hg
07A	GP-4-5	Modified TO-15	5.5 "Hg
08A	GP-4-10	Modified TO-15	3.5 "Hg
09A	GP-4-10 Duplicate	Modified TO-15	1.5 "Hg
10A	Lab Blank	Modified TO-15	NA
10B	Lab Blank	Modified TO-15	NA
11A	CCV	Modified TO-15	NA
11B	CCV	Modified TO-15	NA
12A	LCS	Modified TO-15	NA
12B	LCS	Modified TO-15	NA

CERTIFIED BY:

DATE: 08/21/06

DECEIDT

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 AEI Consultants, Inc. Workorder# 0608172A

Nine 1 Liter Summa Canister samples were received on August 05, 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**

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: GP-1-5** 

Lab ID#: 0608172A-01A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Acetone	8.9	34	21	82
2-Propanol	8.9	9.3	22	23
Carbon Disulfide	2.2	23	7.0	72
1,4-Dioxane	8.9	15	32	54
Tetrachloroethene	2.2	2.6	15	17

Client Sample ID: GP-1-5 Duplicate

Lab ID#: 0608172A-01AA

	Rpt. Limit	Amount	Rpt. Limit	Amount	
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)	
Acetone	8.9	33	21	78	
2-Propanol	8.9	9.2	22	23	
Carbon Disulfide	2.2	23	7.0	71	
1,4-Dioxane	8.9	16	32	56	
Tetrachloroethene	2.2	2.7	15	18	

Client Sample ID: GP-1-10

Lab ID#: 0608172A-02A

	Røt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Acetone	4.6	51	11	120
Carbon Disulfide	1.1	10	3.6	32
2-Butanone (Methyl Ethyl Ketone)	1.1	3.6	3.4	11
Tetrachloroethene	1.1	2.9	7.8	20

**Client Sample ID: GP-2-5** 

Lab ID#: 0608172A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Acetone	4.9	48	12	110
Carbon Disulfide	1.2	38	3.8	120
2-Butanone (Methyl Ethyl Ketone)	1.2	1.4	3.6	4.1
Toluene	1.2	1.8	4.6	6.9
Tetrachloroethene	1.2	88	8.4	600
m.p-Xvlene	1.2	2.4	5.4	10



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

Client Sample ID: GP-2-10

Lab ID#: 0608172A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Acetone	11	26	27	62
Carbon Disulfide	2.8	6.0	8.8	18
Methylene Chloride	2.8	6.8	9.8	24
2,2,4-Trimethylpentane	2.8	3.2	13	15
Toluene	2.8	4.8	11	18
Tetrachloroethene	2.8	40	19	270

Client Sample ID: GP-3-5

Lab ID#: 0608172A-05A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Acetone	4.7	46	11	110
2-Butanone (Methyl Ethyl Ketone)	1.2	1.6	3.4	4.8

**Client Sample ID: GP-3-10** 

Lab ID#: 0608172A-06A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Acetone	4.7	100	11	240
Carbon Disulfide	1.2	2.9	3.6	9.0
2-Butanone (Methyl Ethyl Ketone)	1.2	1.9	3.4	5.6

**Client Sample ID: GP-4-5** 

Lab ID#: 0608172A-07A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Acetone	4.9	42	12	100
Carbon Disulfide	1.2	86	3.8	270
2-Butanone (Methyl Ethyl Ketone)	1.2	1.4	3.6	4.3
Benzene	1.2	1.7	3.9	5.4

Client Sample ID: GP-4-10 Lab ID#: 0608172A-08A



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

Client Sample ID: GP-4-10

Lab ID#: 0608172A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethanol	4.6	6.2	8.6	12
Acetone	4.6	55	11	130
Carbon Disulfide	1.1	81	3.6	250
2-Butanone (Methyl Ethyl Ketone)	1.1	3.2	3.4	9.4
Benzene	1.1	1.9	3.6	6.1
Toluene	1.1	4.4	4.3	17
Ethyl Benzene	1.1	1.3	5.0	5.7
m,p-Xylene	1.1	3.7	5.0	16

Client Sample ID: GP-4-10 Duplicate

Lab ID#: 0608172A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethanol	4.3	9.6	8.0	18
Acetone	4.3	55	10	130
Carbon Disulfide	1.1	42	3.3	130
2-Butanone (Methyl Ethyl Ketone)	1.1	3.2	3.1	9.4
Benzene	1.1	1.3	3.4	4.2
Toluene	1.1	4.8	4.0	18
m,p-Xylene	1.1	3.9	4.6	17



# Client Sample ID: GP-1-5 Lab ID#: 0608172A-01A

File Name: Dil. Factor:	1081513 4.47	Date of Collection: 8/4/06 Date of Analysis: 8/15/06 07:34		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2.2	Not Detected	11	Not Detected
Freon 114	2.2	Not Detected	16	Not Detected
Chloromethane	8.9	Not Detected	18	Not Detected
Vinyl Chloride	2.2	Not Detected	5.7	Not Detected
1,3-Butadiene	2.2	Not Detected	4.9	Not Detected
Bromomethane	2.2	Not Detected	8.7	Not Detected
Chloroethane	2.2	Not Detected	5.9	Not Detected
Freon 11	2.2	Not Detected	12	Not Detected
Ethanol	8.9	Not Detected	17	Not Detected
Freon 113	2.2	Not Detected	17	Not Detected
1,1-Dichloroethene	2.2	Not Detected	8.9	Not Detected
Acetone	8.9	34	21	82
2-Propanol	8.9	9.3	22	23
Carbon Disulfide	2.2	23	7.0	72
3-Chloropropene	8.9	Not Detected	28	Not Detected
Methylene Chloride	2.2	Not Detected	7.8	Not Detected
Methyl tert-butyl ether	2.2	Not Detected	8.0	Not Detected
trans-1,2-Dichloroethene	2.2	Not Detected	8.9	Not Detected
Hexane	2.2	Not Detected	7.9	Not Detected
1,1-Dichloroethane	2.2	Not Detected	9.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.2	Not Detected	6.6	Not Detected
cis-1,2-Dichloroethene	2.2	Not Detected	8.9	Not Detected
Tetrahydrofuran	2.2	Not Detected	6.6	Not Detected
Chloroform	2.2	Not Detected	11	Not Detected
1,1,1-Trichloroethane	2.2	Not Detected	12	Not Detected
Cyclohexane	2.2	Not Detected	7.7	Not Detected
Carbon Tetrachloride	2.2	Not Detected	14	Not Detected
2,2,4-Trimethylpentane	2.2	Not Detected	10	Not Detected
Benzene	2.2	Not Detected	7.1	Not Detected
1,2-Dichloroethane	2.2	Not Detected	9.0	Not Detected
Heptane	2.2	Not Detected	9.2	Not Detected
Trichloroethene	2.2	Not Detected	12	Not Detected
1,2-Dichloropropane	2.2	Not Detected	10	Not Detected
1,4-Dioxane	8.9	15	32	54
Bromodichloromethane	2.2	Not Detected	15	Not Detected
cis-1,3-Dichloropropene	2.2	Not Detected	10	Not Detected
4-Methyl-2-pentanone	2.2	Not Detected	9.2	Not Detected
Toluene	2.2	Not Detected	8.4	Not Detected
trans-1,3-Dichloropropene	2.2	Not Detected	10	Not Detected
1,1,2-Trichloroethane	2.2	Not Detected	12	Not Detected

# Client Sample ID: GP-1-5 Lab ID#: 0608172A-01A

File Name: Dil. Factor:	1081513 4.47		Date of Collection: Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	2.2	2.6	15	17
2-Hexanone	8.9	Not Detected	37	Not Detected
Dibromochloromethane	2.2	Not Detected	19	Not Detected
1,2-Dibromoethane (EDB)	2.2	Not Detected	17	Not Detected
Chlorobenzene	2.2	Not Detected	10	Not Detected
Ethyl Benzene	2.2	Not Detected	9.7	Not Detected
m,p-Xylene	2.2	Not Detected	9.7	Not Detected
o-Xylene	2.2	Not Detected	9.7	Not Detected
Styrene	2.2	Not Detected	9.5	Not Detected
Bromoform	2.2	Not Detected	23	Not Detected
Cumene	2.2	Not Detected	11	Not Detected
1,1,2,2-Tetrachloroethane	2.2	Not Detected	15	Not Detected
Propylbenzene	2.2	Not Detected	11	Not Detected
4-Ethyltoluene	2.2	Not Detected	11	Not Detected
1,3,5-Trimethylbenzene	2.2	Not Detected	11	Not Detected
1,2,4-Trimethylbenzene	2.2	Not Detected	11	Not Detected
1,3-Dichlorobenzene	2.2	Not Detected	13	Not Detected
1,4-Dichlorobenzene	2.2	Not Detected	13	Not Detected
alpha-Chlorotoluene	2.2	Not Detected	12	Not Detected
1,2-Dichlorobenzene	2.2	Not Detected	13	Not Detected
1,2,4-Trichlorobenzene	8.9	Not Detected	66	Not Detected
Hexachlorobutadiene	8.9	Not Detected	95	Not Detected
Container Type: 1 Liter Summa	Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		96		70-130

		Welliou
Surrogates	%Recovery	Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	99	70-130



# Client Sample ID: GP-1-5 Duplicate Lab ID#: 0608172A-01AA

File Name: Dil. Factor:	1081514 4.47	Date of Collection: 8/4/06 Date of Analysis: 8/15/06 08:13 F		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2.2	Not Detected	11	Not Detected
Freon 114	2.2	Not Detected	16	Not Detected
Chloromethane	8.9	Not Detected	18	Not Detected
Vinyl Chloride	2.2	Not Detected	5.7	Not Detected
1,3-Butadiene	2.2	Not Detected	4.9	Not Detected
Bromomethane	2.2	Not Detected	8.7	Not Detected
Chloroethane	2.2	Not Detected	5.9	Not Detected
Freon 11	2.2	Not Detected	12	Not Detected
Ethanol	8.9	Not Detected	17	Not Detected
Freon 113	2.2	Not Detected	17	Not Detected
1.1-Dichloroethene	2.2	Not Detected	8.9	Not Detected
Acetone	8.9	33	21	78
Acetorie 2-Propanol	8.9	9.2	22	23
Z-Fropanoi Carbon Disulfide	2.2	23	7.0	71
3-Chloropropene	8.9	Not Detected	28	Not Detected
Methylene Chloride	2.2	Not Detected	7.8	Not Detected
Methyl tert-butyl ether	2.2	Not Detected	8.0	Not Detected
	2.2	Not Detected	8.9	Not Detected
trans-1,2-Dichloroethene Hexane	2.2	Not Detected	7.9	Not Detected
nexane 1,1-Dichloroethane	2.2	Not Detected	9.0	Not Detected
<del>-</del>	2.2	Not Detected	6.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.2	Not Detected	8.9	Not Detected
cis-1,2-Dichloroethene	2.2	Not Detected	6.6	Not Detected
Tetrahydrofuran Chloroform	2.2		11	
		Not Detected	12	Not Detected
1,1,1-Trichloroethane	2.2	Not Detected		Not Detected
Cyclohexane	2.2	Not Detected	7.7	Not Detected
Carbon Tetrachloride	2.2	Not Detected	14	Not Detected
2,2,4-Trimethylpentane	2.2	Not Detected	10	Not Detected
Benzene	2.2	Not Detected	7.1	Not Detected
1,2-Dichloroethane	2.2	Not Detected	9.0	Not Detected
Heptane Trial Language	2.2	Not Detected	9.2	Not Detected
Trichloroethene	2.2	Not Detected	12	Not Detected
1,2-Dichloropropane	2.2	Not Detected	10	Not Detected
1,4-Dioxane	8.9	16	32	56
Bromodichloromethane	2.2	Not Detected	15	Not Detected
cis-1,3-Dichloropropene	2.2	Not Detected	10	Not Detected
4-Methyl-2-pentanone	2.2	Not Detected	9.2	Not Detected
Toluene	2.2	Not Detected	8.4	Not Detected
trans-1,3-Dichloropropene	2.2	Not Detected	10	Not Detected
1,1,2-Trichloroethane	2.2	Not Detected	12	Not Detected

# Client Sample ID: GP-1-5 Duplicate Lab ID#: 0608172A-01AA

File Name: Dil. Factor:	1081514 4.47		Date of Collection: Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	2.2	2.7	15	18
2-Hexanone	8.9	Not Detected	37	Not Detected
Dibromochloromethane	2.2	Not Detected	19	Not Detected
1,2-Dibromoethane (EDB)	2.2	Not Detected	17	Not Detected
Chlorobenzene	2.2	Not Detected	10	Not Detected
Ethyl Benzene	2.2	Not Detected	9.7	Not Detected
m,p-Xylene	2.2	Not Detected	9.7	Not Detected
o-Xylene	2.2	Not Detected	9.7	Not Detected
Styrene	2.2	Not Detected	9.5	Not Detected
Bromoform	2.2	Not Detected	23	Not Detected
Cumene	2.2	Not Detected	11	Not Detected
1,1,2,2-Tetrachloroethane	2.2	Not Detected	15	Not Detected
Propylbenzene	2.2	Not Detected	11	Not Detected
4-Ethyltoluene	2.2	Not Detected	11	Not Detected
1,3,5-Trimethylbenzene	2.2	Not Detected	11	Not Detected
1,2,4-Trimethylbenzene	2.2	Not Detected	11	Not Detected
1,3-Dichlorobenzene	2.2	Not Detected	13	Not Detected
1,4-Dichlorobenzene	2.2	Not Detected	13	Not Detected
alpha-Chlorotoluene	2.2	Not Detected	12	Not Detected
1,2-Dichlorobenzene	2.2	Not Detected	13	Not Detected
1,2,4-Trichlorobenzene	8.9	Not Detected	66	Not Detected
Hexachlorobutadiene	8.9	Not Detected	95	Not Detected
Container Type: 1 Liter Summa Canis	ster			
_		_		Method
Surrogates		%Recovery		Limits
Toluene-d8		96		70-130
1,2-Dichloroethane-d4		100		70-130
4-Bromofluorobenzene		97		70-130



# Client Sample ID: GP-1-10 Lab ID#: 0608172A-02A

File Name: Dil. Factor:	1081426 2.29		Date of Collection: Date of Analysis: 8	
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Freon 12	1.1	Not Detected	5.7	Not Detected
Freon 114	1.1	Not Detected	8.0	Not Detected
Chloromethane	4.6	Not Detected	9.4	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	4.4	Not Detected
Chloroethane	1.1	Not Detected	3.0	Not Detected
Freon 11	1.1	Not Detected	6.4	Not Detected
Ethanol	4.6	Not Detected	8.6	Not Detected
Freon 113	1.1	Not Detected	8.8	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	4.6	51	11	120
2-Propanol	4.6	Not Detected	11	Not Detected
Carbon Disulfide	1.1	10	3.6	32
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	1.1	Not Detected	4.0	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.1	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	3.6	3.4	11
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.4	Not Detected
Chloroform	1.1	Not Detected	5.6	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.7	Not Detected
Trichloroethene	1.1	Not Detected	6.2	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.3	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.7	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.7	Not Detected
Toluene	1.1	Not Detected	4.3	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected

# Client Sample ID: GP-1-10 Lab ID#: 0608172A-02A

File Name: Dil. Factor:	1081426 2.29		Date of Collection: Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.1	2.9	7.8	20
2-Hexanone	4.6	Not Detected	19	Not Detected
Dibromochloromethane	1.1	Not Detected	9.8	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.8	Not Detected
Chlorobenzene	1.1	Not Detected	5.3	Not Detected
Ethyl Benzene	1.1	Not Detected	5.0	Not Detected
m,p-Xylene	1.1	Not Detected	5.0	Not Detected
o-Xylene	1.1	Not Detected	5.0	Not Detected
Styrene	1.1	Not Detected	4.9	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.9	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected
Container Type: 1 Liter Summa Ca	nister			
				Method
Surrogates		%Recovery		Limits
Toluene-d8		96		70-130
1,2-Dichloroethane-d4		96		70-130
4-Bromofluorobenzene		102		70-130



# Client Sample ID: GP-2-5 Lab ID#: 0608172A-03A

File Name: Dil. Factor:	1081420 2.47	Date of Collection: 8/4/06 Date of Analysis: 8/15/06 12:2		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	4.9	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	Not Detected	9.3	Not Detected
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	4.9	48	12	110
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	1.2	38	3.8	120
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	1.4	3.6	4.1
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.1	Not Detected
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.3	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	1.8	4.6	6.9
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected

# Client Sample ID: GP-2-5 Lab ID#: 0608172A-03A

File Name: Dil. Factor:	1081420 2.47			Date of Collection: 8/4/06 Date of Analysis: 8/15/06 12:21 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)		
Tetrachloroethene	1.2	88	8.4	600		
2-Hexanone	4.9	Not Detected	20	Not Detected		
Dibromochloromethane	1.2	Not Detected	10	Not Detected		
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.5	Not Detected		
Chlorobenzene	1.2	Not Detected	5.7	Not Detected		
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected		
m,p-Xylene	1.2	2.4	5.4	10		
o-Xylene	1.2	Not Detected	5.4	Not Detected		
Styrene	1.2	Not Detected	5.3	Not Detected		
Bromoform	1.2	Not Detected	13	Not Detected		
Cumene	1.2	Not Detected	6.1	Not Detected		
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.5	Not Detected		
Propylbenzene	1.2	Not Detected	6.1	Not Detected		
4-Ethyltoluene	1.2	Not Detected	6.1	Not Detected		
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected		
1,2,4-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected		
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected		
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected		
alpha-Chlorotoluene	1.2	Not Detected	6.4	Not Detected		
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected		
1,2,4-Trichlorobenzene	4.9	Not Detected	37	Not Detected		
Hexachlorobutadiene	4.9	Not Detected	53	Not Detected		
Container Type: 1 Liter Summa	Canister			Method		
Surrogates		%Recovery		Limits		
Toluene-d8		98		70-130		

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



# Client Sample ID: GP-2-10 Lab ID#: 0608172A-04A

File Name: Dil. Factor:	1081512 5.67	Date of Collection: 8/4/06 Date of Analysis: 8/15/06 00		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2.8	Not Detected	14	Not Detected
Freon 114	2.8	Not Detected	20	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	2.8	Not Detected	7.2	Not Detected
1,3-Butadiene	2.8	Not Detected	6.3	Not Detected
Bromomethane	2.8	Not Detected	11	Not Detected
Chloroethane	2.8	Not Detected	7.5	Not Detected
Freon 11	2.8	Not Detected	16	Not Detected
Ethanol	11	Not Detected	21	Not Detected
Freon 113	2.8	Not Detected	22	Not Detected
1,1-Dichloroethene	2.8	Not Detected	11	Not Detected
Acetone	11	26	27	62
2-Propanol	11	Not Detected	28	Not Detected
Carbon Disulfide	2.8	6.0	8.8	18
3-Chloropropene	11	Not Detected	35	Not Detected
Methylene Chloride	2.8	6.8	9.8	24
Methyl tert-butyl ether	2.8	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	2.8	Not Detected	11	Not Detected
Hexane	2.8	Not Detected	10	Not Detected
1,1-Dichloroethane	2.8	Not Detected	11	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	Not Detected	8.4	Not Detected
cis-1,2-Dichloroethene	2.8	Not Detected	11	Not Detected
Tetrahydrofuran	2.8	Not Detected	8.4	Not Detected
Chloroform	2.8	Not Detected	14	Not Detected
1,1,1-Trichloroethane	2.8	Not Detected	15	Not Detected
	2.8	Not Detected	9.8	Not Detected
Carbon Tetrachloride	2.8	Not Detected	18	Not Detected
2,2,4-Trimethylpentane	2.8	3.2	13	15
Benzene	2.8	Not Detected	9.0	Not Detected
1,2-Dichloroethane	2.8	Not Detected	11	Not Detected
Heptane	2.8	Not Detected	12	Not Detected
Trichloroethene	2.8	Not Detected	15	Not Detected
1,2-Dichloropropane	2.8	Not Detected	13	Not Detected
1,4-Dioxane	11	Not Detected	41	Not Detected
Bromodichloromethane	2.8	Not Detected	19	Not Detected
cis-1,3-Dichloropropene	2.8	Not Detected	13	Not Detected
4-Methyl-2-pentanone	2.8	Not Detected	12	Not Detected
Toluene	2.8	4.8	11	18
trans-1,3-Dichloropropene	2.8	Not Detected	13	Not Detected
1,1,2-Trichloroethane	2.8	Not Detected	15	Not Detected

# Client Sample ID: GP-2-10 Lab ID#: 0608172A-04A

File Name: Dil. Factor:	1081512 5.67			Date of Collection: 8/4/06 Date of Analysis: 8/15/06 06:54 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Tetrachloroethene	2.8	40	19	270	
2-Hexanone	11	Not Detected	46	Not Detected	
Dibromochloromethane	2.8	Not Detected	24	Not Detected	
1,2-Dibromoethane (EDB)	2.8	Not Detected	22	Not Detected	
Chlorobenzene	2.8	Not Detected	13	Not Detected	
Ethyl Benzene	2.8	Not Detected	12	Not Detected	
m,p-Xylene	2.8	Not Detected	12	Not Detected	
o-Xylene	2.8	Not Detected	12	Not Detected	
Styrene	2.8	Not Detected	12	Not Detected	
Bromoform	2.8	Not Detected	29	Not Detected	
Cumene	2.8	Not Detected	14	Not Detected	
1,1,2,2-Tetrachloroethane	2.8	Not Detected	19	Not Detected	
Propylbenzene	2.8	Not Detected	14	Not Detected	
4-Ethyltoluene	2.8	Not Detected	14	Not Detected	
1,3,5-Trimethylbenzene	2.8	Not Detected	14	Not Detected	
1,2,4-Trimethylbenzene	2.8	Not Detected	14	Not Detected	
1,3-Dichlorobenzene	2.8	Not Detected	17	Not Detected	
1,4-Dichlorobenzene	2.8	Not Detected	17	Not Detected	
alpha-Chlorotoluene	2.8	Not Detected	15	Not Detected	
1,2-Dichlorobenzene	2.8	Not Detected	17	Not Detected	
1,2,4-Trichlorobenzene	11	Not Detected	84	Not Detected	
Hexachlorobutadiene	11	Not Detected	120	Not Detected	
Container Type: 1 Liter Summa	Canister				
				Method	
Surrogates		%Recovery		Limits	
Toluene-d8		97		70-130	
1,2-Dichloroethane-d4		98		70-130	
4-Bromofluorobenzene		100		70-130	



# Client Sample ID: GP-3-5 Lab ID#: 0608172A-05A

File Name: Dil. Factor:	1081421 2.33	Date of Collection: 8/4/06 Date of Analysis: 8/15/06 01:11		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	5.8	Not Detected
Freon 114	1.2	Not Detected	8.1	Not Detected
Chloromethane	4.7	Not Detected	9.6	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	1.2	Not Detected	4.5	Not Detected
Chloroethane	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2		6.5	
		Not Detected		Not Detected
Ethanol	4.7	Not Detected	8.8	Not Detected
Freon 113	1.2	Not Detected	8.9	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Acetone	4.7	46	11	110
2-Propanol	4.7	Not Detected	11	Not Detected
Carbon Disulfide	1.2	Not Detected	3.6	Not Detected
3-Chloropropene	4.7	Not Detected	14	Not Detected
Methylene Chloride	1.2	Not Detected	4.0	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.2	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Hexane	1.2	Not Detected	4.1	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	1.6	3.4	4.8
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.4	Not Detected
Chloroform	1.2	Not Detected	5.7	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Cyclohexane	1.2	Not Detected	4.0	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.3	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.4	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.7	Not Detected
Heptane	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	Not Detected	6.3	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.4	Not Detected
1,4-Dioxane	4.7	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	7.8	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.8	Not Detected
Toluene	1.2	Not Detected	4.4	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.4	Not Detected

4-Bromofluorobenzene

AN ENVIRONMENTAL ANALYTICAL LABORATORY

# Client Sample ID: GP-3-5 Lab ID#: 0608172A-05A

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

File Name:	1081421		Date of Collection:		
Dil. Factor:	2.33		Date of Analysis: 8/15/06 01:11 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Tetrachloroethene	1.2	Not Detected	7.9	Not Detected	
2-Hexanone	4.7	Not Detected	19	Not Detected	
Dibromochloromethane	1.2	Not Detected	9.9	Not Detected	
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.0	Not Detected	
Chlorobenzene	1.2	Not Detected	5.4	Not Detected	
Ethyl Benzene	1.2	Not Detected	5.0	Not Detected	
m,p-Xylene	1.2	Not Detected	5.0	Not Detected	
o-Xylene	1.2	Not Detected	5.0	Not Detected	
Styrene	1.2	Not Detected	5.0	Not Detected	
Bromoform	1.2	Not Detected	12	Not Detected	
Cumene	1.2	Not Detected	5.7	Not Detected	
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.0	Not Detected	
Propylbenzene	1.2	Not Detected	5.7	Not Detected	
4-Ethyltoluene	1.2	Not Detected	5.7	Not Detected	
1,3,5-Trimethylbenzene	1.2	Not Detected	5.7	Not Detected	
1,2,4-Trimethylbenzene	1.2	Not Detected	5.7	Not Detected	
1,3-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected	
1,4-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected	
alpha-Chlorotoluene	1.2	Not Detected	6.0	Not Detected	
1,2-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected	
1,2,4-Trichlorobenzene	4.7	Not Detected	34	Not Detected	
Hexachlorobutadiene	4.7	Not Detected	50	Not Detected	
Container Type: 1 Liter Summa	Canister				
Surrogates		%Recovery		Method Limits	
Toluene-d8		97		70-130	
1,2-Dichloroethane-d4		100		70-130	

99

70-130



# Client Sample ID: GP-3-10 Lab ID#: 0608172A-06A

File Name: Dil. Factor:	1081422 2.33	Date of Collection: 8/4/06 Date of Analysis: 8/15/06 01:55 A		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	5.8	Not Detected
Freon 114	1.2	Not Detected	8.1	Not Detected
Chloromethane	4.7	Not Detected	9.6	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	1.2	Not Detected	4.5	Not Detected
Chloroethane	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	Not Detected	6.5	Not Detected
Ethanol	4.7	Not Detected	8.8	Not Detected
Freon 113	1.2	Not Detected	8.9	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Acetone	4.7	100	11	240
2-Propanol	4.7	Not Detected	11	Not Detected
Carbon Disulfide	1.2	2.9	3.6	9.0
3-Chloropropene	4.7	Not Detected	14	Not Detected
Methylene Chloride	1.2	Not Detected	4.0	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.2	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Hexane	1.2	Not Detected	4.1	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	1.9	3.4	5.6
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.4	Not Detected
Chloroform	1.2	Not Detected	5.7	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Cyclohexane	1.2	Not Detected	4.0	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.3	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.4	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
1.2-Dichloroethane	1.2	Not Detected	4.7	Not Detected
Heptane	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	Not Detected	6.3	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.4	Not Detected
1,4-Dioxane	4.7	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	7.8	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.8	Not Detected
Toluene	1.2	Not Detected	4.4	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.4	Not Detected

# Client Sample ID: GP-3-10 Lab ID#: 0608172A-06A

File Name: Dil. Factor:	1081422 2.33		Date of Collection: 8/4/06 Date of Analysis: 8/15/06 01:55 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.2	Not Detected	7.9	Not Detected
2-Hexanone	4.7	Not Detected	19	Not Detected
Dibromochloromethane	1.2	Not Detected	9.9	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.0	Not Detected
Chlorobenzene	1.2	Not Detected	5.4	Not Detected
Ethyl Benzene	1.2	Not Detected	5.0	Not Detected
m,p-Xylene	1.2	Not Detected	5.0	Not Detected
o-Xylene	1.2	Not Detected	5.0	Not Detected
Styrene	1.2	Not Detected	5.0	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.7	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.0	Not Detected
Propylbenzene	1.2	Not Detected	5.7	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.7	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.7	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.7	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.0	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,2,4-Trichlorobenzene	4.7	Not Detected	34	Not Detected
Hexachlorobutadiene	4.7	Not Detected	50	Not Detected
Container Type: 1 Liter Summa	Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		97		70-130
1,2-Dichloroethane-d4		98		70-130
4-Bromofluorobenzene		94		70-130



# Client Sample ID: GP-4-5 Lab ID#: 0608172A-07A

File Name: Dil. Factor:	1081423 2.47	Date of Collection: 8/4/06 Date of Analysis: 8/15/06 02:		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	4.9	Not Detected	10	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	Not Detected	9.3	Not Detected
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	4.9	42	12	100
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	1.2	86	3.8	270
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.3	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	1.4	3.6	4.3
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	1.7	3.9	5.4
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.1	Not Detected
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.3	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected

## Client Sample ID: GP-4-5 Lab ID#: 0608172A-07A

File Name: Dil. Factor:	1081423 2.47		Date of Collection: Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.2	Not Detected	8.4	Not Detected
2-Hexanone	4.9	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.5	Not Detected
Chlorobenzene	1.2	Not Detected	5.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
Styrene	1.2	Not Detected	5.3	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.5	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.1	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	37	Not Detected
Hexachlorobutadiene	4.9	Not Detected	53	Not Detected
Container Type: 1 Liter Summa	Canister			
				Method
Surrogates		%Recovery		Limits
Toluene-d8		97		70-130
1,2-Dichloroethane-d4		96		70-130
4-Bromofluorobenzene		101		70-130



## Client Sample ID: GP-4-10 Lab ID#: 0608172A-08A

File Name: Dil. Factor:	1081424 2.29		Date of Collection: Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.1	Not Detected	5.7	Not Detected
Freon 12 Freon 114	1.1	Not Detected  Not Detected	8.0	Not Detected
	4.6	Not Detected	9.4	Not Detected
Chloromethane	4.6 1.1	Not Detected  Not Detected	2.9	Not Detected
Vinyl Chloride	1.1		2.9 2.5	Not Detected
1,3-Butadiene		Not Detected		
Bromomethane	1.1	Not Detected	4.4	Not Detected
Chloroethane	1.1	Not Detected	3.0	Not Detected
Freon 11	1.1	Not Detected	6.4	Not Detected
Ethanol	4.6	6.2	8.6	12
Freon 113	1.1	Not Detected	8.8	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	4.6	55	11	130
2-Propanol	4.6	Not Detected	11	Not Detected
Carbon Disulfide	1.1	81	3.6	250
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	1.1	Not Detected	4.0	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.1	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	3.2	3.4	9.4
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.4	Not Detected
Chloroform	1.1	Not Detected	5.6	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	1.9	3.6	6.1
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.7	Not Detected
Trichloroethene	1.1	Not Detected	6.2	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.3	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.7	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.7	Not Detected
Toluene	1.1	4.4	4.3	17
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected

## Client Sample ID: GP-4-10 Lab ID#: 0608172A-08A

File Name: Dil. Factor:	1081424 2.29		Date of Collection: Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.1	Not Detected	7.8	Not Detected
2-Hexanone	4.6	Not Detected	19	Not Detected
Dibromochloromethane	1.1	Not Detected	9.8	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.8	Not Detected
Chlorobenzene	1.1	Not Detected	5.3	Not Detected
Ethyl Benzene	1.1	1.3	5.0	5.7
m,p-Xylene	1.1	3.7	5.0	16
o-Xylene	1.1	Not Detected	5.0	Not Detected
Styrene	1.1	Not Detected	4.9	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.9	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected
Container Type: 1 Liter Summa (	Canister			
				Method
Surrogates		%Recovery		Limits
Toluene-d8		97		70-130
1,2-Dichloroethane-d4		99		70-130
4-Bromofluorobenzene		100		70-130



## Client Sample ID: GP-4-10 Duplicate

#### Lab ID#: 0608172A-09A

File Name: Dil. Factor:	1081425 2.13		Date of Collection: Date of Analysis: 8/	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	1.1	Not Detected	7.4	Not Detected
Chloromethane	4.3	Not Detected	8.8	Not Detected
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	1.1	Not Detected	4.1	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	1.1	Not Detected	6.0	Not Detected
Ethanol	4.3	9.6	8.0	18
Freon 113	1.1	Not Detected	8.2	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Acetone	4.3	55	10	130
2-Propanol	4.3	Not Detected	10	Not Detected
Carbon Disulfide	1.1	42	3.3	130
3-Chloropropene	4.3	Not Detected	13	Not Detected
Methylene Chloride	1.1	Not Detected	3.7	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	3.8	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	3.2	3.1	9.4
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.1	Not Detected
Chloroform	1.1	Not Detected	5.2	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.7	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	1.1	1.3	3.4	4.2
1,2-Dichloroethane	1.1	Not Detected	4.3	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	Not Detected	5.7	Not Detected
1,2-Dichloropropane	1.1	Not Detected	4.9	Not Detected
1,4-Dioxane	4.3	Not Detected	15	Not Detected
Bromodichloromethane	1.1	Not Detected	7.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.4	Not Detected
Toluene	1.1	4.8	4.0	18
trans-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.8	Not Detected

# Client Sample ID: GP-4-10 Duplicate

Lab ID#: 0608172A-09A

File Name: Dil. Factor:	1081425 2.13		Date of Collection: Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Tetrachloroethene	1.1	Not Detected	7.2	Not Detected
2-Hexanone	4.3	Not Detected	17	Not Detected
Dibromochloromethane	1.1	Not Detected	9.1	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.2	Not Detected
Chlorobenzene	1.1	Not Detected	4.9	Not Detected
Ethyl Benzene	1.1	Not Detected	4.6	Not Detected
m,p-Xylene	1.1	3.9	4.6	17
o-Xylene	1.1	Not Detected	4.6	Not Detected
Styrene	1.1	Not Detected	4.5	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.3	Not Detected
Propylbenzene	1.1	Not Detected	5.2	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.2	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.2	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.2	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.5	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	45	Not Detected
Container Type: 1 Liter Summa	Canister			
Surrogates		%Recovery		Method Limits
Toluene-d8		99		70-130
1,2-Dichloroethane-d4		98		70-130
4-Bromofluorobenzene		100		70-130



## Client Sample ID: Lab Blank Lab ID#: 0608172A-10A

File Name: Dil. Factor:	1081405 1.00		Date of Collection: N Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (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
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected

4-Bromofluorobenzene

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## Client Sample ID: Lab Blank Lab ID#: 0608172A-10A

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

File Name: Dil. Factor:	1081405 1.00		Date of Collection: No. 10 Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
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		98		70-130

100

70-130



## Client Sample ID: Lab Blank Lab ID#: 0608172A-10B

File Name: Dil. Factor:	1081506 1.00		Date of Collection: No. 10 Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (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
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected

## Client Sample ID: Lab Blank Lab ID#: 0608172A-10B

File Name: Dil. Factor:	1081506 1.00		Date of Collection: No. 10 Date of Analysis: 8	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
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				
				Method
Surrogates		%Recovery		Limits
Toluene-d8		95		70-130
1,2-Dichloroethane-d4		98		70-130



## Client Sample ID: CCV Lab ID#: 0608172A-11A

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

File Name: 1081402 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/14/06 09:30 AM

Compound	%Recovery
Freon 12	107
Freon 114	106
Chloromethane	90
Vinyl Chloride	90
1,3-Butadiene	77
Bromomethane	97
Chloroethane	88
Freon 11	103
Ethanol	81
Freon 113	105
1,1-Dichloroethene	92
Acetone	81
2-Propanol	87
Carbon Disulfide	86
3-Chloropropene	95
Methylene Chloride	85
Methyl tert-butyl ether	124
trans-1,2-Dichloroethene	91
Hexane	88
1,1-Dichloroethane	99
2-Butanone (Methyl Ethyl Ketone)	101
cis-1,2-Dichloroethene	101
Tetrahydrofuran	87
Chloroform	109
1,1,1-Trichloroethane	121
Cyclohexane	101
Carbon Tetrachloride	121
2,2,4-Trimethylpentane	92
Benzene	105
1,2-Dichloroethane	107
Heptane	102
Trichloroethene	103
1,2-Dichloropropane	97
1,4-Dioxane	91
Bromodichloromethane	98
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	92
Toluene	102
trans-1,3-Dichloropropene	114
1,1,2-Trichloroethane	110

## Client Sample ID: CCV Lab ID#: 0608172A-11A

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

File Name: 1081402 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/14/06 09:30 AM

Compound	%Recovery
Tetrachloroethene	116
2-Hexanone	92
Dibromochloromethane	109
1,2-Dibromoethane (EDB)	114
Chlorobenzene	110
Ethyl Benzene	109
m,p-Xylene	109
o-Xylene	109
Styrene	116
Bromoform	114
Cumene	92
1,1,2,2-Tetrachloroethane	102
Propylbenzene	99
4-Ethyltoluene	101
1,3,5-Trimethylbenzene	101
1,2,4-Trimethylbenzene	106
1,3-Dichlorobenzene	112
1,4-Dichlorobenzene	113
alpha-Chlorotoluene	103
1,2-Dichlorobenzene	108
1,2,4-Trichlorobenzene	84
Hexachlorobutadiene	84

#### **Container Type: NA - Not Applicable**

		Wethod
Surrogates	%Recovery	Limits
Toluene-d8	90	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	106	70-130



## Client Sample ID: CCV Lab ID#: 0608172A-11B

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

File Name: 1081502 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/15/06 09:55 AM

Compound	%Recovery
Freon 12	116
Freon 114	114
Chloromethane	101
Vinyl Chloride	94
1,3-Butadiene	82
Bromomethane	102
Chloroethane	86
Freon 11	103
Ethanol	79
Freon 113	102
1,1-Dichloroethene	89
Acetone	76
2-Propanol	85
Carbon Disulfide	82
3-Chloropropene	90
Methylene Chloride	82
Methyl tert-butyl ether	108
rans-1,2-Dichloroethene	85
Hexane	84
1,1-Dichloroethane	95
2-Butanone (Methyl Ethyl Ketone)	97
cis-1,2-Dichloroethene	98
Tetrahydrofuran	84
Chloroform	109
1,1,1-Trichloroethane	122
Cyclohexane	98
Carbon Tetrachloride	123
2,2,4-Trimethylpentane	89
Benzene	101
1,2-Dichloroethane	106
	97
Trichloroethene	109
1,2-Dichloropropane	102
1,4-Dioxane	97
Bromodichloromethane	107
cis-1,3-Dichloropropene	110
4-Methyl-2-pentanone	95
Toluene	108
rans-1,3-Dichloropropene	113
1,1,2-Trichloroethane	109

## Client Sample ID: CCV Lab ID#: 0608172A-11B

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

File Name: 1081502 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/15/06 09:55 AM

Compound	%Recovery
Tetrachloroethene	116
2-Hexanone	90
Dibromochloromethane	110
1,2-Dibromoethane (EDB)	115
Chlorobenzene	110
Ethyl Benzene	109
m,p-Xylene	110
o-Xylene	108
Styrene	115
Bromoform	115
Cumene	92
1,1,2,2-Tetrachloroethane	102
Propylbenzene	100
4-Ethyltoluene	102
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	105
1,3-Dichlorobenzene	111
1,4-Dichlorobenzene	111
alpha-Chlorotoluene	101
1,2-Dichlorobenzene	106
1,2,4-Trichlorobenzene	79
Hexachlorobutadiene	81

#### Container Type: NA - Not Applicable

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	97	70-130	
1,2-Dichloroethane-d4	97	70-130	
4-Bromofluorobenzene	105	70-130	



# Client Sample ID: LCS

## Lab ID#: 0608172A-12A MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 1081403 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/14/06 10:30 AM

Compound	%Recovery
Freon 12	102
Freon 114	100
Chloromethane	86
Vinyl Chloride	83
1,3-Butadiene	86
Bromomethane	95
Chloroethane	84
Freon 11	96
Ethanol	88
Freon 113	98
1,1-Dichloroethene	83
Acetone	89
2-Propanol	92
Carbon Disulfide	102
3-Chloropropene	92
Methylene Chloride	77
Methyl tert-butyl ether	119
trans-1,2-Dichloroethene	99
Hexane	98
1,1-Dichloroethane	91
2-Butanone (Methyl Ethyl Ketone)	109
cis-1,2-Dichloroethene	93
Tetrahydrofuran	90
Chloroform	100
1,1,1-Trichloroethane	110
Cyclohexane	111
Carbon Tetrachloride	111
2,2,4-Trimethylpentane	95
Benzene	94
1,2-Dichloroethane	97
Heptane	110
Trichloroethene	101
1,2-Dichloropropane	96
1,4-Dioxane	108
Bromodichloromethane	109
cis-1,3-Dichloropropene	77
4-Methyl-2-pentanone	105
Toluene	101
trans-1,3-Dichloropropene	105
1,1,2-Trichloroethane	100

## Client Sample ID: LCS Lab ID#: 0608172A-12A

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

File Name: 1081403 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/14/06 10:30 AM

Compound	%Recovery
Tetrachloroethene	105
2-Hexanone	99
Dibromochloromethane	119
1,2-Dibromoethane (EDB)	103
Chlorobenzene	101
Ethyl Benzene	104
m,p-Xylene	96
o-Xylene	88
Styrene	106
Bromoform	125
Cumene	89
1,1,2,2-Tetrachloroethane	95
Propylbenzene	97
4-Ethyltoluene	97
1,3,5-Trimethylbenzene	79
1,2,4-Trimethylbenzene	64 Q
1,3-Dichlorobenzene	98
1,4-Dichlorobenzene	99
alpha-Chlorotoluene	85
1,2-Dichlorobenzene	94
1,2,4-Trichlorobenzene	83
Hexachlorobutadiene	77

# Q = Exceeds Quality Control limits. Container Type: NA - Not Applicable

		Wethod	
Surrogates	%Recovery	Limits	
Toluene-d8	98	70-130	
1,2-Dichloroethane-d4	97	70-130	
4-Bromofluorobenzene	100	70-130	



## Client Sample ID: LCS

#### Lab ID#: 0608172A-12B

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

File Name: 1081504 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/15/06 11:35 AM

Compound	%Recovery
Freon 12	96
Freon 114	93
Chloromethane	84
Vinyl Chloride	78
1,3-Butadiene	79
Bromomethane	95
Chloroethane	81
Freon 11	94
Ethanol	84
Freon 113	95
1,1-Dichloroethene	81
Acetone	84
2-Propanol	91
Carbon Disulfide	97
3-Chloropropene	87
Methylene Chloride	76
Methyl tert-butyl ether	108
trans-1,2-Dichloroethene	94
Hexane	95
1,1-Dichloroethane	88
2-Butanone (Methyl Ethyl Ketone)	105
cis-1,2-Dichloroethene	91
Tetrahydrofuran	89
Chloroform	100
1,1,1-Trichloroethane	111
Cyclohexane	109
Carbon Tetrachloride	112
2,2,4-Trimethylpentane	93
Benzene	92
1,2-Dichloroethane	96
Heptane	107
Trichloroethene	99
1,2-Dichloropropane	93
1,4-Dioxane	107
Bromodichloromethane	109
cis-1,3-Dichloropropene	76
4-Methyl-2-pentanone	103
Toluene	98
trans-1,3-Dichloropropene	104
1,1,2-Trichloroethane	100

## Client Sample ID: LCS Lab ID#: 0608172A-12B

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

File Name: 1081504 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/15/06 11:35 AM

Compound	%Recovery
Tetrachloroethene	108
2-Hexanone	98
Dibromochloromethane	119
1,2-Dibromoethane (EDB)	102
Chlorobenzene	101
Ethyl Benzene	104
m,p-Xylene	95
o-Xylene	87
Styrene	106
Bromoform	126
Cumene	89
1,1,2,2-Tetrachloroethane	94
Propylbenzene	96
4-Ethyltoluene	97
1,3,5-Trimethylbenzene	71
1,2,4-Trimethylbenzene	62 Q
1,3-Dichlorobenzene	93
1,4-Dichlorobenzene	92
alpha-Chlorotoluene	79
1,2-Dichlorobenzene	88
1,2,4-Trichlorobenzene	74
Hexachlorobutadiene	72

# Q = Exceeds Quality Control limits. Container Type: NA - Not Applicable

21 bb		Method Limits
Surrogates	%Recovery	
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	102	70-130