December 17, 2012

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

Subject: **Perjury Statement and Report Transmittal**
Soil Gas Investigation Report

245 8th Street
Oakland, California 94607
AEI Project No. 116907
ACEH RO#0000202

Dear Mr. Wickham:

I declare under penalty of perjury, that the information and/or recommendations contained in the attached report for the above-referenced site are true and correct to the best of my knowledge.

If you have any questions or need additional information, please do not hesitate to call me at (510) 832-9014, or Mr. Robert Flory at AEI Consultants, (925) 746-6000.

Sincerely,

Victor Lum
Owner
Vic's Automotive

SL/vl

Attachment

cc: Mr. Robert Flory, AEI Consultants, 2500 Camino Diablo, Walnut Creek, CA 94597

November 30, 2012

Soil Gas Investigation Report

Property Identification:
Vic's Auto
245 8th Street
Oakland, CA 94607

AEI Project No. 116907
ACEH RO#0000202
RWQCB #01-1244

Prepared for:
Mr. Vic Lum
Vic's Automotive
245 8th Street
Oakland, CA 94607

Prepared by:
AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597
(925) 746-6000

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November 30, 2012

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

Subject: **Soil Gas Investigation Report**
245 8th Street
Oakland, California 94607
AEI Project No. 116907

Dear Mr. Wickham:

1.0 INTRODUCTION

AEI Consultants (AEI) has prepared this report on behalf of Mr. Victor Lum, owner and operator of Vic's Auto automotive repair and former fuel service station located at 245 8th Street in the City of Oakland, Alameda County, California (Figure 1). AEI has been retained by Mr. Lum to provide environmental engineering and consulting services related to the release of gasoline fuel hydrocarbons from the former underground storage tank (UST) and dispensing system on the property. The investigation and remediation of the release is being performed under the direction of the Alameda County Environmental Health (ACEH) local oversight program.

This investigation was requested by the ACEH in a letter dated April 2, 2012. The letter was in response to the AEI's case closure consideration request in the first quarter groundwater monitoring report dated February 24, 2012. AEI prepared a Soil Gas Investigation Workplan dated August 29, 2012 which was approved by the ACEH with additions in a letter dated September 10, 2012.

2.0 ABBREVIATED SITE HISTORY

The subject property (hereafter referred to as the "site" or "property") is located in a mixed commercial and residential area of Oakland. The site is a lot on the south corner of Alice Street and 8th Street, and is currently developed with an automotive repair facility (Figure 2).

A release was discovered in the mid-1990s during the removal of seven underground storage tanks (USTs) from the property. Light non-aqueous phase liquid (LNAPL) was observed on the water table. Since 1995, the site has undergone extensive characterization of soil, groundwater, and soil gas conditions. Following pilot testing, a High Vacuum Dual Phase Extraction (HVDPE) was installed in 2006 and 2007 to extract hydrocarbons from both on and off site wells; the system began operation in June 2007. Additional offsite characterization was

performed with the installation of additional monitoring wells in March 2008 (MW-8, MW-9 and MW-13) and in July 2009 (MW-14, MW-15, and MW-16). Air sparging was added to the HVDPE system in 2010. The system operated through June 2011 since which time post remediation rebound groundwater monitoring has been conducted.

Four (4) soil gas monitoring wells (GP-1 to GP-4) were installed in 2006 with sampling intervals at 5 and 10 feet below ground surface each (*Soil Gas Probe Installation & Sampling Report* dated September 29, 2006). GP-3 and GP-4 (offsite) were decommissioned in 2008 to allow the owner of that property to develop a building. Historical analytical data is summarized in Table 1.

Based on the logs of soil borings advanced on and offsite, 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 hydro-geologic system. Sediments have been relatively uniform throughout the investigation area.

Groundwater depths have typically ranged from 14 to 19 feet bgs, corresponding to elevation of approximately 14 to 16 feet above mean sea level (msl). Annual groundwater levels fluctuate by approximately 3 to 4 feet. Groundwater has consistently flowed to the south, southeast, or southwest with a hydraulic gradient of approximately 0.010 ft/ft.

3.0 SCOPE OF WORK

The purpose of the soil gas sampling investigation was to assess whether there is a potential for vapor intrusion remaining as a result of residual petroleum hydrocarbons that may be present at the site. Soil gas sampling performed prior to remediation of the site indicated that there were very little volatile petroleum hydrocarbons as a vapor phase; this sampling was performed to investigate a larger area, including where significant gasoline range hydrocarbons or LNAPL was previously identified in the soil or groundwater.

The two existing probes (GP-1-5' and GP-2-5') were to be sampled along with six (6) new probes. Five (5) new probes were installed in the locations shown on Figure 2. An access agreement could not be obtained for the sixth new soil vapor probe which was proposed at a location adjacent to former monitoring well MW-10.

Soil vapor analytical data are compared to the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) and Department of Toxic Substance Control (DTSC) California Human Health Screening Levels (CHHSLs) for residential and commercial industrial land use as a preliminary screening of the potential for vapor intrusion.

3.1 Pre-Field Activities

Prior to initiating field work at the site, drilling activities was scheduled and Underground Utility Services (USA North) was notified to locate possible underground utilities in the area. The drilling permit was obtained from Alameda County Public Works Agency (ACPWA) is attached in

Appendix A. In addition, each boring location was cleared for underground utilities by a private utility survey company.

3.2 Health and Safety

AEI prepared a site-specific health and safety plan (HASP) conforming to Part 1910.120 (i) (2) of 29 CFR prior to mobilizing to the site. Prior to commencing field activities, a site safety meeting was held at a designated command post near the working area. Emergency procedures were outlined at this meeting, including an explanation of the hazards of the known or suspected chemicals of interest. All site personnel were in Level D personal protection equipment, which was the anticipated maximum amount of protection needed. A working area was established with cones, barricades, and caution tape to delineate the zone where hard hats, safety vests, and steel-toed shoes must be worn, and where unauthorized personnel were allowed. The site safety plan was on site at all times during the project.

3.3 Soil Gas Probe Installation

October 16, 2012, AEI advanced soil borings (GP-5 though GP-9) at the site to depths of 5.5 bgs and completed each of the vapor borings as a permanent soil gas monitoring point. The borings were advanced with a truck mounted Geoprobe® 5400 series drilling rig operated by Environmental Control Associates (ECA) of Aptos, California. An eight inch diameter hole was cored in the concrete or asphalt at each location and a 2.25 inch diameter soil boring was continuously cored to a depth of approximately 5.5 feet bgs using a Geoprobe® Macro Core® sampler.

The soil cores were described within general accordance with ASTM D-2488 and recorded on the boring logs which are included in Appendix B. No soil samples were retained for chemical analyses.

The soil gas probes were constructed inside the open borehole using an approximately 6-inch long stainless steel vapor implant connected to 0.25-inch outside diameter nylaflow nylon tubing. The implant was lowered to the bottom of the borehole inside a section of ¾ inch PVC casing. The annulus around the implant was filled with layer of #30 mesh Monterey sand to a depth of 4.5 feet bgs as the PVC casing was withdrawn. Approximately 0.5 feet of dry granular bentonite was placed on top of the sand and hydrated with a small amount of water. Granular bentonite was placed and hydrated in 0.5 foot lifts to a depth of approximately 0.75 feet bgs. A 0.25-inch Swagelok® plug valve was installed on the top of each soil gas probe to allow for a shut in test and so that the tubing can be connected to the laboratory supplied vapor sampling manifold. The top of the boring was sealed with neat cement and completed with a 4-inch diameter waterproof flush mounted well box.

3.4 Sample Collection

The two existing gas probes (GP-1 to GP-2) and the five newly installed probes (GP-5 though GP-9) were sampled no less than 2 days after installation of the new probes.

The soil vapor probes were sampled on October 31, 2012. Initially, the probe caps were removed and the laboratory supplied canister and manifold was connected to the vapor probes. Prior to collecting the samples, a shut in test was performed by placing a vacuum on the sampling train above grade with the swage lock at the top of the probe in the closed position. The vacuum was observed for approximately 1 minute and, if the vacuum had not changed, the above ground sampling train was considered free of leaks.

Soil gas was then be purged from the probe. Due to the use of Summa canisters, an onsite purge volume test could not be conducted; therefore approximately 3 purge volumes was purged prior to collecting the sampling from the probe. The probes were purged using a syringe. Following purging of the sampling lines, the 1 liter Summa canister, which was connected to the sampling manifold, was opened and the initial vacuum was recorded. Vapor samples were collected through the regulator at a rate of approximately 167 mL/minute. After approximately seven to nine minutes (depending on the down hole vacuum), or when approximately -5 inches of Hg vacuum remained in the canister, the canister was closed and removed from the sampling line. Samples were labeled and entered onto a chain of custody prior to shipping to the laboratory.

A duplicate sample was collected from soil gas probe GP-9.

During sampling, a leak check gas, isopropyl alcohol, was used to confirm that the sample train and probe seal were tight and leak free.

3.5 Laboratory Analyses

The eight (8) soil gas samples were shipped to McCampbell Analytical, Inc. of Pittsburg, California (DHS Certification #1644) for analysis under chain of custody protocol. The vapor samples were analyzed for TPH-gasoline and MBTEX by method TO15 and as well as for light gases oxygen (O_2), methane (CH_4), carbon dioxide (CO_2) and nitrogen (N_2) by ASTM D 1946-90.

3.6 Waste Storage and Disposal

Investigation-derived wastes (IDWs) consisting of soil cuttings and other debris generated during probe installation and sampling were stored in DOT-approved 55-gallon steel drums. The drums were sealed and labeled and secured on-site pending the results of the analyses and arrangements for off-site disposal. The IDWs will be handled and transported by a certified waste transporter to a waste disposal and/or recycling facility in accordance with all applicable state, location, and federal regulations.

4.0 SOIL GAS SAMPLE ANALYTICAL RESULTS

4.1 Soil Gas Sample Results

Soil gas samples collected from the probe located at a depth of 5 bgs were analyzed for TPH-g, MTBE and BTEX by EPA Method Modified TO15 and light gasses by ASTM D 1946-90. Due to a

canister pressure problem with sample "GP-9" (MAI Lab ID# 1210992-007A), the TO-15 data was compromised and the data is suspect.

Fuel hydrocarbons (TPH-g) were reported only in sample GP1 at a concentration of 2,700 μg/m3. TPH-g was reported as non detectable in all other soil vapor samples. No BTEX or MTBE was reported at or above laboratory reporting limits in any of the soil vapor samples.

Analysis for leak check compound isopropyl alcohol (2-Propanol) reported all samples as non-detectable at or above the laboratory reporting limit of 12 $\mu g/m^3$.

Analysis for light gases reported Carbon dioxide at concentrations of 7.1 % (GP-5) to 4.3% (GP-8). Normal concentration of carbon dioxide in the atmosphere is 0.0394 %.

Methane was reported at concentrations ranging from ND<0.0001 % (GP-5, GP-7, GP-8, and GP-9Df) to 0.00067 % (GP-1). Normal concentration of methane in the atmosphere is 0.000179 %.

Nitrogen was reported at concentrations ranging from 50 % (GP-2) to 64 % (GP-6). Normal concentration of nitrogen in the atmosphere is 78.084 %.

Oxygen was reported at concentrations ranging from 13 % (GP-8) to 19 % (GP-1 and GP-6). Normal concentration of oxygen in the atmosphere is 20.946 %.

A summary of soil gas sample analytical data is presented in Table 1 & 2 and on Figure 3. Laboratory analytical reports and chain of custody documentation are included in Appendix B.

4.2 Leak Check Compound Results

The leak check compound isopropyl alcohol (i.e., 2-Propanol) was not reported at or above reporting limits in any of the soil vapor samples analyzed.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Analysis of soil vapor samples by method TO15 reported TPH-g and VOCs (MTBE and BTEX well below the CHHSLs and RWQCB soil gas ESLs. TPH-g was reported in only one sample, GP-1. This indicates little or no potential for vapor intrusion into building that is currently on the site or that maybe constructed on the site in the future.

Concentrations of carbon dioxide and methane in the soil vapor are slightly elevated indicating continuing biodegradation of residual hydrocarbons in the soil and groundwater. Oxygen concentrations in the soil vapor are below normal atmospheric levels but sufficiently high to allow continued biodegradation which can be expected to continue to reduce the concentrations of any residual hydrocarbons underlying the site.

AEI believes that the site currently meets the criteria for closure as a low risk site and request that the site be considered for closure under those guidelines.

6.0 CLOSING

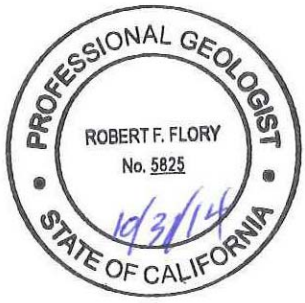
AEI has been retained by to provide environmental engineering and consulting services relating to the unauthorized release of petroleum hydrocarbons from the former UST at the subject property. Material samples have been and or are proposed to be collected and analyzed, and where appropriate conclusions drawn and recommendations made based on these analyses and other observations. This report may not reflect subsurface variations that may exist between sampling points. These variations cannot be fully anticipated, nor could they be entirely accounted for, in spite of exhaustive additional testing. This document should not be regarded as a guarantee that no further contamination, beyond that which could have been detected within the scope of past investigations is present beneath the property or that all contamination present at the site will be identified, treated, or removed. Undocumented, unauthorized releases of hazardous material(s) and petroleum products, the remains of which are not readily identifiable by visual inspection and/or are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation and may or may not become apparent at a later time. All specified work has been performed in accordance with generally accepted practices in environmental engineering, geology, and hydrogeology that existed at the time and location of the work and performed under the direction of appropriate California registered professionals.

Should you have any questions or comments, or need any additional information, please contact either of the undersigned at (925) 746-6000.

Sincerely,
AEI Consultants

Peter McIntyre, PG
Sr. Vice President

Robert F. Flory, PG
Senior Geologist



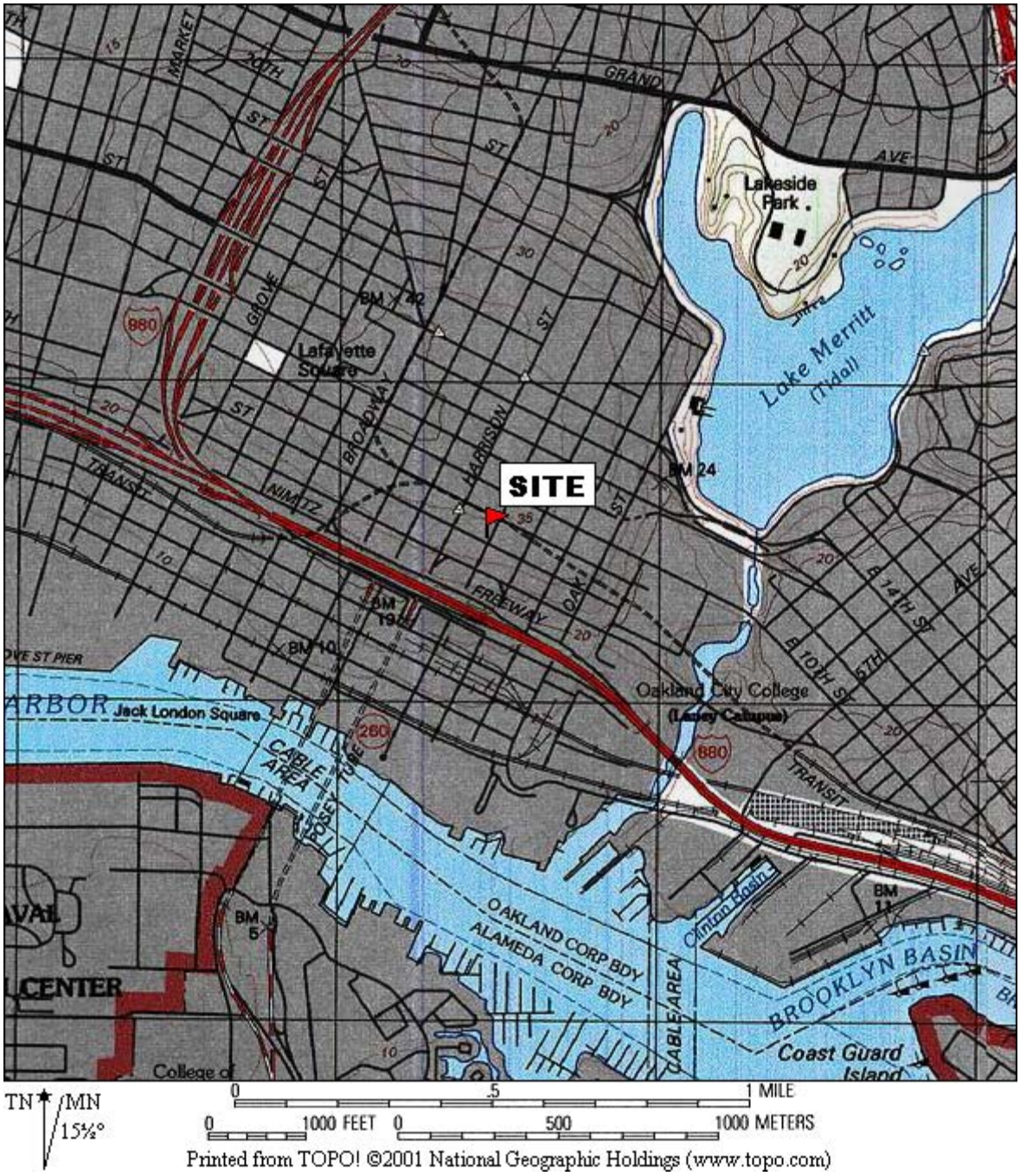
Distribution List:

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

Mr. Jerry Wickham (electronic-ftp)
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

GeoTracker (electronic)

FIGURES



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AEI CONSULTANTS

2500 CAMINO DIABLO BLVD, SUITE 200, WALNUT CREEK, CA

SITE LOCATION MAP

245 8th STREET
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 116907

Drafted By R. Bradford 02-14-11	Revised By S. Lao 08-27-12
Checked By P. McIntyre 08-27-12	

N
W E
S

COMMERCIAL
RESIDENTIAL
RCIAL
SIDEWALK
ALICE STREET
8th STREET
7th STREET
DRIVE
DRIVEWAY
FENCE
SB-6
SB-2
SB-5
SB-12
SB-13
SB-14
SB-15
SB-4
SB-3
SB-11
SB-10
SB-9
SB-8
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
GP-1
GP-2
GP-3
GP-4
GP-5
GP-6
GP-7
GP-8
GP-9
GP-x not drilled
SB-16
SB-17
SB-18
SB-19
AS-1
AS-2
AS-3
AS-4
1,000 GAL
6,000 GAL
250 GAL
UST SYSTEM REMOVED 2009
CANOPY
VIC'S AUTO (245 8TH STREET)
RESIDENTIAL (718 ALICE ST)
RESIDENTIAL (712 ALICE ST)
RESIDENTIAL (708 ALICE ST)
RESIDENTIAL (704 ALICE ST)
RESIDENTIAL (702 ALICE ST)
RESIDENTIAL (234 7TH ST)
RESIDENTIAL (230 7TH ST)
RESIDENTIAL (228 7TH ST)
RESIDENTIAL
PRINGLE ME (216
RE (227

0 25 50
SCALE: 1" = 25'

LEGEND

- MONITORING WELL
- SOIL BORING (8/9/96)
- SOIL BORING (04/02 & 03/03)
- SOIL GAS PROBE
- ABANDONED SOIL GAS PROBE
- SOIL BORING (2010)
- AIR SPARGE WELL (2010)
- FORMER UST LOCATION

AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK, CALIFORNIA

SITE PLAN

245 8TH STREET
OAKLAND, CALIFORNIA

FIGURE 2
PROJECT NO. 116907

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\Vic's Auto (116907) Oakland - RJB, PM\(G) Groundwater Monitoring (116907) RJB\39 Event (March 2011)

Drafted By R. Bradford 02-14-11	Revised By S. Lao 08-27-12
Checked By P. McIntyre 08-27-12	

N
W E
S

8th STREET

ALICE STREET

MW-3
DRIVEWAY
GP-5
GP-5
TPH-g ND<1,800
Benzene ND<6.5
UST SYSTEM
REMOVED 2009
GP-7
TPH-g ND<1,800
Benzene ND<6.5
SB-1
MW-5
SB-16
GP-7
GP-5
TPH-g ND<1,800
Benzene ND<6.5
GP-9
GP-6
GP-8
TPH-g ND<1,800
Benzene ND<6.5
DRIVE
MW-1
SB-17
AS-1
GP-8
AS-2
SB-18
AS-3
MW-6
GP-9
TPH-g ND<1,800
Benzene ND<6.5
CANOPY
VIC'S AUTO
(245 8TH STREET)
MW-8
DRIVE
GP-1
SB-7
MW-7
AS-4
SB-19
250
GAL
GP-1
TPH-g 2,700
Benzene ND<6.5
GP-2
TPH-g ND<1,800
Benzene ND<6.5
MW-2
GP-2
DRIVE
RESIDENTIAL
(718 ALICE ST)
GP-x
not drilled
SB-3
MW-10
SB-11
RESIDENTIAL
(712 ALICE ST)
SB-8
MW-4
GP-4
MW-11
MW-12

LEGEND

TPH-g = Total Petroleum Hydrocarbons as gasoline
MTBE = Methyl tertiary-butyl ether
NS = Not sampled / buried under a new building
ND = Not detected at or above the reporting limit
All groundwater sample analytical data in micrograms per liter (ug/L) or ppb

*MTBE by EPA Method SW8260B

MONITORING WELL
SOIL GAS PROBE
ABANDONED SOIL GAS PROBE
PROPOSED GAS PROBE (2012)

FORMER UST LOCATION

AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK, CALIFORNIA

SOIL VAPOR ANALYTICAL DATA HYDROCARBONS 10/31/2012

245 8TH STREET
OAKLAND, CALIFORNIA

FIGURE 3
PROJECT NO. 116907

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\Vic's Auto (116907) Oakland - RJB, PM\(G) Groundwater Monitoring (116907) RJB\39 Event (March 2011)

Drafted By R. Bradford 02–14–11	Revised By S. Lao 08–27–12
Checked By P. McIntyre 08–27–12	

N
W E
S

8th STREET

ALICE STREET

GP-5	%
Carbon Dioxide	0.71
Methane	<0.0001
Nitrogen	60
Oxygen	15

GP-9 Dup	%
Carbon Dioxide	1.9
Methane	<0.0001
Nitrogen	59
Oxygen	17

GP-7	%
Carbon Dioxide	1.2
Methane	<0.0001
Nitrogen	52
Oxygen	15

GP-8	%
Carbon Dioxide	4.3
Methane	<0.0001
Nitrogen	58
Oxygen	13

GP-6	%
Carbon Dioxide	1.4
Methane	0.00026
Nitrogen	64
Oxygen	19

GP-1	%
Carbon Dioxide	2.1
Methane	0.00067
Nitrogen	58
Oxygen	19

GP-2	%
Carbon Dioxide	1.2
Methane	0.00021
Nitrogen	50
Oxygen	16

MW–3 DRIVEWAY GP–5 GP–9 GP–7 SB–1 MW–5 SB–16 GP–6 CANOPY MW–1 SB–17 AS–1 GP–8 AS–2 SB–18 AS–3 MW–6 MW–8 DRIVE GP–1 SB–7 MW–7 AS–4 SB–19 250 GAL MW–2 GP–2 GP-x not drilled SB–3 MW–10 SB–11 GP–4 MW–11 MW–12 SB–8 MW–4

UST SYSTEM REMOVED 2009

VIC'S AUTO
(245 8TH STREET)

RESIDENTIAL
(712 ALICE ST)

LEGEND

TPH-g = Total Petroleum Hydrocarbons as gasoline
MTBE = Methyl tertiary-butyl ether
NS = Not sampled / buried under a new building
ND = Not detected at or above the reporting limit
All groundwater sample analytical data in micrograms per liter (ug/L) or ppb

*MTBE by EPA Method SW8260B

MONITORING WELL
SOIL GAS PROBE
ABANDONED SOIL GAS PROBE
PROPOSED GAS PROBE (2012)

FORMER UST LOCATION

AEI CONSULTANTS

2500 CAMINO DIABLO, WALNUT CREEK, CALIFORNIA

SOIL VAPOR ANALYTICAL DATA LIGHT GASES 10/31/2012

245 8TH STREET
OAKLAND, CALIFORNIA

FIGURE 4
PROJECT NO. 116907

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\Vic's Auto (116907) Oakland - RJB, PM\(G) Groundwater Monitoring (116907) RJB\39 Event (March 2011)

TABLES

TABLE 1: SOIL GAS SAMPLE ANALYTICAL DATA

Vic's Auto, 245 8th Street, Oakland, California

Well ID	Date Collected	Sample Depth	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	Ethanol	PCE	2-propanol
			Method TO3/TO15								
		ft/bgs	µg/m^3								
GP-1-5	08/04/06	5	331	<8.0	<7.1	<8.4	<9.7	<9.7	<17	17	23
GP-1-5D$_I$	08/04/06	5	-	<8.0	<7.1	<8.4	<9.7	<9.7	<17	18	23
GP-1-5	11/08/06	5	1,100	<4.6	<4.0	<4.8	<5.5	<5.5	<9.5	12	<12
GP-1-5	03/06/07*	5	-	-	-	-	-	-	-	-	-
GP-1-5	05/17/07	5	457	<3.6	<3.2	<3.8	<4.4	<4.4	<7.6	14	<9.9
GP-1-5D$_I$	05/17/07	5	-	<3.6	<3.2	<3.8	<4.4	<4.4	<7.6	14	<9.9
GP-1-5	12/12/07	5	<1,500	<48	<6.5	<7.7	<8.8	<27	<96	<14	<25
GP-1-5	02/14/08	5	<1,800	<48	<6.5	<7.7	<8.8	<27	<96	<14	<10,000
GP-1-5	05/08/08	5	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<25
GP-1-5	08/15/08	5	<1800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-1-5	**10/31/12**	**5**	**2,700**	**<7.3**	**<6.5**	**<7.7**	**<8.8**	**<27**	**-**	**-**	**<14**
GP-1-10	08/04/06	10	493	<4.1	<3.6	<4.3	<5.0	<5.0	<8.6	20	<11
GP-1-10	11/08/06	10	950	<4.2	<3.7	<4.4	<5.0	<5.0	<8.8	<7.9	<11
GP-1-10	03/06/07*	10	-	-	-	-	-	-	-	-	-
GP-1-10	05/17/07^	10	-	-	-	-	-	-	-	-	-
GP-1-10	12/12/07	10	<1,500	<48	<6.5	<7.7	<8.8	<27	<96	<14	<25
GP-1-10	02/14/08	10	<1,800	<48	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-1-10	05/08/08	10	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<25
GP-1-10	08/15/08	10	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-2-5	08/04/06	5	493	<4.4	<3.9	6.9	<5.4	10	<9.3	600	<12
GP-2-5	11/08/06	5	1,100	<4.0	<3.6	<4.2	<4.9	<4.9	<8.4	240	<11
GP-2-5	03/06/07*	5	-	-	-	-	-	-	-	-	-
GP-2-5	05/17/07	5	582	<4.0	<3.5	<4.1	<4.8	<4.8	<8.3	420	<11
GP-2-5	12/12/07	5	<1,500	<48	<6.5	<7.7	<8.8	<27	<96	<14	<25
GP-2-5	02/14/08	5	<1,800	<48	<6.5	<7.7	<8.8	<27	<14	<14	<10,000
GP-2-5	05/08/08	5	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<25
GP-2-5	08/15/08	5	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	39	<10,000
GP-2-5	**10/31/12**	**5**	**<1,800**	**<7.3**	**<6.5**	**<7.7**	**<8.8**	**<27**	**-**	**-**	**<12**
GP-2-10	08/04/06	10	352	<10	<9.0	18	<12	<12	<21	270	<28
GP-2-10	11/08/06	10	910	<3.9	<3.4	<4.1	<4.7	<4.7	<8.1	450	<11
GP-2-10	03/06/07*	10	-	-	-	-	-	-	-	-	-
GP-2-10	05/17/07	10	748	<3.8	<3.3	<3.9	<4.5	<4.5	<7.9	440	<10
GP-2-10	12/12/07	10	<1500	<48	<6.5	<7.7	<8.8	<27	<96	<14	<25
GP-2-10	02/14/08	10	<1800	<48	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-2-10	05/08/08	10	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<25
GP-2-10	08/15/08	10	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	48	<10,000

TABLE 1: SOIL GAS SAMPLE ANALYTICAL DATA

Vic's Auto, 245 8th Street, Oakland, California

Well ID	Date Collected	Sample Depth	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	Ethanol	PCE	2-propanol
			Method TO3/TO15								
		ft/bgs	µg/m^3								
GP-3-5	08/04/06	5	<240	<4.2	<3.7	<4.4	<5.0	<5.0	<8.8	<7.9	<11
GP-3-5	11/08/06	5	930	<4.4	<3.9	<4.6	<5.2	<5.2	<9.1	<8.2	<12
GP-3-5	03/06/07*	5	-	-	-	-	-	-	-	-	-
GP-3-5	05/17/07	5	582	<4.0	<3.5	<4.1	<4.8	<4.8	17	<7.5	<11
GP-3-5D$_f$	05/17/07	5	582	<4.0	<3.5	<4.1	<4.8	<4.8	<8.3	16	<11
GP-3-5	12/12/07	5	<1500	<48	<6.5	<7.7	<8.8	<27	<96	<14	<25
GP-3-5	02/14/08	5	<1800	<48	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-3-5	05/08/08	5	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<25
GP-3-5	08/15/08	5	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-3-5	Decommissioned August 21, 2008										
GP-3-10	08/04/06	10	564	<4.2	<3.7	<4.4	<5.0	<5.0	<8.8	<7.9	<11
GP-3-10	11/08/06	10	1,800	<4.0	<3.6	<4.2	<4.9	<4.9	<8.4	<7.6	<11
GP-3-10	03/06/07*	10	-	-	-	-	-	-	-	-	-
GP-3-10	05/17/07	10	1,538	<4.1	<3.6	<4.3	<5.0	<5.0	18	<7.8	12
GP-3-10	12/12/07	10	<1500	<48	<6.5	<7.7	<8.8	<27	<96	<14	-
GP-3-10	02/14/08	10	<1800	<48	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-3-10	05/08/08	10	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<25
GP-3-10	08/15/08	10	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-3-10	Decommissioned August 21, 2008										
GP-4-5	08/04/06	5	705	<4.4	5.4	<4.6	<5.4	<5.4	<9.3	<8.4	<12
GP-4-5D$_l$	08/04/06	5	599	-	-	-	-	-	-	-	-
GP-4-5	11/08/06	5	540	<4	<3.5	<4.1	<4.8	<4.8	<8.3	<7.5	<11
GP-4-5D$_f$	11/08/06	5	610	<7.7	<6.8	<8.0	<9.2	<9.2	<16	<14	<21
GP-4-5	03/06/07*	5	-	-	-	-	-	-	-	-	-
GP-4-5	05/17/07	5	873	<4	<3.6	<4.2	<4.9	<4.9	15	<7.6	<11
GP-4-5	12/12/07	5	<1500	<48	<6.5	<7.7	<8.8	<27	<96	<14	<25
GP-4-5D$_f$	12/12/07	5	<1500	<48	<6.5	<7.7	<8.8	<27	<96	<14	<25
GP-4-5	02/14/08	5	<1800	<48	<6.5	<7.7	<8.8	<27	<96	<14	<10,000
GP-4-5	05/08/08	5	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<25
GP-4-5	08/15/08	5	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-4-5	Decommissioned August 21, 2008										
GP-4-10	08/04/06	10	564	<4.1	6.1	17	5.7	16	12	<7.8	<11
GP-4-10D$_f$	08/05/06	10	529	<3.8	4.2	18	<4.6	17	18	<7.2	<10
GP-4-10	11/08/06	10	900	<4.0	<3.5	4.1	<4.8	5.2	<8.3	<7.5	<11
GP-4-10D$_l$	11/08/06	10	880	<1.8	<1.6	<1.9	<2.2	<2.2	<3.8	<3.4	<4.9
GP-4-10	03/06/07*	10	-	-	-	-	-	-	-	-	-
GP-4-10	05/17/07^	10	-	-	-	-	-	-	-	-	-
GP-4-10	12/12/07	10	1,600	<48	<6.5	<7.7	<8.8	<27	<96	<14	<25
GP-4-10	02/14/08	10	-	-	-	-	-	-	-	-	-
GP-4-10	05/08/08	10	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<25
GP-4-10	08/15/08	10	<1,800	<7.3	<6.5	<7.7	<8.8	<27	-	<14	<10,000
GP-4-10	Decommissioned August 21, 2008										

TABLE 1: SOIL GAS SAMPLE ANALYTICAL DATA

Vic's Auto, 245 8th Street, Oakland, California

Well ID	Date Collected	Sample Depth	TPH-g	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	Ethanol	PCE	2-propanol
			Method TO3/TO15								
		ft/bgs	µg/m^3								
GP-5	**10/31/12**	**5**	**<1,800**	**<7.3**	**<6.5**	**<7.7**	**<8.8**	**<27**	-	-	**<12**
GP-6	**10/31/12**	**5**	**<1,800**	**<7.3**	**<6.5**	**<7.7**	**<8.8**	**<27**	-	-	**<12**
GP-7	**10/31/12**	**5**	**<1,800**	**<7.3**	**<6.5**	**<7.7**	**<8.8**	**<27**	-	-	**<12**
GP-8	**10/31/12**	**5**	**<1,800**	**<7.3**	**<6.5**	**<7.7**	**<8.8**	**<27**	-	-	**<12**
GP-9	**10/31/12**	**5**	**<1,800**	**<7.3**	**<6.5**	**<7.7**	**<8.8**	**<27**	-	-	**<12**
GP-9Df	**10/31/12**	**5**	**<1,800**	**<7.3**	**<6.5**	**<7.7**	**<8.8**	**<27**	-	-	**<12**
Residential ESLs			10,000	9,400	84	63,000	980	21,000	1.9E+07	410	-
Commercial /Industrial ESLs			29,000	31,000	280	180,000	3,300	58,000	1.9E+07	1400	-
Residential CHHSLs			-	4,000	36.2	135,000	Postponed	315,000	1.9E+07	180	-
Commercial /Industrial CHHSLs			-	13,400	122	378,000	Postponed	879,000	1.9E+07	603	-

NOTES:

- not sampled/analyzed

2-propanol (i.e., isopropyl alcohol) tracer/leak check compound

ft bgs = feet below ground surface

µg/m3 = micrograms per cubic meter

TPH-g = total petroleum hydrocarbons as gasoline

MTBE = methyl tertiary-butyl ether

PCE = tetrachloroethene

ESLs = Regionsl Water Quality Control Board Environmental Screening Levels - May 2008

CHHSLs = Department of Toxic Substance Control, California Human Health Screening Levels, January 2005

* = Sampling not possible due to seasonal wet soil conditions

^ = No sample analysis due to presence of free moisture in sample tubing

D_f = after the probe/sample ID indicates a duplicate sample collected in the field

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

TABLE 2: LIGHT GAS ANALYTICAL SUMMARY
Vic's Automotive
245 8th Street, Oakland, California

Probe/Sample ID	Date Collected	Sample Depth	Carbon Dioxide	Methane	Nitrogen	Oxygen
		(ft bgs)	Percent			
GP-1-5	10/31/2012	5	2.1	0.00067	58.0	19.0
GP-2-5	10/31/2012	5	1.2	0.00021	50.0	16.0
GP-5	10/31/2012	5	0.71	<0.0001	60.0	15.0
GP-6	10/31/2012	5	1.4	0.00026	64.0	19.0
GP-7	10/31/2012	5	1.2	<0.0001	52.0	15.0
GP-8	10/31/2012	5	4.3	<0.0001	58.0	13.0
GP-9	10/31/2012	5	-	-	-	-
GP-9Df	10/31/2012	5	1.9	<0.0001	59.0	17.0
Composition of Normal Atmosphere			0.0394	0.000179	78.084	20.946

= feet below ground surface

APPENDIX A

ACPWA DRILLING PERMITS

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: 10/03/2012 By jamesy

Permit Numbers: W2012-0713
Permits Valid from 10/15/2012 to 10/26/2012

Application Id: 1349132216999 **City of Project Site:** Oakland
Site Location: 245 8th Street
Oakland, CA
Project Start Date: 10/15/2012 **Completion Date:** 10/26/2012
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Applicant: AEI Consultants - Robert Flory **Phone:** 925-746-6000
2500 Camino Diablo, Walnut Creek, CA 94597
Property Owner: Vic Lum **Phone:** 510-832-9014
245 8th Street, Oakland, CA 94607
Client: ** same as Property Owner **
Contact: Robert Flory **Phone:** 925-746-6000
Cell: 925-457-7517

Total Due: $265.00
Receipt Number: WR2012-0324 **Total Amount Paid:** $265.00
Payer Name : Robert F. Flory Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Well Construction-Vapor monitoring well-Vapor monitoring well - 6 Wells
Driller: ECA - Lic #: 695970 - Method: Hand **Work Total: $265.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2012-0713	10/03/2012	01/13/2013	GP-10	2.50 in.	0.25 in.	4.00 ft	5.50 ft
W2012-0713	10/03/2012	01/13/2013	GP-5	2.50 in.	0.25 in.	4.00 ft	5.50 ft
W2012-0713	10/03/2012	01/13/2013	GP-6	2.50 in.	0.25 in.	4.00 ft	5.50 ft
W2012-0713	10/03/2012	01/13/2013	GP-7	2.50 in.	0.25 in.	4.00 ft	5.50 ft
W2012-0713	10/03/2012	01/13/2013	GP-8	2.50 in.	0.25 in.	4.00 ft	5.50 ft
W2012-0713	10/03/2012	01/13/2013	GP-9	2.50 in.	0.25 in.	4.00 ft	5.50 ft

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days, including permit number and site map.

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. Permittee, 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. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

6. No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.

7. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

8. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

9. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

10. 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.

11. Vapor monitoring wells above water level constructed with tubing maybe be backfilled with pancake-batter consistency bentonite. Minimum surface seal thickness is two inches of cement grout around well box.

Vapor monitoring wells above water level constructed with pvc pipe shall have a minimum seal depth (Neat Cement Seal) of 2 feet below ground surface (BGS). Minimum surface seal thickness is two inches of cement grout around well box. All other conditions for monitoring well construction shall apply.

APPENDIX B

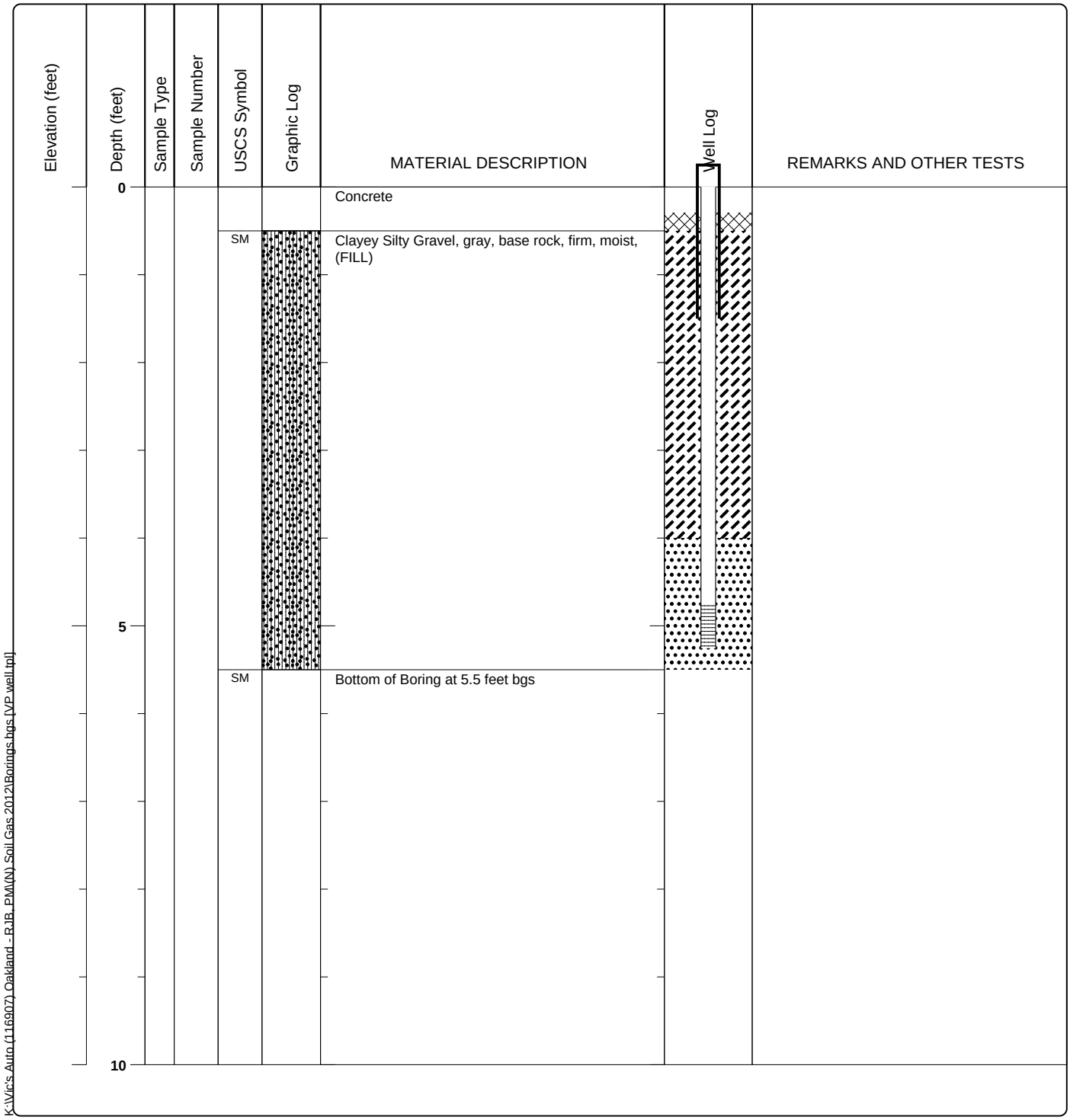
BORING LOGS

Project: Vic's Auto
Project Location: 245 8th Street, Oakland, CA
Project Number: 116907

Log of Boring GP-5

Sheet 1 of 1

Date(s) Drilled October 16, 2012	**Logged By** Robert F. Flory	**Checked By**
Drilling Method Direct Push	**Drill Bit Size/Type** 2.25 inch	**Total Depth of Borehole** 5.5 feet bgs
Drill Rig Type Geoprobe 5400	**Drilling Contractor** Enviromental Control Associates	**Approximate Surface Elevation**
Groundwater Level and Date Measured Not Encountered ATD	**Sampling Method(s)** None	**Well Permit** W2012-0713
Borehole Backfill Well Completion	**Location**	



K:\Vic's Auto (116907) Oakland - RJB_PM(N) Soil Gas 2012\Borings bgs [VP well.tpl]

Project: Vic's Auto
Project Location: 245 8th Street, Oakland, CA
Project Number: 116907

Log of Boring GP-6

Sheet 1 of 1

Date(s) Drilled October 16, 2012	**Logged By** Robert F. Flory	**Checked By**
Drilling Method Direct Push	**Drill Bit Size/Type** 2.25 inch	**Total Depth of Borehole** 5.5 feet bgs
Drill Rig Type Geoprobe 5400	**Drilling Contractor** Enviromental Control Associates	**Approximate Surface Elevation**
Groundwater Level and Date Measured Not Encountered ATD	**Sampling Method(s)** None	**Well Permit** W2012-0713
Borehole Backfill Well Completion	**Location**	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	0					Concrete		
				SM		Silty gravelly Sand, reddish brown - brown, soft, loose, moist (FILL)		
				SM		Silty Sand, yellowish brown, soft, loose, moist		
	5			SM		Bottom of Boring at 5.5 feet bgs		
	10							

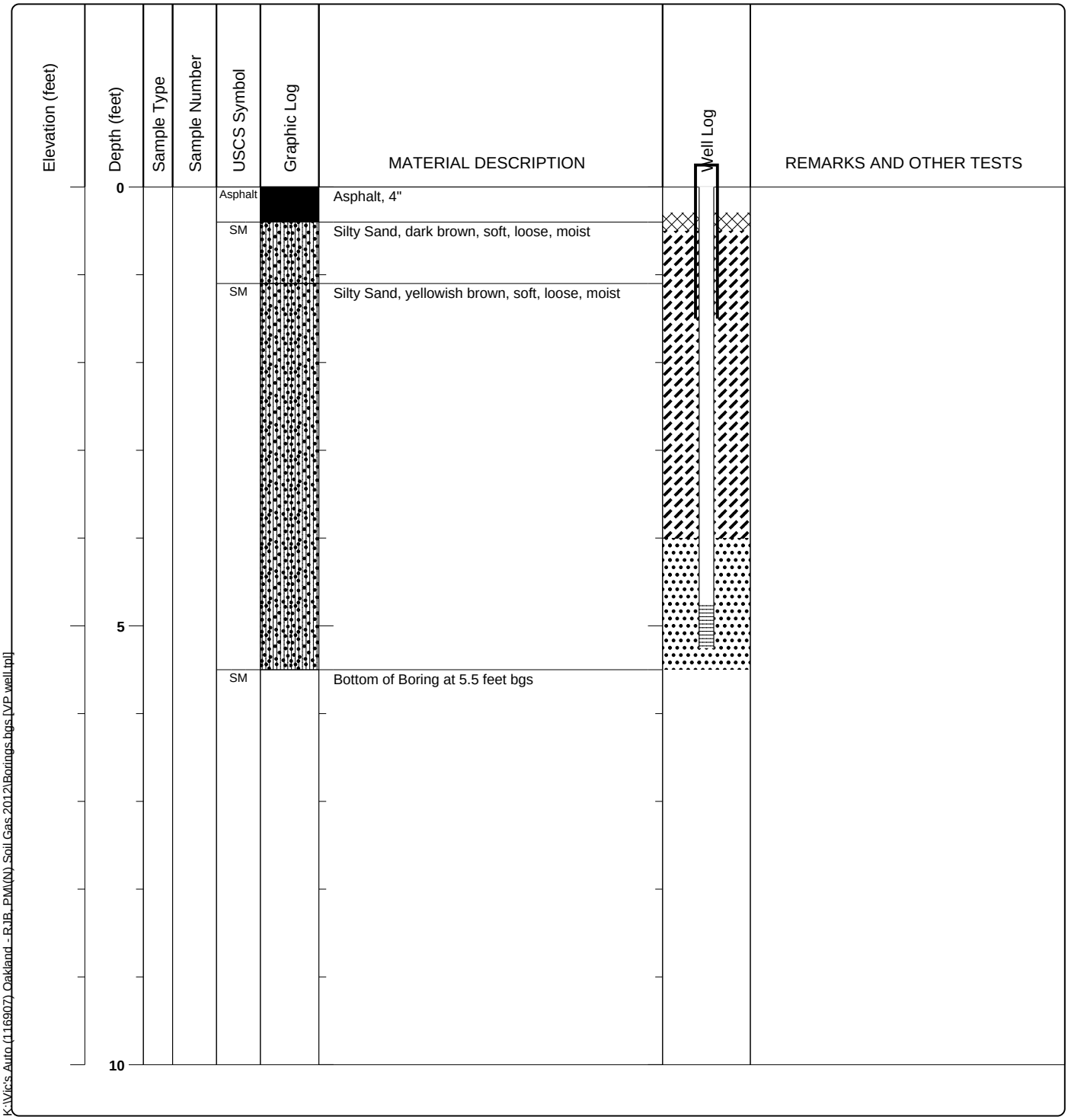
K:\Vic's Auto (116907) Oakland - RJB_PM\(N) Soil Gas 2012\Borings bgs [VP well.tpl]

Project: Vic's Auto
Project Location: 245 8th Street, Oakland, CA
Project Number: 116907

Log of Boring GP-7

Sheet 1 of 1

Date(s) Drilled October 16, 2012	**Logged By** Robert F. Flory	**Checked By**
Drilling Method Direct Push	**Drill Bit Size/Type** 2.25 inch	**Total Depth of Borehole** 5.5 feet bgs
Drill Rig Type Geoprobe 5400	**Drilling Contractor** Enviromental Control Associates	**Approximate Surface Elevation**
Groundwater Level and Date Measured Not Encountered ATD	**Sampling Method(s)** None	**Well Permit** W2012-0713
Borehole Backfill Well Completion	**Location**	



K:\Vic's Auto (116907) Oakland - RJB_PM(N) Soil Gas 2012\Borings bgs [VP well.tpl]

Project: Vic's Auto
Project Location: 245 8th Street, Oakland, CA
Project Number: 116907

Log of Boring GP-8

Sheet 1 of 1

Date(s) Drilled October 16, 2012	**Logged By** Robert F. Flory	**Checked By**
Drilling Method Direct Push	**Drill Bit Size/Type** 2.25 inch	**Total Depth of Borehole** 5.5 feet bgs
Drill Rig Type Geoprobe 5400	**Drilling Contractor** Enviromental Control Associates	**Approximate Surface Elevation**
Groundwater Level and Date Measured Not Encountered ATD	**Sampling Method(s)** None	**Well Permit** W2012-0713
Borehole Backfill Well Completion	**Location**	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt 4"		
				SM		Silty Sand, dark brown, soft, loose, moist		
				SM		Silty Sand, yellowish brown, soft, loose, moist		
	5			SM		Bottom of Boring at 5.5 feet bgs		
	10							

K:\Vic's Auto (116907) Oakland - RJB_PM\(N) Soil Gas 2012\Borings bgs [VP well.tpl]

Project: Vic's Auto
Project Location: 245 8th Street, Oakland, CA
Project Number: 116907

Log of Boring GP-9

Sheet 1 of 1

Date(s) Drilled October 16, 2012	**Logged By** Robert F. Flory	**Checked By**
Drilling Method Direct Push	**Drill Bit Size/Type** 2.25 inch	**Total Depth of Borehole** 5.5 feet bgs
Drill Rig Type Geoprobe 5400	**Drilling Contractor** Enviromental Control Associates	**Approximate Surface Elevation**
Groundwater Level and Date Measured Not Encountered ATD	**Sampling Method(s)** None	**Well Permit** W2012-0713
Borehole Backfill Well Completion	**Location**	

Elevation (feet)	Depth (feet)	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	Well Log	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt 4"		
				SM		Silty Sand, dark brown, soft, loose, moist		
				SM		Silty Sand, yellowish brown, soft, loose, moist		
	5			SM		Bottom of Boring at 5.5 feet bgs		
	10							

K:\Vic's Auto (116907) Oakland - RJB_PM(N) Soil Gas 2012\Borings bgs [VP well.tpl]

APPENDIX C

FIELD NOTES

AEI CONSULTANTS
DAILY FIELD REPORT

PAGE 1 OF 1

Project Name: Vic's Auto
Location: 245 8th Street, Oakland, CA
Project No.: 116907 Date: 10/31/12
Field Person: J. Sigg
Project Manager: R.Flory
Weather: Cloudy

Daily Summary: **SOIL GAS SAMPLING**

Equipment:

Materials:

TIME	SUMMARIZE FIELD ACTIVITIES
0600	LEAVE HOME
0615	ARRIVE @ SITE / CONE OFF PROBE LOCATIONS
0630	BEGIN SAMPLING GP-9 AFTER 1MIN SHUT IN TEST & PURGING 3 VOLUMES WITH PURGE CANISTER, ISOPROPYL ALCOHOL USED AS LEAK CHECK
	COLLECTED REMAINING 8 SAMPLES AS DESCRIBED FOR GP-9 SAMPLE
1150	ALL SAMPLING COMPLETE
1200	LEAVE SITE
1237	DROP SAMPLES @ McCAMPBELL
1305	ARRIVE @ OFFICE

Field Person Signature: John Sigg
Project Manager Signature:

Revised 06-09-09

AEI CONSULTANTS

SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID:	GP-1

Project Name:	Vishay Siliconix (Q4, 2012)	Date of Sampling:	10/31/12
Job Number:	288227	Start Time:	1015
Project Address:	2201 Laurelwood Road, Santa Clara	End Time:	1020
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA	
Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D.
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW
Wellbox Condition	GOOD
Depth of Probe (ft bgs)	5
Length of Tubing Above Grade (ft)	2
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	**50**
Appreciable Amount of Rain (>1/2") in Last Five Days?	No
Moisture / Water Present in Tubing?	NO

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6174
Sampling Manifold / Flow Controller Number	729
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL)

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

AEI CONSULTANTS

SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID:	GP-2

Project Name:	Vishay Siliconix (Q4, 2012)	Date of Sampling:	10/31/12
Job Number:	288227	Start Time:	1100
Project Address:	2201 Laurelwood Road, Santa Clara	End Time:	1106
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA	
Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D.
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW
Wellbox Condition	GOOD
Depth of Probe (ft bgs)	5
Length of Tubing Above Grade (ft)	2
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	**50**
Appreciable Amount of Rain (>1/2") in Last Five Days?	No
Moisture / Water Present in Tubing?	No

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6422
Sampling Manifold / Flow Controller Number	676
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL)

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

AEI CONSULTANTS

SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID:	GP-5

Project Name:	Vishay Siliconix (Q4, 2012)	Date of Sampling:	10/31/12
Job Number:	288227	Start Time:	0715
Project Address:	2201 Laurelwood Road, Santa Clara	End Time:	0722
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA	
Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D.
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW
Wellbox Condition	GOOD
Depth of Probe (ft bgs)	5
Length of Tubing Above Grade (ft)	2
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	**50**
Appreciable Amount of Rain (>1/2") in Last Five Days?	NO
Moisture / Water Present in Tubing?	NO

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	1461
Sampling Manifold / Flow Controller Number	845
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL)

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

AEI CONSULTANTS

SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID:	GP-6

Project Name:	Vishay Siliconix (Q4, 2012)	Date of Sampling:	10/31/12
Job Number:	288227	Start Time:	0800
Project Address:	2201 Laurelwood Road, Santa Clara	End Time:	0807
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA	
Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D.
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW
Wellbox Condition	GOOD
Depth of Probe (ft bgs)	5
Length of Tubing Above Grade (ft)	2
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	**50**
Appreciable Amount of Rain (>1/2") in Last Five Days?	NO
Moisture / Water Present in Tubing?	NO

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6202
Sampling Manifold / Flow Controller Number	768
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL)

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

AEI CONSULTANTS
SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID:	GP-7

Project Name:	Vishay Siliconix (Q4, 2012)	Date of Sampling:	10/31/12
Job Number:	288227	Start Time:	0845
Project Address:	2201 Laurelwood Road, Santa Clara	End Time:	0849
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA	
Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D.
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW
Wellbox Condition	GOOD
Depth of Probe (ft bgs)	5
Length of Tubing Above Grade (ft)	2
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	**50**
Appreciable Amount of Rain (>1/2") in Last Five Days?	No
Moisture / Water Present in Tubing?	NO

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6306
Sampling Manifold / Flow Controller Number	770
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL)

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

AEI CONSULTANTS
SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID:	GP-8

Project Name:	Vishay Siliconix (Q4, 2012)	Date of Sampling:	10/31/12
Job Number:	288227	Start Time:	0930
Project Address:	2201 Laurelwood Road, Santa Clara	End Time:	0935
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA	
Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D.
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW
Wellbox Condition	GOOD
Depth of Probe (ft bgs)	5
Length of Tubing Above Grade (ft)	2
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	**50**
Appreciable Amount of Rain (>1/2") in Last Five Days?	NO
Moisture / Water Present in Tubing?	NO

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6203
Sampling Manifold / Flow Controller Number	827
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL)

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

AEI CONSULTANTS

SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID:	GP-9

Project Name:	Vishay Siliconix (Q4, 2012)	Date of Sampling:	10/31/12
Job Number:	288227	Start Time:	0630
Project Address:	2201 Laurelwood Road, Santa Clara	End Time:	0635
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA	
Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D.
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW
Wellbox Condition	GOOD
Depth of Probe (ft bgs)	5
Length of Tubing Above Grade (ft)	2
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	**50**
Appreciable Amount of Rain (>1/2") in Last Five Days?	NO
Moisture / Water Present in Tubing?	NO

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6170
Sampling Manifold / Flow Controller Number	829
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL)

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

AEI CONSULTANTS

SOIL VAPOR FIELD SAMPLING FORM

SOIL VAPOR PROBE ID:	GP-9-DUP

Project Name:	Vishay Siliconix (Q4, 2012)	Date of Sampling:	10/31/12
Job Number:	288227	Start Time:	1145
Project Address:	2201 Laurelwood Road, Santa Clara	End Time:	1150
		Name of Sampler:	J. Sigg

SOIL GAS PROBE DATA	
Starting Vacuum (in-Hg)	30
Ending Vacuum (in-Hg)	5
Flow Controller / Sampling Flow Rate (mL/min)	100 - 200
Tubing Inside Diameter (1/8" or 1/4")	1/8" I.D.
Tubing Type (Nylon, Kynar, Teflon, Stainless Steel)	NYLON / NYLAFLOW
Wellbox Condition	GOOD
Depth of Probe (ft bgs)	5
Length of Tubing Above Grade (ft)	2
Total Length of Tubing Purged (ft)	7
Number of Purge Volumes (default = 3 purge volumes)	3
Total Volume Purged (mL): formula valid only for tubing sizes of 1/8" I.D. (~2.4 mL/ft), 3/16" I.D. (~5.4 mL/ft), and 1/4" I.D. (~9.6 mL/ft)	**50**
Appreciable Amount of Rain (>1/2") in Last Five Days?	No
Moisture / Water Present in Tubing?	NO

SOIL GAS SAMPLING EQUIPMENT	
Number of Samples / Container Size and Type	One (1) 1-Liter Summa Canister
Summa Canister Number	6408
Sampling Manifold / Flow Controller Number	670
Leak Check Compound	ISOPROPYL ALCOHOL (2-PROPANOL)

NOTES & COMMENTS

cc = cubic centimeter
mL = milliliter

1 L = 1000 mL
1 mL = 1 cc

in-Hg = inches of mercury
ft bgs = feet below ground surface

McCAMPBELL ANALYTICAL INC.

1534 WILLOW PASS ROAD / PITTSBURG, CA 94565-1701
Website: www.mccampbell.com / Email: main@mccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Stephen Lao	Bill To: AEI Consultants
Company: AEI Consultants, 2500 Camino Diablo, Walnut Creek, CA 94597	
PO# WC083821 Global ID: T0600101143	
	E-Mail: slao@aeiconsultants.com
Tele: (925) 746-6026	Fax: (925) 746-6099
Project #: 116907	Project Name: Vic's Auto
Project Location: 245 8th Street, Oakland, CA 94607	
Sampler Signature: John Stagg	

Lab Use Only

Pressurized By	Date	Pressurization Gas	
		N2	He

Helium Shroud SN#:

Other:

Notes: Isopropyl Alcohol Leak Check

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Manifold / Sampler Kit SN#
GP-1	10/31/12	1015	6174	729
GP-2		1100	6422	676
GP-5		0715	1461	845
GP-6		0800	6202	768
GP-7		0845	6306	770
GP-8		0930	6203	827
GP-9		0830	6170	829
GP-9-Dup	↓	1145	10408	670

Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
TO-15 TPH-g,		X	30	5		
BTEX, MTBE,		X	30	5		
Oxygen, Methane,		X	30	5		
Carbon Dioxide,		X	30	5		
Nitrogen		X	30	5		
"		X	30	5		
"		X	30	5		
"		X	30	5		

	Date:	Time:	Received By:
Relinquished By: John Stagg	10/31/12	1737	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Temp (°C): _____ Work Order #: _____

Equipment Condition: _____

Shipped Via: _____

APPENDIX D

LABORATORY ANALYTICAL REPORTS
w/ CHAIN OF CUSTODY DOCUMENTATION

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

AEI Consultants	Client Project ID: #116907; Vic's Auto	Date Sampled: 10/31/12
		Date Received: 10/31/12
2500 Camino Diablo, Ste.#200	Client Contact: Stephen Lao	Date Reported: 11/14/12
Walnut Creek, CA 94597	Client P.O.: #WC083821	Date Completed: 11/14/12

WorkOrder: 1210992

November 14, 2012

Dear Stephen:

Enclosed within are:

1) The results of the **8** analyzed samples from your project: **#116907; Vic's Auto,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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

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

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1210992

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

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ■ 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Lab Use Only

Pressurized By	Date	Pressurization Gas	
		N2	He

Report To: Stephen Lao	Bill To: AEI Consultants
Company: AEI Consultants, 2500 Camino Diablo, Walnut Creek, CA 94597	
PO# WC083821 Global ID: T0600101143	
E-Mail: slao@aeiconsultants.com	
Tele: (925) 746-6026	Fax: (925) 746-6099
Project #: 116907	Project Name: Vic's Auto
Project Location: 245 8th Street, Oakland, CA 94607	
Sampler Signature: John Sigg	

Helium Shroud SN#:

Other:

Notes: Isopropyl Alcohol Leak Check

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Manifold / Sampler Kit SN#	Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
GP-1	10-31-12	1015	6174	729	TO-15 TPH-g,		X	30	5		
GP-2		1100	6422	676	BTEX, MTBE		X	30	5		
GP-5		0715	1461	845	Oxygen, Methane,		X	30	5		
GP-6		0800	6202	768	Carbon Dioxide,		X	30	5		
GP-7		0845	6306	770	Nitrogen		X	30	5		
GP-8		0930	6203	827	"		X	30	5		
GP-9		0630	6170	829	"		X	30	5		
GP-9-Dup		1145	6408	670	"		X	30	5		

Relinquished By:	Date:	Time:	Received By:
John Sigg	10-31-12	1237	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Temp (°C): n/a Work Order #: 1210992

Equipment Condition: good

Shipped Via: Client drop in

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1210992 **ClientCode: AEL**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ EQuIS ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Stephen Lao
AEI Consultants
2500 Camino Diablo, Ste.#200
Walnut Creek, CA 94597
(408) 559-7600 FAX: (408) 559-7601
Email: slao@aeiconsultants.com
cc:
PO: #WC083821
ProjectNo: #116907; Vic's Auto

Bill to:
Sara Guerin
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
AccountsPayable@AEIConsultants.co

Requested TAT: 5 days
Date Received: **10/31/2012**
Date Printed: **11/05/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1210992-001	GP-1	Soil Gas	10/31/2012 10:15	☐	A	A										
1210992-002	GP-2	Soil Gas	10/31/2012 11:00	☐	A	A										
1210992-003	GP-5	Soil Gas	10/31/2012 7:15	☐	A	A										
1210992-004	GP-6	Soil Gas	10/31/2012 8:00	☐	A	A										
1210992-005	GP-7	Soil Gas	10/31/2012 8:45	☐	A	A										
1210992-006	GP-8	Soil Gas	10/31/2012 9:30	☐	A	A										
1210992-007	GP-9	Soil Gas	10/31/2012 6:30	☐	A	A										
1210992-008	GP-9-Dup	Soil Gas	10/31/2012 11:45	☐	A	A										

Test Legend:

1	LG_SUMMA_SOILGAS	2	TO15+GAS_SOIL(UG/M3)	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A contain testgroup.

Prepared by: Melissa Valles

Comments:

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

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name: **AEI Consultants**
Date and Time Received: **10/31/2012 1:28:52 PM**
Project Name: **#116907; Vic's Auto**
LogIn Reviewed by: Melissa Valles
WorkOrder N°: **1210992** Matrix: Soil Gas
Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

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

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

Comments:

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEI Consultants 2500 Camino Diablo, Ste.#200 Walnut Creek, CA 94597	Client Project ID: #116907; Vic's Auto	Date Sampled: 10/31/12
		Date Received: 10/31/12
	Client Contact: Stephen Lao	Date Reported: 11/07/12
	Client P.O.: #WC083821	Date Completed: 11/07/12

Work Order: 1210992

November 07, 2012

CASE NARRATIVE REGARDING TO-15 ANALYSIS

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

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

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

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

AEI Consultants	Client Project ID: #116907; Vic's Auto	Date Sampled: 10/31/12
		Date Received: 10/31/12
2500 Camino Diablo, Ste.#200	Client Contact: Stephen Lao	Date Extracted: 11/02/12-11/13/12
Walnut Creek, CA 94597	Client P.O.: #WC083821	Date Analyzed: 11/02/12-11/13/12

Light Gases*

Extraction Method: ASTM D 1946-90 | Analytical Method: ASTM D 1946-90 | Work Order: 1210992

Lab ID	1210992-001A	1210992-002A	1210992-003A	1210992-004A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2	
Client ID	GP-1	GP-2	GP-5	GP-6		
Matrix	Soil Gas	Soil Gas	Soil Gas	Soil Gas		
Initial Pressure (psia)	12.41	12.74	12.86	11.79		
Final Pressure (psia)	24.70	25.39	25.62	23.49		
DF	1	1	1	1	Soil Gas	W
Compound	**Concentration**				µL/L	ug/L
Carbon Dioxide	21,000	12,000	7100	14,000	50	NA
Methane	6.7	2.1	ND	2.6	1.0	NA
Nitrogen	580,000	500,000	600,000	640,000	4000	NA
Oxygen	190,000	160,000	150,000	190,000	4000	NA
Surrogate Recoveries (%)						
%SS:	N/A	N/A	N/A	N/A		
Comments						

* soil vapor samples are reported in µL/L.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

AEI Consultants	Client Project ID: #116907; Vic's Auto	Date Sampled: 10/31/12
		Date Received: 10/31/12
2500 Camino Diablo, Ste.#200	Client Contact: Stephen Lao	Date Extracted: 11/02/12-11/13/12
Walnut Creek, CA 94597	Client P.O.: #WC083821	Date Analyzed: 11/02/12-11/13/12

Light Gases*

Extraction Method: ASTM D 1946-90 | Analytical Method: ASTM D 1946-90 | Work Order: 1210992

Lab ID	1210992-005A	1210992-006A	1210992-008A		Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2	
Client ID	GP-7	GP-8	GP-9-Dup			
Matrix	Soil Gas	Soil Gas	Soil Gas			
Initial Pressure (psia)	12.57	12.66	12.37			
Final Pressure (psia)	25.06	25.27	24.64			
DF	1	1	1		Soil Gas	W
Compound	**Concentration**				µL/L	ug/L
Carbon Dioxide	12,000	43,000	19,000		50	NA
Methane	ND	ND	ND		1.0	NA
Nitrogen	520,000	580,000	590,000		4000	NA
Oxygen	150,000	130,000	170,000		4000	NA
Surrogate Recoveries (%)						
%SS:	N/A	N/A	N/A			
Comments						

* soil vapor samples are reported in µL/L.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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http://www.mccampbell.com / E-mail: main@mccampbell.com

AEI Consultants	Client Project ID: #116907; Vic's Auto	Date Sampled: 10/31/12
		Date Received: 10/31/12
2500 Camino Diablo, Ste.#200	Client Contact: Stephen Lao	Date Extracted: 11/05/12-11/06/12
Walnut Creek, CA 94597	Client P.O.: #WC083821	Date Analyzed: 11/05/12-11/06/12

TPH gas + Volatile Organic Compounds in µg/m³*

Extraction Method: TO15 | Analytical Method: TO15 | Work Order: 1210992

Lab ID	1210992-001A	1210992-002A	1210992-003A	1210992-004A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2	
Client ID	GP-1	GP-2	GP-5	GP-6		
Matrix	Soil Gas	Soil Gas	Soil Gas	Soil Gas		
Initial Pressure (psia)	12.40	12.74	12.86	11.79		
Final Pressure (psia)	24.70	25.39	25.62	23.49		
DF	1	1	1	1	Soil Gas	W
Compound	**Concentration**				µg/m³	ug/L
Benzene	ND	ND	ND	ND	6.5	NA
Ethylbenzene	ND	ND	ND	ND	8.8	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	7.3	NA
Toluene	ND	ND	ND	ND	7.7	NA
TPH(g)	2700	ND	ND	ND	1800	NA
Xylenes, Total	ND	ND	ND	ND	27	NA
Surrogate Recoveries (%)						
%SS1:	122	120	124	126		
%SS2:	126	125	127	125		
%SS3:	108	112	112	112		
Comments						

*vapor samples are reported in µg/m³.

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

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

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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AEI Consultants	Client Project ID: #116907; Vic's Auto	Date Sampled: 10/31/12
		Date Received: 10/31/12
2500 Camino Diablo, Ste.#200	Client Contact: Stephen Lao	Date Extracted: 11/05/12-11/06/12
Walnut Creek, CA 94597	Client P.O.: #WC083821	Date Analyzed: 11/05/12-11/06/12

TPH gas + Volatile Organic Compounds in µg/m³*

Extraction Method: TO15 Analytical Method: TO15 Work Order: 1210992

Lab ID	1210992-005A	1210992-006A	1210992-007A	1210992-008A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2	
Client ID	GP-7	GP-8	GP-9	GP-9-Dup		
Matrix	Soil Gas	Soil Gas	Soil Gas	Soil Gas		
Initial Pressure (psia)	12.57	12.66	11.76	12.37		
Final Pressure (psia)	25.06	25.27	23.42	24.64		
DF	1	1	1	1	Soil Gas	W
Compound	**Concentration**				µg/m³	ug/L
Benzene	ND	ND	ND	ND	6.5	NA
Ethylbenzene	ND	ND	ND	ND	8.8	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	7.3	NA
Toluene	ND	ND	ND	ND	7.7	NA
TPH(g)	ND	ND	ND	ND	1800	NA
Xylenes, Total	ND	ND	ND	ND	27	NA
Surrogate Recoveries (%)						
%SS1:	128	125	118	126		
%SS2:	126	122	123	125		
%SS3:	112	109	112	113		
Comments						

*vapor samples are reported in µg/m³.

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

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

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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AEI Consultants	Client Project ID: #116907; Vic's Auto	Date Sampled: 10/31/12
		Date Received: 10/31/12
2500 Camino Diablo, Ste.#200	Client Contact: Stephen Lao	Date Extracted: 11/05/12-11/06/12
Walnut Creek, CA 94597	Client P.O.: #WC083821	Date Analyzed: 11/05/12-11/06/12

Leak Check Compound*

Extraction method: TO15 Analytical methods: TO15 Work Order: 1210992

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Isopropyl Alcohol	DF	% SS	Comments
001A	GP-1	Soil Gas	12.40	24.70	ND	1	N/A	
002A	GP-2	Soil Gas	12.74	25.39	ND	1	N/A	
003A	GP-5	Soil Gas	12.86	25.62	ND	1	N/A	
004A	GP-6	Soil Gas	11.79	23.49	ND	1	N/A	
005A	GP-7	Soil Gas	12.57	25.06	ND	1	N/A	
006A	GP-8	Soil Gas	12.66	25.27	ND	1	N/A	
007A	GP-9	Soil Gas	11.76	23.42	ND	1	N/A	
008A	GP-9-Dup	Soil Gas	12.37	24.64	ND	1	N/A	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	SoilGas	psia	psia	50	µg/m³

* leak check compound is reported in µg/m³.

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

The (liquid) Leak Check reference is:

DTSC, Advisory-Active Soil Gas Investigations, April 2012, page 17, section 4.2.2.1:

"The laboratory reports should quantify and annotate all detections of the leak check compound at the reporting limit of the target analytes."

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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QC SUMMARY REPORT FOR ASTM D 1946-90

W.O. Sample Matrix: SoilGas | QC Matrix: SoilGas | BatchID: 72329 | WorkOrder: 1210992

EPA Method: ASTM D 1946-90 **Extraction: ASTM D 1946-90** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µL/L	µL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Carbon Dioxide	N/A	100	N/A	N/A	N/A	93	N/A	N/A	70 - 130
Methane	N/A	100	N/A	N/A	N/A	79.8	N/A	N/A	70 - 130
Nitrogen	N/A	26000	N/A	N/A	N/A	96.1	N/A	N/A	70 - 130
Oxygen	N/A	7000	N/A	N/A	N/A	97.9	N/A	N/A	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 72329 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210992-001A	10/31/12 10:15 AM	11/08/12	11/08/12 3:37 PM	1210992-001A	10/31/12 10:15 AM	11/12/12	11/12/12 11:55 AM
1210992-001A	10/31/12 10:15 AM	11/13/12	11/13/12 1:46 PM	1210992-002A	10/31/12 11:00 AM	11/08/12	11/08/12 5:23 PM
1210992-002A	10/31/12 11:00 AM	11/12/12	11/12/12 1:37 PM	1210992-002A	10/31/12 11:00 AM	11/13/12	11/13/12 2:19 PM
1210992-003A	10/31/12 7:15 AM	11/08/12	11/08/12 2:17 PM	1210992-003A	10/31/12 7:15 AM	11/12/12	11/12/12 3:15 PM
1210992-003A	10/31/12 7:15 AM	11/13/12	11/13/12 3:06 PM	1210992-004A	10/31/12 8:00 AM	11/02/12	11/02/12 6:12 PM
1210992-004A	10/31/12 8:00 AM	11/12/12	11/12/12 2:26 PM	1210992-004A	10/31/12 8:00 AM	11/13/12	11/13/12 3:18 PM
1210992-005A	10/31/12 8:45 AM	11/08/12	11/08/12 3:48 PM	1210992-005A	10/31/12 8:45 AM	11/12/12	11/12/12 2:51 PM
1210992-005A	10/31/12 8:45 AM	11/13/12	11/13/12 2:52 PM	1210992-006A	10/31/12 9:30 AM	11/08/12	11/08/12 3:04 PM
1210992-006A	10/31/12 9:30 AM	11/12/12	11/12/12 2:02 PM	1210992-006A	10/31/12 9:30 AM	11/13/12	11/13/12 2:40 PM
1210992-008A	10/31/12 11:45 AM	11/08/12	11/08/12 4:09 PM	1210992-008A	10/31/12 11:45 AM	11/12/12	11/12/12 12:20 PM
1210992-008A	10/31/12 11:45 AM	11/13/12	11/13/12 1:58 PM				

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

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

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

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

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

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QA/QC Officer

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QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas | QC Matrix: Soilgas | BatchID: 72249 | WorkOrder: 1210992

EPA Method: TO15 | **Extraction: TO15** | **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Acrylonitrile	N/A	25	N/A	N/A	N/A	90.3	N/A	N/A	60 - 140
tert-Amyl methyl ether (TAME)	N/A	25	N/A	N/A	N/A	92.5	N/A	N/A	60 - 140
Benzene	N/A	25	N/A	N/A	N/A	90.5	N/A	N/A	60 - 140
Benzyl chloride	N/A	25	N/A	N/A	N/A	125	N/A	N/A	60 - 140
Bromodichloromethane	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
Bromoform	N/A	25	N/A	N/A	N/A	120	N/A	N/A	60 - 140
t-Butyl alcohol (TBA)	N/A	25	N/A	N/A	N/A	110	N/A	N/A	60 - 140
Carbon Disulfide	N/A	25	N/A	N/A	N/A	104	N/A	N/A	60 - 140
Carbon Tetrachloride	N/A	25	N/A	N/A	N/A	120	N/A	N/A	60 - 140
Chlorobenzene	N/A	25	N/A	N/A	N/A	93.4	N/A	N/A	60 - 140
Chloroethane	N/A	25	N/A	N/A	N/A	117	N/A	N/A	60 - 140
Chloroform	N/A	25	N/A	N/A	N/A	91.5	N/A	N/A	60 - 140
Chloromethane	N/A	25	N/A	N/A	N/A	111	N/A	N/A	60 - 140
Dibromochloromethane	N/A	25	N/A	N/A	N/A	113	N/A	N/A	60 - 140
1,2-Dibromo-3-chloropropane	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	94.4	N/A	N/A	60 - 140
1,2-Dichlorobenzene	N/A	25	N/A	N/A	N/A	96.2	N/A	N/A	60 - 140
1,3-Dichlorobenzene	N/A	25	N/A	N/A	N/A	97.5	N/A	N/A	60 - 140
1,4-Dichlorobenzene	N/A	25	N/A	N/A	N/A	94.1	N/A	N/A	60 - 140
Dichlorodifluoromethane	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140
1,1-Dichloroethane	N/A	25	N/A	N/A	N/A	86	N/A	N/A	60 - 140
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	87.6	N/A	N/A	60 - 140
1,1-Dichloroethene	N/A	25	N/A	N/A	N/A	99.1	N/A	N/A	60 - 140
cis-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	96.9	N/A	N/A	60 - 140
trans-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	96.1	N/A	N/A	60 - 140
1,2-Dichloropropane	N/A	25	N/A	N/A	N/A	89.3	N/A	N/A	60 - 140
cis-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	105	N/A	N/A	60 - 140
trans-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	101	N/A	N/A	60 - 140
1,2-Dichloro-1,1,2,2-tetrafluoroethane	N/A	25	N/A	N/A	N/A	105	N/A	N/A	60 - 140
Diisopropyl ether (DIPE)	N/A	25	N/A	N/A	N/A	96.7	N/A	N/A	60 - 140
1,4-Dioxane	N/A	25	N/A	N/A	N/A	99.5	N/A	N/A	60 - 140

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas | QC Matrix: Soilgas | BatchID: 72249 | WorkOrder: 1210992

EPA Method: TO15 | **Extraction: TO15** | **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
Ethyl acetate	N/A	25	N/A	N/A	N/A	84.9	N/A	N/A	60 - 140
Ethyl tert-butyl ether (ETBE)	N/A	25	N/A	N/A	N/A	97.6	N/A	N/A	60 - 140
Ethylbenzene	N/A	25	N/A	N/A	N/A	89.5	N/A	N/A	60 - 140
Freon 113	N/A	25	N/A	N/A	N/A	99.5	N/A	N/A	60 - 140
Hexachlorobutadiene	N/A	25	N/A	N/A	N/A	89.5	N/A	N/A	60 - 140
Isopropyl Alcohol	N/A	0	N/A	N/A	N/A	F2	N/A	N/A	-
4-Methyl-2-pentanone (MIBK)	N/A	25	N/A	N/A	N/A	78.1	N/A	N/A	60 - 140
Methyl-t-butyl ether (MTBE)	N/A	25	N/A	N/A	N/A	114	N/A	N/A	60 - 140
Methylene chloride	N/A	25	N/A	N/A	N/A	97.8	N/A	N/A	60 - 140
Naphthalene	N/A	25	N/A	N/A	N/A	76.2	N/A	N/A	60 - 140
Styrene	N/A	25	N/A	N/A	N/A	92.2	N/A	N/A	60 - 140
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	108	N/A	N/A	60 - 140
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	88.8	N/A	N/A	60 - 140
Tetrachloroethene	N/A	25	N/A	N/A	N/A	113	N/A	N/A	60 - 140
Tetrahydrofuran	N/A	25	N/A	N/A	N/A	78.8	N/A	N/A	60 - 140
Toluene	N/A	25	N/A	N/A	N/A	103	N/A	N/A	60 - 140
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	94.9	N/A	N/A	60 - 140
1,1,1-Trichloroethane	N/A	25	N/A	N/A	N/A	102	N/A	N/A	60 - 140
1,1,2-Trichloroethane	N/A	25	N/A	N/A	N/A	91.5	N/A	N/A	60 - 140
Trichloroethene	N/A	25	N/A	N/A	N/A	99.3	N/A	N/A	60 - 140
1,2,4-Trimethylbenzene	N/A	25	N/A	N/A	N/A	95.8	N/A	N/A	60 - 140
1,3,5-Trimethylbenzene	N/A	25	N/A	N/A	N/A	87.5	N/A	N/A	60 - 140
Vinyl Chloride	N/A	25	N/A	N/A	N/A	93	N/A	N/A	60 - 140
%SS1:	N/A	500	N/A	N/A	N/A	125	N/A	N/A	60 - 140
%SS2:	N/A	500	N/A	N/A	N/A	124	N/A	N/A	60 - 140
%SS3:	N/A	500	N/A	N/A	N/A	107	N/A	N/A	60 - 140

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

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

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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

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QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soilgas | QC Matrix: Soilgas | BatchID: 72249 | WorkOrder: 1210992

EPA Method: TO15 | **Extraction: TO15** | **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS

BATCH 72249 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1210992-001A	10/31/12 10:15 AM	11/05/12	11/05/12 8:08 PM	1210992-002A	10/31/12 11:00 AM	11/05/12	11/05/12 8:50 PM
1210992-003A	10/31/12 7:15 AM	11/05/12	11/05/12 9:38 PM	1210992-004A	10/31/12 8:00 AM	11/05/12	11/05/12 10:26 PM
1210992-005A	10/31/12 8:45 AM	11/05/12	11/05/12 11:13 PM	1210992-006A	10/31/12 9:30 AM	11/05/12	11/05/12 11:53 PM
1210992-007A	10/31/12 6:30 AM	11/06/12	11/06/12 12:35 AM	1210992-008A	10/31/12 11:45 AM	11/06/12	11/06/12 1:21 AM

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

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

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

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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

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