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PO Box 59, Sonoma, CA 95476
Phone: (707) 235-9979
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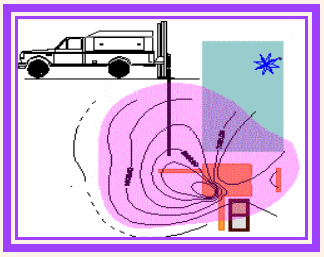


RECEIVED
By DEHLOPTOXIC at 9:21 am, Jul 05, 2006

February 18, 2006

Barney M. Chan
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-9335

Telephone: (510) 567-6765
FAX: (510) 337-9335

Subject: Field Investigation Report for Indoor Air and Soil Gas Sampling of Hydrocarbons related to the Former Underground Storage Tanks at the FORMER BILL CHUN SERVICE STATION @ 2301 SANTA CLARA AVENUE, ALAMEDA, CA 94501

Dear Barney:

The following technical report summarizes the collection of indoor air and subsurface soil gas samples within the investigation area from beneath the existing flower shop, in the vicinity of the highest concentrations of benzene identified in soil and groundwater during recent subsurface investigations (See Attached Figures 1 & 2). The proposed indoor air sampling locations were based on a preliminary building inspection performed on October 17, 2005. This soil gas and indoor air sampling was required by Alameda County Environmental Health (See ACEHD correspondences dated April 19 and August 12, 2005). The "INTERIM FINAL GUIDANCE FOR THE EVALUATION AND MITIGATION OF SUBSURFACE VAPOR INTRUSION TO INDOOR AIR, Department of Toxic Substances Control, California Environmental Protection Agency, December 15, 2004, (Revised February 7, 2005)" was applied as a guide for the investigation and evaluation completed. A site visit was initially conducted on January 28, 2006 to perform a soil gas screening inside the building with Draeger tubes using a handheld UltraRAE digital readout meter on both floors of the flower shop building and in the greenhouse. At that time, five (5) Summa canisters were placed inside the building to collect ambient air samples over a period of 48 hours. On January 30, 2006 the Summa canisters were collected and sent to a state certified laboratory. Also, five (5) soil gas sampling probes were installed to collect samples for analysis of gasoline related vapor contaminants by an onsite mobile laboratory.

Call me if you have any questions.
Sincerely,

Franklin J. Goldman

Franklin J. Goldman
Certified Hydrogeologist No. 466

REGISTERED GEOLOGIST
FRANKLIN J. GOLDMAN
CERTIFIED HYDROGEOLOGIST
NO. 466
STATE OF CALIFORNIA

INDOOR AIR SAMPLING

Fifteen (15) indoor air screening samples were collected based upon the potential conduits identified during the initial building inspection with an UltraRAE on January 28, 2006. Prior to sampling, the air temperature inside the building on both floors was maintained above 65 degrees F and no ventilation appeared to be necessary. All ventilation, inside the Flower Shop on the 1st floor and in the 2nd floor apartment, was closed off to eliminate dilution of air samples. The Summa Canister for Su-3 was placed in the Refrigeration Box used for Flower Storage because this was the location, over which, the highest concentrations of benzene in soil and groundwater was established during past subsurface investigations and monitoring. No benzene vapor was identified with the UltraRAE during this screening process. Immediately after screening, five (5) Summa canisters were then placed for sampling at the locations dispersed throughout the building and were allowed to passively collect air samples over a 48 hour period. On January 30, 2006 the five (5) Summa canisters were collected for lab analysis after verifying that the pressure gauge had dropped from 30 psi to 0 psi indicating that the calibrated valves had run their course in collecting air and vapor in the immediate vicinity. The valves on the canisters were closed and they were shipped to a State certified laboratory for vapor analysis for VOCs by EPA Method TO-14A (See Figures 1 and 2 for Indoor Air Sampling Locations) & (Appendix A for Laboratory Data Sheets for Summa Canister Sampling).

TABLE OF INDOOR AIR SAMPLING LABORATORY RESULTS (ppbv) [FIVE, SIX (6) LITER CANISTERS FOR AMBIENT INDOOR AIR]

FIELD SAMPLE ID	SU4	SU5	SU1	SU3	SU2
LAB SAMPLE ID	AO60202 02-01	AO60202 02-02	AO60202 02-03	AO60202 02-04	AO60202 02-05
LOCATION	SECOND FLOOR APARTMENT KITCHEN	SECOND FLOOR APARTMENT LIVING ROOM	FIRST FLOOR FLOWER SHOP REAR WORK AREA	FIRST FLOOR FLOWER SHOP WALK-IN FLOWER COLD BOX	FIRST FLOOR FLOWER SHOP STREET ENTRANCE AREA
DATE	01-30 2006	01-30 2006	01-30 2006	01-30 2006	01-30 2006
TIME AFTER 48 HRS	01:05 PM	01:10 PM	02:00 PM	02:15 PM	02:10 PM
DICHLORODIFLUOROMETHANE	0.6	0.6	ND	ND	ND
CHLOROMETHANE	4.4	4.3	0.7	0.6	0.6
TRICHLOROFLUOROMETHANE	0.6	0.6	ND	ND	ND
METHYLENE CHLORIDE	82	53	0.7	ND	ND
1, 1, 1 TCA	0.6	ND	ND	ND	ND
BENZENE	2.5	2.3	ND	ND	ND

TOLUENE	5.5	5.6	1.3	1.2	1.3
ETHYLBENZENE	0.6	0.6	ND	ND	ND
XYLENE	1.8	1.9	0.6	0.6	0.6

Benzene vapors were not identified, and toluene was only identified at very low levels, in the flower shop. Benzene and Toluene were identified on the second floor, however, the resident's smoking of cigarettes may have skewed the results for these contaminants. In addition, there were no easily identifiable air flow pathways that extended from the first floor or subsurface to the second floor.

SOIL GAS SAMPLING

On January 30, 2006, five (5) soil gas samples were collected with an onsite Mobil Laboratory in the vicinity of the highest concentrations of benzene identified in soil during the installation of the six (6) groundwater extraction wells beginning in October 2002 and during the monitoring well installations constructed on the Towata property in May 2005, as well as within the dissolved benzene plume delineated in the most recent groundwater monitoring event in November 2005 (See Figure 1 for Soil Gas Sampling Locations and data obtained).

SOIL GAS SAMPLING PROTOCOL

Soil gas samples were collected with the aid of a Mobile Laboratory.

The following soil gas sampling protocol was as follows:

Five (5) semi-permanent vapor wells were installed to depths of between six (6) and 7.5 feet bgs with a direct push methodology of excavating. The vapor well sampling point was then constructed with a 1/4 inch polypropylene filter for a vapor implant that was packed with one foot of sand and sealed with bentonite that lead from the implant to the surface. A seal around the surface of the soil gas sampler was then made to prevent ambient air intrusion. The end of the tubing was then labeled with the vapor well number and depth and a quick connect fitting was then installed to eliminate ambient air diffusion into the well.

Purge testing was initially conducted on well point SG2 to evaluate the appropriate purge volume for the probes according to the DTSC/LARWQCB Advisory - Active Soil Gas Investigations protocol. Purge testing was then conducted at one (1), three (3), and seven (7) purge volumes. Each sample was purged at the volume that had identified the highest detected VOC concentration. Purge flow rates were set at 200 ml/min.

After purging, the samples were collected in 60 cubic centimeter plastic syringes. Surgical gloves were used when handling samples. The sample containers were protected from light exposure and were transferred to the mobile lab for direct injection into a gas chromatograph for analysis consistent with EPA Method 8260B. One blank sample was also run. A leak test was conducted at each soil vapor location by using a tracer (isobutane).

Reporting of Laboratory Results

The laboratory results were obtained by the mobile lab in the field (See Appendix B for Laboratory Data Sheets for Soil Gas Sampling from Mobile Laboratory) . The results are also shown for the chemicals of concern as listed in the following Table:

Table of Soil Gas Mobile Laboratory Results (µg/L)

Sample	SG2	SG2	SG2	SG3	SG4	SG2	SG5	SG1
Purge Volume	1	3	7	1	1	1	1	1
Depth	6'	6'	6'	6'	6'	7.5	6'	6'
Date	01-30 2006	01-30 2006	01-30 2006	01-30 2006	01-30 2006	01-30 2006	01-30 2006	01-30 2006
Time	10:12	10:34	10:53	11:22	12:16	12:39	13:04	13:53
Dilution Factor	1	1	1	25	1	1	1	1
Chloroform	ND	ND	ND	120	ND	ND	ND	ND
1, 2 DCA	ND	ND	ND	50	ND	ND	ND	ND
Benzene	ND	ND	ND	1,600	1.3	ND	ND	0.19
Toluene	0.29	0.27	0.23	1,600	1.7	0.22	0.35	0.54
Ethylbenzene	ND	ND	ND	57	0.17	ND	ND	ND
Xylene	0.26	0.28	0.26	179	0.66	0.17	0.25	0.26

The only significant level of VOCs identified in soil gas was measured in soil gas sample SG3. SG3 identified 1,600 µg/L of benzene and 1,500 µg/L of toluene soil gas. This location was chosen because it was in the immediate vicinity of extraction well EW-13 which identified 16,000 ppb of dissolved benzene during the 11-26-05 groundwater sampling and 45.9 ppm benzene in soil at a depth of 10 feet bgs during the 10-24-02 soil boring excavation of EW-13. This location represents the worst case scenario for the highest levels of gasoline constituents identified to date located in the immediate vicinity of the Flower shop.

Human Health Risk Evaluation Reporting

The human health risk assessment is based upon a one in a million cancer risk for a life time exposure scenario for a residence to represent a worst case scenario. The first floor of the Flower Shop is actually represented by a commercial worker scenario and the second floor apartment above the flower shop is a residence. The main chemicals of concern, benzene and toluene, were chosen based upon the know source contaminants (i.e. gasoline) and the concentrations identified in soil gas and indoor air. Human health risk assessment was based on the potential that the highest levels of benzene and toluene identified in the subsurface could migrate through the slab and into the flower shop as well as the low level of toluene in indoor air that was actually identified in the flower shop.

This preliminary evaluation of the health risk of benzene and toluene exposure applies generic attenuation factors (based on the generally conservative use of the Johnson-Ettinger mathematical model) that relates groundwater and soil gas target concentrations to such site-specific conditions as depth of contamination and soil type.

There is no known primary gasoline contamination source in the unsaturated zone under the Towata Flowers building. The only potential secondary sources of gasoline contamination are the dissolved groundwater contamination and possibly in the vadose zone within the zone of water table fluctuation (i.e. during the low water table) located beneath the east central portion of the building. Since the depth to water was recently measured at approximately eight (8) feet bgs, soil gas samples were collected between six (6) and 7 ½ feet bgs to capture the maximum concentration of gasoline vapors directly above the capillary fringe of the water table.

The underlying assumption of this generic model is that site-specific subsurface characteristics will tend to reduce or attenuate vapor concentrations as vapors migrate upward from the secondary source and into structures. The attenuation factors applied at this site were determined for a source that is six or more feet under the slab of the building, within a silty sand soil (e.g as identified in the Soil boring for EW-13 in 2002), through which the vapors can migrate.

The media-specific target concentrations are based on a generic conceptual model for vapor intrusion consisting of a groundwater and/or vadose zone source of volatile vapors that diffuse upwards through unsaturated soils towards the surface. Under the model, the soil in the vadose zone is considered to be relatively homogeneous and isotropic with layered soil types. The receptors at the surface used in the model are residents in buildings with poured concrete foundations (e.g., basement or slab on grade foundation).

Various site specific assumptions were made which can influence this estimate of the concentrations which could potentially enter the building. The building has double slab with total thickness of eight (8) inches. No visible cracks or other damage was observed in the upper slab inside the building. In addition to that, the flower shop refrigeration box, beneath which the highest soil gas concentrations were identified, sits directly over the highest concentrations of the groundwater and soil contamination plumes. The reduced subsurface temperature beneath this cold box may also affect the volatilization and migration of the chemicals from the soil to indoor air. Finally, since the building is very old, and fill soils and rubble have been encountered in subsurface soil excavations, there may be numerous migratory pathways not yet accounted for. Since these factors cannot be reasonably accommodated without the generic model and unless excessive direct sampling is employed, ambient air sampling was performed, as a one time representation of the indoor vapors which actually exist as a result of migration of contaminants to indoor air or from some other source(s).

EPA has established a target soil gas concentration which corresponds to an acceptable target indoor air concentration at an attenuation factor of 0.001 as well as a target groundwater concentration at an attenuation factor of 0.01 (Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). The following table shows that the highest BTEX concentrations measured in soil and groundwater have the potential, in a worst case scenario, to migrate into indoor air.

Generic Screening Levels and Summary Sheet Risk = 1 x 10^{-6}

Chemical	Target Deep Soil Gas Concentration Corresponding to Target Indoor Air Concentration Where the Soil Gas to Indoor Air Attenuation Factor=0.01 [ppbv]	Actual Measurement of soil-gas concentrations in Soil Gas Probe SG3 on 01-30-06 Located in the Cold Box of the Flower Shop [ppbv]	Target Groundwater Concentration Corresponding to Target Indoor Air Concentration Where the Soil Gas to Indoor Air Attenuation Factor = 0.001 [µg/L]	Actual Measurement of concentrations of gasoline in groundwater in Extraction Well EW-13 on 11-26-05 [µg/L]
benzene	9.8	493,000	50	16,000
ethylbenzene	51	11,547	700	4,600
toluene	1,100	416,802	1,500	49,000
xylene	160,000	40,528	22,000	26,400

The measured concentrations for benzene, ethylbenzene and toluene as soil gas and as dissolved groundwater contamination exceed the acceptable target concentrations for indoor air quality.

The actual concentrations of gasoline vapor as measured inside the 1st floor of the Flower Shop did not identify high concentrations of these vapor constituents as estimated in the aforementioned table.

Indoor air sampling Risk = 1 x 10^{-6}

Chemical	Target indoor concentration (10^{-4},10^{-5},10^{-6}) risk factor) From Table 2c of the EPA Vapor Intrusion Manual	Sample Su1 1st Floor	Sample Su2 1st Floor Located in the Cold Box of the Flower Shop	Sample Su3 1st Floor	Sample Su4 2nd Floor	Sample Su-5 2nd Floor
	[ppbv]	[ppbv]	[ppbv]	[ppbv]	[ppbv]	[ppbv]
Benzene	(9.8, 0.98, 0.098)	ND	ND	ND	2.5	2.3
Toluene	(110, 11, 1.1)	1.3	1.3	1.2	5.5	5.6
Methylene Chloride	(150, 15, 1.5)	0.7	0.6	ND	82	53
Ethylbenzene	(51, 5.1, 0.51)	ND	ND	ND	0.6	0.6
Xylene	1600, 160, 16	0.6	0.6	0.6	1.8	1.9

The actual concentration of benzene was ND on the 1st floor, inside the Flower Shop, and therefore do not indicate a health risk from this chemical of concern at this time.

According to"INTERIM FINAL GUIDANCE FOR THE EVALUATION AND MITIGATION OF SUBSURFACE VAPOR INTRUSION TO INDOOR AIR, Department of Toxic Substances Control, California Environmental Protection Agency, December 15, 2004, (Revised February 7, 2005)," page 29, a table shows the actions that should be taken if indoor air concentrations for toluene fall between 10^{-5} [a] and 10^{-6}**. Since the actual concentration of toluene was 1.3 ppbv on the 1st floor, inside the Flower Shop, the risk falls between 1.1 and 11 ppbv. This suggest that the 1.3 ppbv concentration of toluene which falls between these two values should technically warrant the installation of permanent sub-slab monitoring points after two completed indoor air sampling events. At this point, however, only one indoor air sampling event has been performed, and the concentration measured is so close to the** 10^{-6} **cancer risk that this action is not warranted at this time.**

As measured on the 2nd floor, the health risk for Benzene @ 2.5 ppbv >10^{-5} **, for Toluene @ 5.6 ppbv >** 10^{-6}**, for Methylene Chloride @ 82 ppbv >** 10^{-5}**, and for Ethylbenzene @ 0.6 ppbv >** 10^{-6}**. The vapor concentrations identified in the second floor residence were found to be higher than the acceptable carcinogenic risk, however, it is not clear if the contamination in the subsurface is actually the source of the constituents identified. Since measured vapor concentrations were higher in the 2nd floor than in the 1st floor, further away from the secondary source, other scenarios which may account for another source or pathway may exist.**

One explanation for the presence of contaminants on the 2nd floor were that they may have emanated from the cigarette smoke generated by the residents. According to item H of page 11 of "DRAFT GUIDANCE FOR EVALUATING THE VAPOR INTRUSION TO INDOOR AIR PATHWAY FROM GROUNDWATER AND SOILS, (Subsurface Vapor Intrusion Guidance)," it states,

"In addition, human activities (e.g., smoking, craft hobbies) or consumer products (e.g., cleaners, paints, and glues) typically found in the home provide additional indoor vapor emission sources that can contribute to increased indoor air concentrations of some chemicals.**" On page 33 of "INTERIM FINAL GUIDANCE FOR THE EVALUATION AND MITIGATION OF SUBSURFACE VAPOR INTRUSION TO INDOOR AIR, Department of Toxic Substances Control, California Environmental Protection Agency, December 15, 2004, (Revised February 7, 2005)," it states, "**The following should be recorded 24 hours prior to sampling:.....Smoke (note distance to outdoor smoking area from building entrance)."

Another explanation is that since gasoline vapors rise, more soil gas vapor may collect in the second floor over time. Another rationale could be that a unique pathway exists that was not accounted for; or that other household chemicals may have been present on the second floor, that were not observed during the field inspection.

CONCLUSIONS

Benzene and toluene vapors could migrate into the work area of the Flower shop, however, the actual vapors measured inside the 1st floor are negligible. Gasoline related vapors identified in the second floor apartment do not appear to be associated with the subsurface contamination based upon the data collected to date. Benzene and toluene vapors identified in soil gas are most significant in the locations identified in the past where these same constituents were identified at their highest levels in soil and groundwater.

RECOMMENDATIONS

Begin groundwater extraction and treatment to reduce the potential for indoor vapor accumulation. Specifically, the groundwater extraction wells, such as EW-13, must be made operational to remove the highest concentrations benzene and toluene identified in groundwater at the Chun property. Continue groundwater monitoring, especially down-gradient.

LIMITATIONS

This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analyses, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of the investigation and they are subject to change.

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. Franklin J. Goldman, recognizes that the limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs, or requirements of other state agencies, or of other users. Any use or reuse of this document or its findings, conclusions or recommendations presented herein, is done so at the sole risk of the said user.

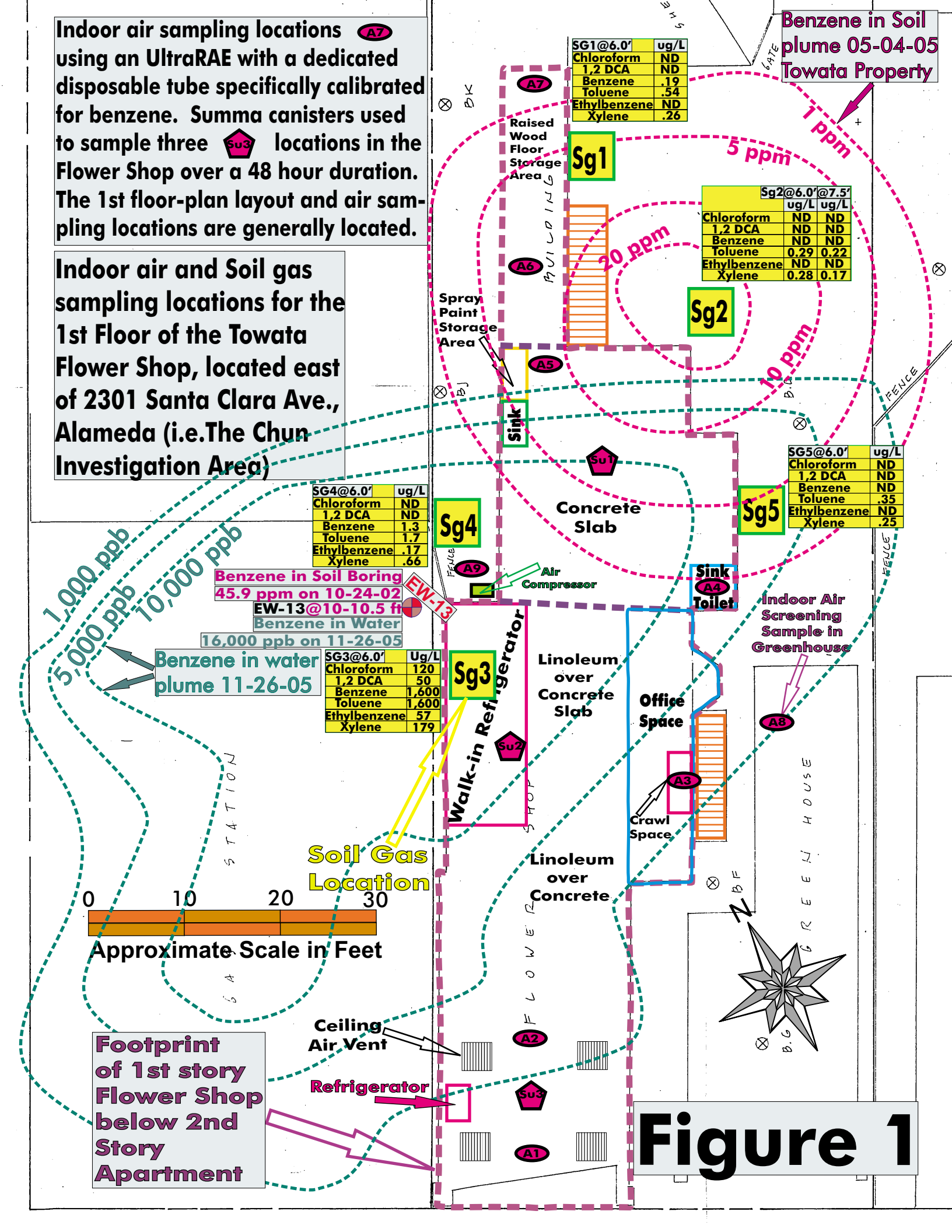
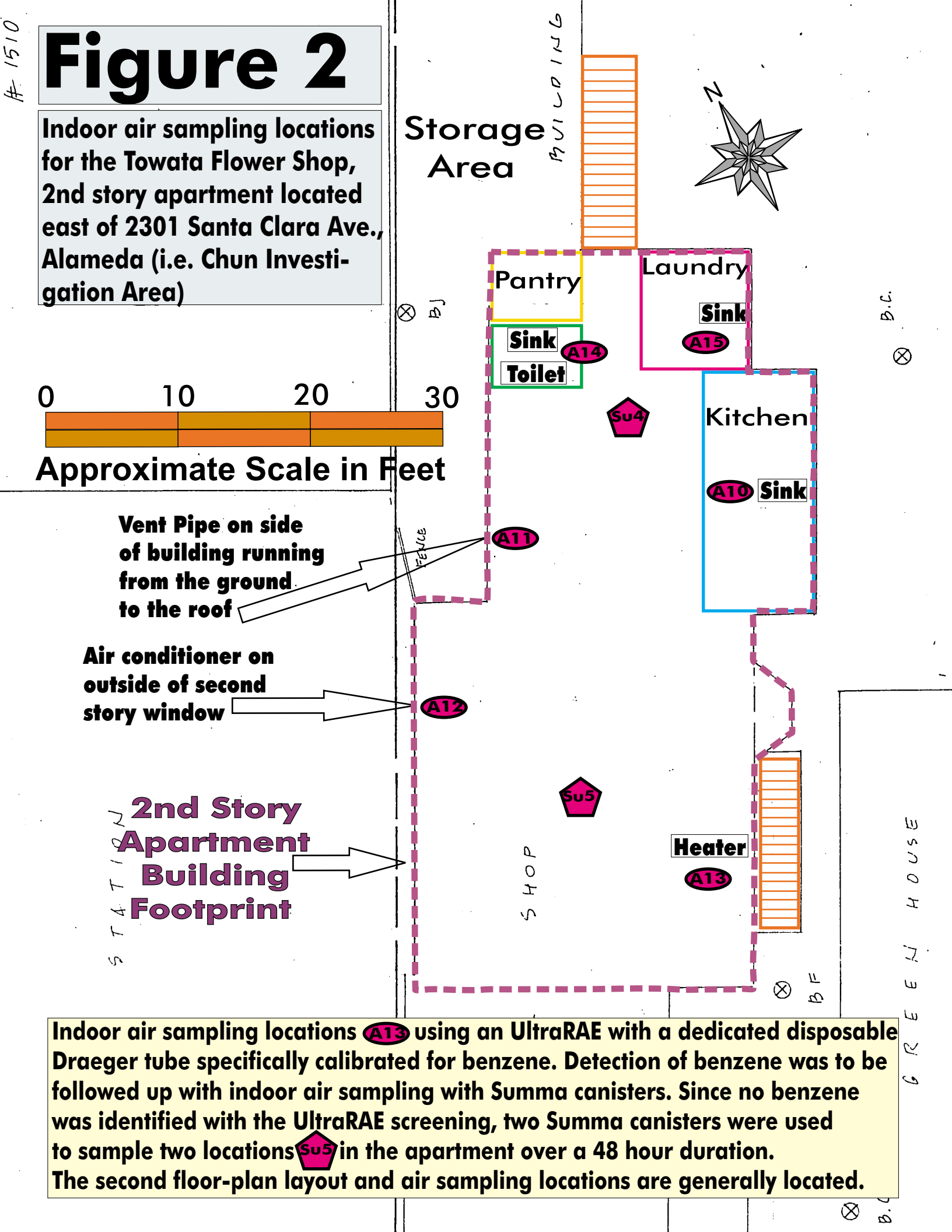

Indoor air sampling locations A7 using an UltraRAE with a dedicated disposable tube specifically calibrated for benzene. Summa canisters used to sample three Su3 locations in the Flower Shop over a 48 hour duration. The 1st floor-plan layout and air sampling locations are generally located.
Indoor air and Soil gas sampling locations for the 1st Floor of the Towata Flower Shop, located east of 2301 Santa Clara Ave., Alameda (i.e.The Chun Investigation Area)
Benzene in Soil plume 05-04-05 Towata Property
1 ppm
5 ppm
10 ppm
20 ppm
1,000 ppb
5,000 ppb
10,000 ppb
SG1@6.0' ug/L
Chloroform ND
1,2 DCA ND
Benzene .19
Toluene .54
Ethylbenzene ND
Xylene .26
Sg1
Raised Wood Floor Storage Area
Sg2@6.0' @7.5'
ug/L ug/L
Chloroform ND ND
1,2 DCA ND ND
Benzene ND ND
Toluene 0.29 0.22
Ethylbenzene ND ND
Xylene 0.28 0.17
Sg2
Spray Paint Storage Area
Sink
Su1
SG5@6.0' ug/L
Chloroform ND
1,2 DCA ND
Benzene ND
Toluene .35
Ethylbenzene ND
Xylene .25
Sg5
SG4@6.0' ug/L
Chloroform ND
1,2 DCA ND
Benzene 1.3
Toluene 1.7
Ethylbenzene .17
Xylene .66
Sg4
Concrete Slab
Benzene in Soil Boring
45.9 ppm on 10-24-02
EW-13@10-10.5 ft
Benzene in Water
16,000 ppb on 11-26-05
EW-13
Air Compressor
Sink
Toilet
Indoor Air Screening Sample in Greenhouse
Benzene in water plume 11-26-05
SG3@6.0' Ug/L
Chloroform 120
1,2 DCA 50
Benzene 1,600
Toluene 1,600
Ethylbenzene 57
Xylene 179
Sg3
Walk-in Refrigerator
Linoleum over Concrete Slab
Office Space
Crawl Space
Linoleum over Concrete
Soil Gas Location
0 10 20 30
Approximate Scale in Feet
Ceiling Air Vent
Refrigerator
Footprint of 1st story Flower Shop below 2nd Story Apartment
Figure 1

Figure 2

Indoor air sampling locations for the Towata Flower Shop, 2nd story apartment located east of 2301 Santa Clara Ave., Alameda (i.e. Chun Investigation Area)



Indoor air sampling locations A13 using an UltraRAE with a dedicated disposable Draeger tube specifically calibrated for benzene. Detection of benzene was to be followed up with indoor air sampling with Summa canisters. Since no benzene was identified with the UltraRAE screening, two Summa canisters were used to sample two locations Su5 in the apartment over a 48 hour duration. The second floor-plan layout and air sampling locations are generally located.

Appendix A

Laboratory Data Sheets for Summa Canister Sampling

Ace Laboratories, Inc.

February 8, 2006

Viorel Vasile
American Analytics
9765 Eton Ave.
Chatsworth, CA 91311

RE: A57213

Dear Viorel:

The following report includes analytical results for samples received on February 2, 2006. The samples were received under chain of custody, intact and in good condition. Ace Laboratories, Inc is certified by the State of New York ELAP, Cert.# 11849, for the analytes listed in Appendix A. All analyses were performed following quality control requirements of Ace Laboratories, Inc., and each analytical method. For your convenience, your project has been assigned Analytical Request number A06020202. Please let us know if there is any additional information you may need.

Sincerely,

Stuart Sigman
Project Chemist

2985 E. Hillcrest Drive #105, Thousand Oaks, CA 91362 Phone: (805) 750-9024

Ace Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-01
	Lab ID	A06020202-01
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Dichlorodifluoromethane	0.5	0.6
Chloromethane	0.5	4.4
Dichlorotetrafluoroethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	0.6
1,1-Dichloroethene	0.5	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.5	ND
Methylene Chloride	0.5	82 *
1,1-Dichloroethane	0.5	ND
cis-1,2-Dichloroethene	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	0.6
1,2-Dichloroethane	0.5	ND
Benzene	0.5	2.5
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
Toluene	0.5	5.5
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
1,2-Dibromoethane	0.5	ND
Chlorobenzene	0.5	ND
Ethylbenzene	0.5	0.6
m,p-Xylene	0.5	1.8
o-Xylene	0.5	ND

Ace Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-01
	Lab ID	A06020202-01
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Styrene	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3,5-Trimethylbenzene	0.5	ND
1,2,4-Trimethylbenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,2,4-Trichlorobenzene	0.5	ND
Hexachlorobutadiene	0.5	ND

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit
* The dilution factor is 4 for this compound.

Approved By: _____ **Date:** 2/8/06

003

Ace Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-02
	Lab ID	A06020202-02
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Dichlorodifluoromethane	0.5	0.6
Chloromethane	0.5	4.3
Dichlorotetrafluoroethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	0.6
1,1-Dichloroethene	0.5	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.5	ND
Methylene Chloride	0.5	53 *
1,1-Dichloroethane	0.5	ND
cis-1,2-Dichloroethene	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
1,2-Dichloroethane	0.5	ND
Benzene	0.5	2.3
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
Toluene	0.5	5.6
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
1,2-Dibromoethane	0.5	ND
Chlorobenzene	0.5	ND
Ethylbenzene	0.5	0.6
m,p-Xylene	0.5	1.9
o-Xylene	0.5	ND

Ace Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
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VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-02
	Lab ID	A06020202-02
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Styrene	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3,5-Trimethylbenzene	0.5	ND
1,2,4-Trimethylbenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,2,4-Trichlorobenzene	0.5	ND
Hexachlorobutadiene	0.5	ND

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit
* The dilution factor is 4 for this compound.

Approved By: _____ **Date:** 2/8/06

Ace Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-03
	Lab ID	A06020202-03
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	0.7
Dichlorotetrafluoroethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.5	ND
Methylene Chloride	0.5	0.7
1,1-Dichloroethane	0.5	ND
cis-1,2-Dichloroethene	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
1,2-Dichloroethane	0.5	ND
Benzene	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
Toluene	0.5	1.3
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
1,2-Dibromoethane	0.5	ND
Chlorobenzene	0.5	ND
Ethylbenzene	0.5	ND
m,p-Xylene	0.5	0.6
o-Xylene	0.5	ND

Ace Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-03
	Lab ID	A06020202-03
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Styrene	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3,5-Trimethylbenzene	0.5	ND
1,2,4-Trimethylbenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,2,4-Trichlorobenzene	0.5	ND
Hexachlorobutadiene	0.5	ND

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit

Approved By: _____ **Date:** 2/8/06

007

ce Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-04
	Lab ID	A06020202-04
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	0.6
Dichlorotetrafluoroethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.5	ND
Methylene Chloride	0.5	ND
1,1-Dichloroethane	0.5	ND
cis-1,2-Dichloroethene	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
1,2-Dichloroethane	0.5	ND
Benzene	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
Toluene	0.5	1.2
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
1,2-Dibromoethane	0.5	ND
Chlorobenzene	0.5	ND
Ethylbenzene	0.5	ND
m,p-Xylene	0.5	0.6
o-Xylene	0.5	ND

Ace Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-04
	Lab ID	A06020202-04
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Styrene	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3,5-Trimethylbenzene	0.5	ND
1,2,4-Trimethylbenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,2,4-Trichlorobenzene	0.5	ND
Hexachlorobutadiene	0.5	ND

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit

Approved By: _____ **Date:** 2/8/06

Ace Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-05
	Lab ID	A06020202-05
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	0.6
Dichlorotetrafluoroethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.5	ND
Methylene Chloride	0.5	0.6
1,1-Dichloroethane	0.5	ND
cis-1,2-Dichloroethene	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
1,2-Dichloroethane	0.5	ND
Benzene	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
Toluene	0.5	1.3
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
1,2-Dibromoethane	0.5	ND
Chlorobenzene	0.5	ND
Ethylbenzene	0.5	ND
m,p-Xylene	0.5	0.6
o-Xylene	0.5	ND

Ace Laboratories, Inc.

Analytical Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

	Client ID	6A31001-05
	Lab ID	A06020202-05
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Styrene	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3,5-Trimethylbenzene	0.5	ND
1,2,4-Trimethylbenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,2,4-Trichlorobenzene	0.5	ND
Hexachlorobutadiene	0.5	ND

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit

Approved By: _____ **Date:** 2/8/06

Ace Laboratories, Inc.

Quality Control / Quality Assurance Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: NA
Date Received: NA

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

		Method Blank
	Lab ID	A0204-MB
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Dichlorodifluoromethane	0.5	ND
Chloromethane	0.5	ND
Dichlorotetrafluoroethane	0.5	ND
Vinyl Chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.5	ND
Methylene Chloride	0.5	ND
1,1-Dichloroethane	0.5	ND
cis-1,2-Dichloroethene	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
1,2-Dichloroethane	0.5	ND
Benzene	0.5	ND
Carbon Tetrachloride	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
Toluene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
1,2-Dibromoethane	0.5	ND
Chlorobenzene	0.5	ND
Ethylbenzene	0.5	ND
m,p-Xylene	0.5	ND
o-Xylene	0.5	ND

Ace Laboratories, Inc.

Quality Control / Quality Assurance Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: NA
Date Received: NA

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

		Method Blank
	Lab ID	A0204-MB
	Date Analyzed	2/4/06
	Dilution Factor	1
Analyte	**MRL**	
Styrene	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3,5-Trimethylbenzene	0.5	ND
1,2,4-Trimethylbenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,2,4-Trichlorobenzene	0.5	ND
Hexachlorobutadiene	0.5	ND

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit

Approved By: _____ **Date:** 2/8/06

Ace Laboratories, Inc.

Quality Control / Quality Assurance Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06020202
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

		Sample	Duplicate	
	Client ID	6A31001-05	6A31001-05	
	Lab ID	A06020202-05	A06020202-05D	
	Date Analyzed	2/4/06	2/4/06	
	Dilution Factor	1	1	
Analyte	**MRL**			**RPD**
Dichlorodifluoromethane	0.5	ND	ND	NA
Chloromethane	0.5	0.62	0.65	5
Dichlorotetrafluoroethane	0.5	ND	ND	NA
Vinyl Chloride	0.5	ND	ND	NA
Bromomethane	0.5	ND	ND	NA
Chloroethane	0.5	ND	ND	NA
Trichlorofluoromethane	0.5	ND	ND	NA
1,1-Dichloroethene	0.5	ND	ND	NA
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.5	ND	ND	NA
Methylene Chloride	0.5	0.57	0.54	5
1,1-Dichloroethane	0.5	ND	ND	NA
cis-1,2-Dichloroethene	0.5	ND	ND	NA
Chloroform	0.5	ND	ND	NA
1,1,1-Trichloroethane	0.5	ND	ND	NA
1,2-Dichloroethane	0.5	ND	ND	NA
Benzene	0.5	ND	ND	NA
Carbon Tetrachloride	0.5	ND	ND	NA
Trichloroethene	0.5	ND	ND	NA
1,2-Dichloropropane	0.5	ND	ND	NA
cis-1,3-Dichloropropene	0.5	ND	ND	NA
trans-1,3-Dichloropropene	0.5	ND	ND	NA
Toluene	0.5	1.26	1.28	2
1,1,2-Trichloroethane	0.5	ND	ND	NA
Tetrachloroethene	0.5	ND	ND	NA
1,2-Dibromoethane	0.5	ND	ND	NA
Chlorobenzene	0.5	ND	ND	NA
Ethylbenzene	0.5	ND	ND	NA
m,p-Xylene	0.5	0.58	0.57	2
o-Xylene	0.5	ND	ND	NA

Ace Laboratories, Inc.

Quality Control / Quality Assurance Report

Client: American Analytics
Project Name: A57213
Project #: NA
Matrix: Air

ALI AR#: A06011701
Date Collected: 1/30/06
Date Received: 2/2/06

VOCs By GC/MS
EPA Method TO-14A
Units: ppbv

		Sample	Duplicate	
	Client ID	6A31001-05	6A31001-05	
	Lab ID	A06020202-05	A06020202-05D	
	Date Analyzed	2/4/06	2/4/06	
	Dilution Factor	1	1	
Analyte	**MRL**			**RPD**
Styrene	0.5	ND	ND	NA
1,1,2,2-Tetrachloroethane	0.5	ND	ND	NA
1,3,5-Trimethylbenzene	0.5	ND	ND	NA
1,2,4-Trimethylbenzene	0.5	ND	ND	NA
1,3-Dichlorobenzene	0.5	ND	ND	NA
1,4-Dichlorobenzene	0.5	ND	ND	NA
1,2-Dichlorobenzene	0.5	ND	ND	NA
1,2,4-Trichlorobenzene	0.5	ND	ND	NA
Hexachlorobutadiene	0.5	ND	ND	NA

MRL Method Reporting Limit
ND Non Detect at or above the Method Reporting Limit

Approved By: _____ **Date:** 2/8/06

Ace Labs

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

№ 309480
DATE: 02/02/06
PAGE 1 OF 1

~~AA~~ Client: AMERICAN ANALYTICS		Phone	Sampler's Name (Print)
Project Manager: Viorel Vasile		P.O. No. SUB00830- A57213	Sampler's Signature
Project Name: A57213		Client's Project No.	Project Manager's Signature
Job Name and Address			

Client's I.D.	AAL e I.D.#	Date	Time	Sample Type	Number of Containers
GA31001-01	A060202L02-01	1/30/06	1015		
-02	-02		1020		
-03	-03		1115		
-04	-04		1125		
-05	-05		1245		

ANALYSIS REQUIRED (Test Name)

ERA TO14A	Client's Comment Special Test Requirements / Comments (i.e., - Turnaround Time, Detection Limits, Data Package...)
X	Ambient (Indoor) air
X	
X	
X	
X	

FEB 2 13:42:59

LAB COMMENTS	Relinquished by:	Date	Time	Received by:
	Viorel Vasile	02/02/06	1355	1355
	Relinquished by:	Date	Time	Received by:
Approved as Work Order by: Print Name Signature Date/Time	Relinquished by:	Date	Time	Received by:
AA Project No.	Relinquished by:	Date	Time	Received by:

DISTRIBUTION: Page 1, White - Laboratory Page 2, Yellow - Laboratory Page 3, Pink - Account Executive Page 4, Gold - Client

Ace Laboratories, Inc.

SAMPLE RECEIPT FORM

LABORATORY # A0602020 2- CLIENT American Analytics

Chain of Custody is complete and clear?	(Yes)	No (see comments)
Client sample Ids agree with C.O.C.?	(Yes)	No (see comments)
Samples are Intact?	(Yes)	No (see comments)
Custody Seals are Intact?	Yes	No (NA)
Short Hold Times or TAT?	Yes	(No)

If Yes, Specify:

Cooler Temp_____ °C Ambient ✓

Sample Type/Quantity: 6 Liter canister

Canister Ids: -01 (05062002) -02 (1827) -03 (05062003) -04 (983) -05 (4155)

Comments_____

Initials: SS Date: 2/2/06

Appendix A

New York NELAP Certified Analyte List For Method TO-14A

Chloromethane
Vinyl Chloride
Bromomethane
Chloroethane
Trichlorofluoromethane (Freon 11)
1,1-Dichloroethene
1,1,2-Trichloro-1,2,2-Trifluoroethane
Methylene Chloride
1,1-Dichloroethane
cis-1,2-Dichloroethene
Chloroform
1,1,1-Trichloroethane
1,2-Dichloroethane
Benzene
Carbon Tetrachloride
Trichloroethene
1,2-Dichloropropane
cis-1,3-Dichloropropene
trans-1,3-Dichloropropene
Toluene
1,1,2-Trichloroethane
Tetrachloroethene
Chlorobenzene
Ethylbenzene
m,p-Xylene
Styrene
o-Xylene
1,1,2,2-Tetrachloroethane
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
1,4-Dichlorobenzene
1,2-Dichlobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene

Franklin J. Goldman
PO BOX 59, Sonoma, CA 95476
Phone: (707) 235-9979
franklingoldman1@yahoo.com

A57213 / 6A31001

CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No. _____

Laboratory Please Call Accounts Payable for PO. No.

Date: 01/31/06 Sheet 1 of 1

Project Name: Chun
Project Number:
Address: 2301 Santa Clara Ave, Alameda, CA
Sampler's Name: Frank Goldman
Sampler's Signature: Franklin J Goldman

Sample Number	Location	Date	Time	TPH as Gasoline 8015	TPH as Diesel 8015	TPH-g/BTEX 8015/8020 & MTBE	BTEX & EPA 8020	Oil and Grease 5520	Volitile Organics (8010)	CAM Metals (17)	Pr. Pollutant Metals (13)	Base/Neu/Acids (Organic)	Pesticides 8140/8141	Method 8260b for 5 oxygenates & 2 lead scavengers	CAM 17 & B 23 Analytes	Bulk density, moisture, porosity fraction of organic carbon	SOIL SAMPLE	WATER SAMPLE	Comments
SU4	6A31001-01	01/30/06	10:05												X				Sumg Canister
SU5	-02	"	10:30 AM																"
SU1	-03	"	11:15 AM																"
SU3	-04	"	11:25 AM																"
SU2	-05	"	12:05 PM																"

Laboratory Delivery Location
American Analytics, Inc.
9765 Eton Ave
Chatsworth, CA
Phone: (818) 998-5547

Phone

Turnaround Time
☐ Rush ☐ 24 Hour ☐ 48 Hour ☒ 5-Day

Repeat to: Frank

Relinquished By	Date	Time	Received By	Date	Time
Franklin J Goldman	01/31/06	2:23 pm	UPS Store Santa Rosa	01/31/06	2:23 pm
UPS					
Dispatched By	Date	Time	Received in Lab By	Date	Time
				02/02/06	09:27

Total Number of Containers this Sheet:

Method of Shipment:

Special Shipment/Handling or Storage Requirements:

Keep on Ice

Approved on work order 02/02/06 0940 V. Vonlo

06FEB 2 9:27AM

Appendix B

Laboratory Data Sheets for Soil Gas Sampling from Mobile Laboratory

teg

TRANSGLOBAL
ENVIRONMENTAL
GEOCHEMISTRY

10 February 2006

Mr. Frank Goldman
PO Box 59
Sonoma, CA 95476

SUBJECT: DATA REPORT - Chun Investigation Area, Alameda, California

TEG Project # 60130E

Mr. Goldman:

Please find enclosed a data report for the samples analyzed from the above referenced project. The samples were analyzed on site in TEG's mobile laboratory. TEG conducted a total of 9 analyses on 9 soil vapor samples.

-- 9 analyses on soil vapors for volatile organic hydrocarbons by EPA method 8260B.

The results of the analyses are summarized in the enclosed tables. Applicable detection limits and calibration data are included in the tables.

1,1 difluoroethane was used as a leak check compound around the probe rods during the soil vapor sampling. No 1,1 difluoroethane was detected in any of the vapor samples reported at or above the DTSC recommended leak check compound reporting limit of 10 µg/L of vapor.

TEG appreciates the opportunity to have provided analytical services to you on this project. If you have any further questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Mark Jerpbak
Director, TEG-Northern California

teg

Chun Investigation Area, Alameda, California

TEG Project #60130E

EPA Method 8260B VOC Analyses of SOIL VAPOR in ug/L of Vapor

SAMPLE NUMBER:		Blank	SG 1 @ 6.0'	SG 2 @ 6.0'	SG 2 @ 6.0'	SG 2 @ 6.0'
PURGE VOLUME:			1	1	3	7
SAMPLE DEPTH (feet):			6.0	6.0	6.0	6.0
COLLECTION DATE:		1/30/06	1/30/06	1/30/06	1/30/06	1/30/06
COLLECTION TIME:		09:46	13:53	10:12	10:34	10:53
DILUTION FACTOR:		1	1	1	1	1
	RL					
Dichlorodifluoromethane	0.10	nd	nd	nd	nd	nd
Vinyl Chloride	0.10	nd	nd	nd	nd	nd
Chloroethane	0.10	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.10	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.10	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	0.10	nd	nd	nd	nd	nd
Methylene Chloride	0.10	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.10	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd
Chloroform	0.10	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	0.10	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.10	nd	nd	nd	nd	nd
1,2-Dichloroethane	0.10	nd	nd	nd	nd	nd
Benzene	0.10	nd	0.19	nd	nd	nd
Trichloroethene	0.10	nd	nd	nd	nd	nd
Toluene	0.10	nd	0.54	0.29	0.27	0.23
1,1,2-Trichloroethane	0.10	nd	nd	nd	nd	nd
Tetrachloroethene	0.10	nd	nd	nd	nd	nd
Ethylbenzene	0.10	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.10	nd	nd	nd	nd	nd
m,p-Xylene	0.10	nd	0.26	0.26	0.28	0.26
o-Xylene	0.10	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.10	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		89%	91%	94%	95%	94%
Surrogate Recovery (1,2-DCA-d4)		95%	93%	97%	101%	98%
Surrogate Recovery (Toluene-d8)		99%	100%	99%	101%	100%

'RL' INDICATES REPORTING LIMITS at a Dilution Factor of 1

'nd' NOT DETECTED AT LISTED REPORTING LIMITS

ANALYSES PERFORMED IN TEG-Northern California's LAB

ANALYSES PERFORMED BY: Mr. Leif Jonsson

11350 Monier Park Place, Rancho Cordova, CA 95742 Phone: (916) 853-8010 Fax: (916) 853-8020

TEG Project #60130E

EPA Method 8260B VOC Analyses of SOIL VAPOR in ug/L of Vapor

SAMPLE NUMBER:		SG 2 @ 7.5'	SG 3 @ 6.0'	SG 4 @ 6.0'	SG 4 @ 6.0' dup	SG 5 @ 6.0'
PURGE VOLUME:		1	1	1	1	1
SAMPLE DEPTH (feet):		7.5	6.0	6.0	6.0	6.0
COLLECTION DATE:		1/30/06	1/30/06	1/30/06	1/30/06	1/30/06
COLLECTION TIME:		12:39	11:22	12:16	13:27	13:04
DILUTION FACTOR:		1	25	1	1	1
	RL					
Dichlorodifluoromethane	0.10	nd	nd	nd	nd	nd
Vinyl Chloride	0.10	nd	nd	nd	nd	nd
Chloroethane	0.10	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.10	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.10	nd	nd	nd	nd	nd
1,1,2-Trichloro-trifluoroethane	0.10	nd	nd	nd	nd	nd
Methylene Chloride	0.10	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.10	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.10	nd	nd	nd	nd	nd
Chloroform	0.10	nd	120	nd	nd	nd
1,1,1-Trichloroethane	0.10	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.10	nd	nd	nd	nd	nd
1,2-Dichloroethane	0.10	nd	50	nd	nd	nd
Benzene	0.10	nd	1600	1.3	1.9	nd
Trichloroethene	0.10	nd	nd	nd	nd	nd
Toluene	0.10	0.22	1600	1.7	2.6	0.35
1,1,2-Trichloroethane	0.10	nd	nd	nd	nd	nd
Tetrachloroethene	0.10	nd	nd	nd	nd	nd
Ethylbenzene	0.10	nd	57	0.17	0.26	nd
1,1,1,2-Tetrachloroethane	0.10	nd	nd	nd	nd	nd
m,p-Xylene	0.10	0.17	150	0.50	0.80	0.25
o-Xylene	0.10	nd	29	0.16	0.25	nd
1,1,2,2-Tetrachloroethane	0.10	nd	nd	nd	nd	nd
Surrogate Recovery (DBFM)		92%	84%	89%	92%	90%
Surrogate Recovery (1,2-DCA-d4)		95%	70%	94%	94%	95%
Surrogate Recovery (Toluene-d8)		100%	100%	98%	99%	99%

'RL' INDICATES REPORTING LIMITS at a Dilution Factor of 1

'nd' NOT DETECTED AT LISTED REPORTING LIMITS

ANALYSES PERFORMED IN TEG-Northern California's LAB

ANALYSES PERFORMED BY: Mr. Leif Jonsson

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CALIBRATION STANDARDS - Initial Calibration / LCS

Instrument: Agilent 5973N MSD

COMPOUND	INITIAL CALIBRATION RF	INITIAL CALIBRATION %RSD	LCS RF	LCS %DIFF
Dichlorodifluoromethane*	1.440	13.4%	1.342	6.8%
Vinyl Chloride*	2.440	7.8%	2.114	13.4%
Chloroethane*	1.426	6.9%	1.220	14.4%
Trichlorofluoromethane*	3.246	9.4%	2.991	7.9%
1,1-Dichloroethene	1.670	12.1%	1.533	8.2%
1,1,2-Trichloro-trifluoroethane*	1.837	13.0%	1.541	16.1%
Methylene Chloride	1.759	10.7%	1.576	10.4%
1,1-Dichloroethane	3.319	11.3%	3.202	3.5%
cis-1,2-Dichloroethene	1.704	11.2%	1.831	7.5%
Chloroform	2.769	9.1%	2.623	5.3%
1,1,1-Trichloroethane	2.507	9.5%	2.356	6.0%
Carbon Tetrachloride	2.107	14.6%	2.113	0.3%
1,2-Dichloroethane	2.076	9.7%	1.914	7.8%
Benzene	6.190	10.5%	5.833	5.8%
Trichloroethene	1.694	9.2%	1.580	6.7%
Toluene	3.974	9.3%	3.710	6.6%
1,1,2-Trichloroethane	0.918	8.7%	0.831	9.5%
Tetrachloroethene	1.520	10.6%	1.734	14.1%
Ethylbenzene	2.639	9.5%	2.798	6.0%
1,1,1,2-Tetrachloroethane	1.530	15.7%	1.642	7.3%
m,p-Xylene	3.191	13.1%	3.426	7.4%
o-Xylene	3.139	11.6%	3.157	0.6%
1,1,2,2-Tetrachloroethane	2.004	11.5%	2.220	10.8%
ACCEPTABLE LIMITS:		20.0%		15.0%

'*' INDICATES RSD NOT TO EXCEED 30% & LCS NOT TO EXCEED 25%